



Report to Congress

on the Prevention and Reduction of Underage Drinking

2019



SAMHSA
Substance Abuse and Mental Health
Services Administration

REPORT TO CONGRESS ON THE PREVENTION AND REDUCTION OF UNDERAGE DRINKING

2019

This Report to Congress is 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). The STOP Act requires an annual report to Congress (Chapters 1 through 4) that includes a description of federal programs to address underage drinking; the extent of progress in preventing and reducing underage drinking; surveillance data on underage drinking initiation, prevalence, consumption patterns, and underage access to alcohol; and related information. The STOP Act also requires an annual report to Congress on the national adult-oriented media public service campaign mandated by the STOP Act (Chapter 5), including the production, broadcasting, and evaluation of the effectiveness and reach of the campaign.

As directed by the STOP Act, the reports were prepared by the Interagency Coordinating Committee on Preventing Underage Drinking (ICCPUD), which is chaired by the Assistant Secretary for Mental Health and Substance Use, U.S. Department of Health and Human Services (HHS).

Time period covered by the 2019 Report to Congress: The 2019 version of the *Report to Congress on the Prevention and Reduction of Underage Drinking* primarily includes data from calendar year 2018. Epidemiological data in Chapters 1, 2 and 3 draw primarily from the 2017 National Survey on Drug Use and Health, the 2017 Monitoring the Future survey, and the 2017 Youth Risk Behavior Survey, the results of which were published in 2018. Chapter 4 includes data on the underage drinking prevention activities of ICCPUD member agencies in calendar year 2018.

Chapter 5, the Report to Congress on the National Media Campaign to Prevent Underage Drinking, describes 2018 activities conducted by the Campaign.

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FOREWORD

As the Acting 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 *2019 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 eleventh annual Report examining the issue of underage drinking. 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. Almost 20 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], 2018c).

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, 29 percent of young people report binge drinking at least once in the past month (CBHSQ 2018a).

There has been improvement over the past several years: since 2004, past-month alcohol use among underage drinkers has declined by 32 percent (CBHSQ, 2018c). Between 2015 and 2017, past-month binge drinking decreased by 11 percent (CBHSQ, 2018c). However, persistent patterns of underage alcohol use, particularly among older underage drinkers, have led the ICCPUD agencies to develop and approve a new comprehensive plan that brings a renewed focus while continuing to use evidence-based practices for preventing 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 ICCPUD Comprehensive Plan draws 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. The Substance Abuse and Mental Health Services Administration and the ICCPUD agencies are committed to working together to provide national leadership in these critical efforts.

Tom Coderre

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

Executive Summary

EXECUTIVE SUMMARY

Introduction

Alcohol use is responsible for approximately 4,300 deaths annually among youth under age 21 in the United States (U.S.), shortening their lives by an average of 60 years (Stahre, Roeber, Kanny, Brewer, & Zhang, 2014). Underage drinking also contributes to a wide range of costly health and social problems, including motor vehicle crashes (the greatest single mortality risk for underage drinkers); suicide; interpersonal violence (including homicides and sexual and other assaults); unintentional injuries (such as burns, falls, and drownings); cognitive impairment; alcohol use disorders;¹ risky sexual activity; poor school performance; and alcohol and other drug overdoses (National Research Council [NRC] & Institute of Medicine [IOM], 2004).

Underage alcohol use occurs in a context of significantly problematic adult use nationwide. Approximately 88,000 individuals of all ages in the U.S. die from alcohol-attributable causes each year, making excessive² alcohol use the third leading preventable cause of death in the U.S. (Stahre et al., 2014). The economic burden of excessive alcohol use (as defined by the Centers for Disease Control and Prevention [CDC]) in the U.S. was estimated to be \$249 billion in 2010, and three-quarters of those costs are from binge drinking³ (Sacks, Gonzales, Bouchery, Tomedi, & Brewer, 2015). Over the past two decades, alcohol use, binge drinking,⁴ and alcohol use disorders have all increased in the adult population, especially among women, older adults, racial/ethnic minorities, and the socioeconomically disadvantaged (Han, Moore, Sherman, Keyes, & Palamar, 2017; Grucza et al., 2018). Alcohol also plays a role in many drug overdoses. Between 2002-2003 and 2014-2015, alcohol involvement in prescription opioid deaths rose from 8.5 percent to 13.7 percent (Kandel, Hu, Griesler, & Wall, 2017), and more than half of the 4.2 million people who misused prescription opioids during 2012-2014 were binge drinkers (Esser, 2019).

This report—the *2019 Report to Congress on the Prevention and Reduction of Underage Drinking (2019 RTC)*—focuses on underage alcohol use, as required by federal law. In 2006, Congress enacted the Sober Truth on Preventing Underage Drinking Act—known as the “STOP Act”—to address underage drinking. The STOP Act, 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 4). 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 5).

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

¹The 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.

²“Excessive drinking” as defined by the Centers for Disease Control and Prevention (CDC) includes binge drinking, heavy drinking, and any drinking by pregnant women or people younger than age 21.

³Binge drinking was defined as four or more drinks on a single occasion for women and five or more drinks for men.

⁴Binge drinking definitions varied according to the survey data reviewed. See Exhibit E.1 for more detail regarding definitions of binge drinking and related terms.

of Columbia, including state-specific population and underage alcohol use data. The *State Reports*, available on <https://www.stopalcoholabuse.gov>, highlight progress of the states toward adopting 26 evidence-based policies and practices to reduce underage drinking. The reports 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 that has been administered to state governments annually since 2011. An accompanying report, the *State Performance and Best Practices for the Prevention and Reduction of Underage Drinking Report*, also available at <https://www.stopalcoholabuse.gov>, summarizes and compares the states' performance in implementing the same 26 evidence-based policies that are assessed on a state-specific basis, providing an overview of current state practices related to the prevention of underage drinking.

Data on current underage alcohol use in the U.S. in this report come primarily from three federal surveys:

1. The National Survey on Drug Use and Health (NSDUH), conducted by the Center for Behavioral Health Statistics and Quality (CBHSQ) of the Substance Abuse and Mental Health Services Administration (SAMHSA).
2. Monitoring the Future (MTF), conducted by a grantee of the National Institute on Drug Abuse (NIDA).
3. Youth Risk Behavior Survey (YRBS), conducted by CDC.

Each of these surveys uses slightly different definitions for drinking patterns such as binge drinking. Exhibit E.1 shows key terms as defined by each study.

Exhibit E.1: Definitions of Alcohol Consumption by Survey

| Measure | Survey Source | Definition |
|----------------------|---------------|--|
| Current Alcohol Use | NSDUH | Any reported use of alcohol in the past 30 days (also referred to as "past-month use") |
| | MTF | Any reported use of alcohol during the last 30 days |
| | YRBS | Had at least 1 drink of alcohol on at least 1 day during the 30 days before the survey |
| Lifetime Alcohol Use | NSDUH | Reported use or misuse of alcohol at least once in the respondent's lifetime |
| | MTF | Used alcohol at least once during respondent's lifetime |
| | YRBS | Had at least 1 drink of alcohol on at least 1 day during their life |
| Binge Use of Alcohol | NSDUH | [As of 2015] Females: reported drinking 4 or more drinks . . . Males: reported drinking 5 or more drinks . . . |

| Measure | Survey Source | Definition |
|---|---------------|---|
| | | . . . on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days |
| | MTF | Reported 5 or more drinks in a row over the past 2 weeks |
| | YRBS | [As of 2017] Females: reported 4 or more drinks of alcohol in a row . . . Males: reported 5 or more drinks of alcohol in a row within a couple of hours on at least 1 day during the 30 days before the survey |
| Heavy Use of Alcohol | NSDUH | [As of 2015] Females: reported drinking 4 or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on each of 5 or more days in the past 30 days Males: reported drinking 5 or more drinks on the same occasion on each of 5 or more days in the past 30 days Heavy alcohol users are also, by definition, binge users of alcohol. |
| Extreme Binge, also referred to as High-Intensity | MTF | 10+ Reported drinking 10 or more drinks in a row over the past 2 weeks 15+ Reported drinking fifteen or more drinks in a row over the past two weeks |
| Largest Number of Alcoholic Drinks in a Row Was 10 or More (similar measure to Extreme Binge) | YRBS | 10+ Reported 10 or more as the largest number of drinks in a row |

Characteristics of Underage Drinking in the United States

Alcohol is the Most Widely Used Substance Among U.S. Youth

Alcohol continues to be the most widely used substance among youth in the U.S., with a higher proportion of young people using alcohol than marijuana, tobacco, or other drugs. According to the 2017 NSDUH:

- 19.7 percent of individuals age 12 to 20 reported alcohol use in the past 30 days.
- 13.2 percent reported illicit drug use in the past 30 days.
- 11.4 percent reported cigarette use in the same period (CBHSQ, 2018c).

Youth Start Drinking at an Early Age

As discussed below, early initiation of alcohol use increases the risk for a variety of health and social problems during adolescence, as well as health problems later in life. For example, the early initiation of alcohol consumption is a risk factor for future substance use and alcohol dependence (Buchmann et al., 2009; Grant & Dawson, 1998; Hawkins, Graham, Maguin, Abbott, Hill, & Catalano, 1997; Liang & Chikritzhs, 2015; Robins & Przybeck, 1985).

Accordingly, delaying the onset of alcohol initiation may reduce the risk of developing alcohol problems in adulthood. The peak years of initiation of alcohol use are in grades 7 to 11, and 15.5 percent of high school students reported on the 2017 YRBS⁵ that they used alcohol before age 13 (Kann et al., 2018). Approximately 2,075 young people ages 12 to 14 initiated alcohol use each day in 2017, based on NSDUH data (CBHSQ, 2018c).

Binge Drinking

Approximately 4.5 million (11.9 percent) of 12- to 20-year-olds reported past-month binge⁶ alcohol use in 2017 (CBHSQ, 2018a). An analysis of 2015 YRBS data indicated that more than half (57.8 percent) of past-month high school drinkers also reported binge drinking⁷ within the past month). The same analysis showed that more than two in five binge drinkers consumed eight or more drinks in a row (Esser, Clayton, Demissie, Kanny, & Brewer, 2017).

Why Is Underage Drinking a Problem?

- Alcohol is used more widely than tobacco, marijuana, and other drugs by our nation's young people under age 21 (Miech et al., 2018).
- Motor vehicle crashes are the greatest mortality risk for underage drinkers (NRC & IOM, 2004). In 2017, of the 1,830 drivers ages 15–20 who were killed in motor vehicle traffic crashes, 440 (24 percent) had a blood alcohol concentration (BAC) of 0.01 g/dL or higher (National Highway Traffic Safety Administration [NHTSA], National Center for Statistics and Analysis [NCSA], 2018).
- Alcohol use contributes to cognitive 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).

⁵YRBS data are collected every two years; the latest available data are for 2017.

⁶Binge drinking is defined in the NSDUH as five or more drinks on a single occasion for males, and four or more drinks on a single occasion for females.

⁷Binge drinking in the YRBS through 2015 data collection was defined as five or more drinks of alcohol in a row within a couple of hours on at least 1 day during the 30 days before the survey.

Binge drinking substantially increases the risk of alcohol-related harms, such as motor vehicle crashes, injuries, unsafe sexual practices, and sexual victimization among underage youth and adults. Given these consequences, reducing binge drinking is a leading health indicator in the U.S. Department of Health and Human Services (HHS) Healthy People 2020 program (HHS, 2019).

Approximately 2.5 percent of 12- to 20-year-olds (0.9 million) are heavy drinkers (defined by SAMHSA as binge drinking on each of 5 or more days in the past 30 days; CBHSQ, 2018a). Although underage drinkers generally consume alcohol less frequently than adult drinkers, they are more likely to binge drink when they do. A significant proportion of underage drinkers consume substantially more than the four- or five-drink binge criterion. For example, based on data from the 2016 and 2017 NSDUH, 7.5 percent of underage drinkers had nine or more drinks during their last drinking occasion (CBHSQ, 2018c).

Underage Binge Drinking

- Approximately 4.5 million (11.9 percent) of 12- to 20-year-olds reported past-month binge alcohol use in 2017 (NSDUH data; CBHSQ, 2018a).
- Almost one million underage youth are heavy drinkers (binge drinking on 5 or more days within a 30-day period; NSDUH data; CBHSQ, 2018a).
- Six percent of 12th graders report consuming 10 or more drinks in a row on a single occasion in the past 2 weeks (MTF data; Miech et al., 2018).

A troubling subset of binge drinking is high-intensity or extreme binge drinking which is the consumption of 10 or more, or 15 or more, drinks in a row on one or more occasions in the previous 2-week period (MTF uses both 10+ and 15+ measures in this category). High intensity or extreme binge drinking represents an even higher level of a consumption pattern (binge drinking) that is already known to be dangerous. According to MTF⁸ data for 2017, 6.0 percent of 12th graders reported consuming 10 or more drinks in a row, and 3.1 percent reported consuming 15 or more drinks in a row within the previous 2 weeks. Although these percentages have been shifting downward over time, declines appear to be leveling off, and 6.0 percent of underage drinkers still meet the definition of high-intensity or extreme binge drinkers (Miech et al., 2018).

Alcohol use rates, including binge and heavy alcohol use⁹, increase rapidly with age (Exhibit E.2). However, it is important to note that, because of their smaller size, very young adolescents (ages 12 to 15), while less likely to drink than older adolescents and young adults, may reach higher blood alcohol concentration levels with fewer drinks (e.g., three to four drinks) than older adolescents (age 18 or older; Donovan, 2009). This suggests that binge and heavy alcohol use may be even more of a problem than is reflected in survey data, and may be particularly dangerous for younger adolescents.

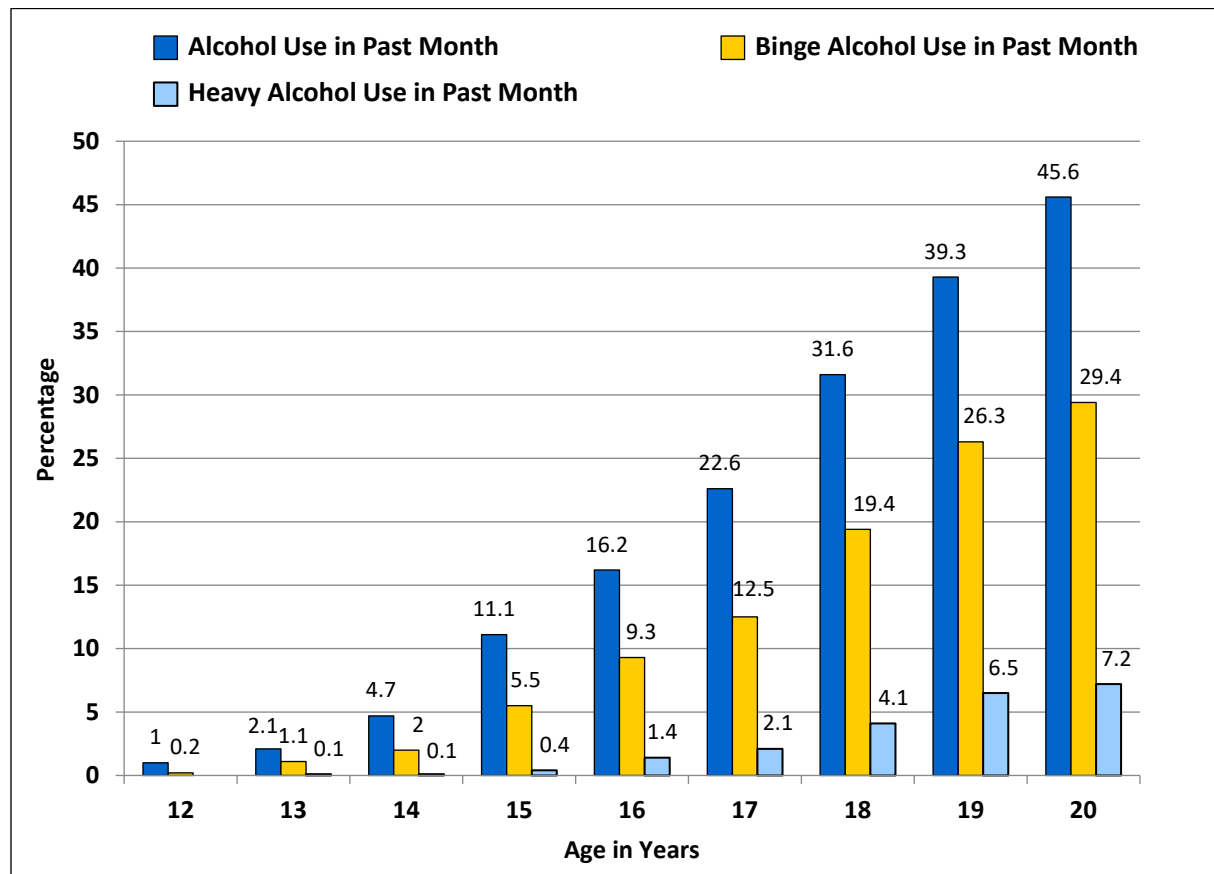
⁸For comparability with data from the 2017 NSDUH and the YRBS, the latest MTF data included in this report are also from 2017. The 2018 MTF data, available in December 2018, will be included in the next report.

⁹Heavy alcohol use is assessed in the NSDUH as binge drinking on 5 or more days in the past 30 days.

Prevalence of Alcohol Use Disorders (Abuse or Dependence) Among Youth Is High

The prevalence of alcohol use disorders 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) criteria¹⁰ is quite high, although most underage binge drinkers do not meet the criteria. According to combined 2016–2017 NSDUH data, the prevalence of DSM-IV-TR alcohol abuse or dependence for 18- to 20-year-olds (8.0 percent) is significantly lower than for 21- to 24-year-olds (12.0 percent) and 25- to 29-year-olds (9.5 percent), but not significantly different than for 30- to 34-year-olds (8.3 percent). In addition, 0.4 percent of 12- to 14-year-olds and 3.2 percent of 15- to 17-year-olds met criteria for DSM-IV alcohol abuse or dependence (CBHSQ, 2018c). The prevalence of alcohol use disorder as defined by DSM-IV-TR is highest among those ages 21–29 (CBHSQ, 2018c).

Exhibit E.2: Current, Binge, and Heavy Alcohol Use Among People Ages 12–20 by Age: NSDUH, 2017 (CBHSQ, 2018a)



¹⁰The 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.

College Drinking

Drinking and bingeing rates are higher for 18- to 20-year-olds compared to youth ages 12-17 years (CBHSQ, 2018a; see Exhibit E.2), and rates are higher for college students¹¹ than for same-age peers not attending college (Schulenberg, Johnston, O'Malley, Bachman, Miech, & Patrick, 2018). Of college students, 62.0 percent report past-month drinking, compared with 56.4 percent of those of the same age but not in college (Schulenberg et al., 2018). 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 in some states, it is legal to provide alcohol to underage youth under special circumstances, such as at religious ceremonies, in private residences, or in the presence of a parent or guardian (for detailed data, see the companion report to this Report to Congress: *State Performance & Best Practices Report at <https://www.stopalcoholabuse.gov>*). Despite the broad restrictions of the age 21 minimum legal drinking age (MLDA), underage youth find it relatively easy to acquire alcohol, often from adults. This may indicate that further evidence- and community-based strategies to reduce underage access should be implemented. 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 underage drinkers (ages 15 to 20) 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, 2018c).

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

Prevention Efforts

Since the mid-1980s, underage drinking prevention efforts have been implemented at the federal, state, and local levels. Evidence-based prevention strategies are described and called for in: *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs and Health* (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

¹¹College 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, O'Malley, Bachman, Schulenberg, & Miech, 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.

Force [CPSTF], 2016); the National Research Council (NRC) and Institute of Medicine (IOM) report *Reducing Underage Drinking: A Collective Responsibility* (NRC & IOM, 2004); the NIAAA *Call to Action: Changing the Culture of Drinking at U.S. Colleges* (NIAAA, 2002), and CollegeAIM: College Alcohol Intervention Matrix (NIAAA, 2015). Several of these important initiatives are discussed in Chapter 1 of this report.

Framework for Success in Reducing Underage Drinking

Epidemiological data demonstrate that the rate of underage drinking has decreased over the past decades in several segments of the 12- to 20-year-old population. It is not clear what has caused this decline in underage drinking, but it likely is due to a combination of factors including increased attention to the risks of underage drinking at all levels of society. Since the early 1980s, federal initiatives have elevated the issue of underage drinking to a more prominent place on the national public health agenda (most notably through passage of the National Minimum Legal Drinking Age [MLDA] Act); contributed to a policy climate in which relevant legislation has been passed by states and localities; raised awareness of the importance of proactive and systematic law enforcement; and stimulated coordinated citizen action. Private and public efforts have also supported the development of drug-free communities. Although many evidence-based prevention strategies remain to be implemented, and some successful strategies have been reversed or slowed in recent years, the changes described above have provided a framework for a 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 this national effort commensurate with their missions and mandates. In 2018, the ICCPUD created an updated Comprehensive Plan with three broad goals and three targets for underage drinking reduction (described below under Extent of Progress). The 2018 Comprehensive Plan also includes the ICCPUD's mission statement, goals, and principles, and is attached to this report as Appendix E.

Every ICCPUD agency below 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 complementary and coordinated federal approach that has helped reduce underage drinking. 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.
- NIDA supports research on patterns and use of drugs and alcohol.
- CDC conducts public health surveillance on excessive drinking; applied research on alcohol-related health impacts and effective population-based prevention strategies; and supports state public health capacity in alcohol epidemiology.
- SAMHSA works to reduce underage demand for alcohol by advancing prevention, treatment, and recovery support services.
- 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 and cooperative agreements) that gather current data on underage alcohol use.

Effective Solutions

A comprehensive underage drinking prevention effort includes a balance of evidence-based prevention programs and strategies that are implemented at multiple levels, including federal, state, community, family, school, and individual. Prevention programs and strategies may be environmental (aimed at altering physical, economic, and social environments which may be focused on entire populations or a subpopulation) or individual (designed to impart knowledge, change attitudes and beliefs, or teach skills to youth and adults).

Evidence-based environmental policies to reduce underage drinking identified in the 2016 Surgeon General's report, *Facing Addiction in America* (HHS, 2016) include, in addition to the age 21 MLDA:

- MLDA compliance checks of alcohol retailers to monitor whether they are selling to underage buyers.
- Zero-tolerance laws that prohibit underage drivers from having any measurable BAC.
- Use/lose laws that take away underage drivers' licenses for alcohol violations.
- Laws that impose criminal and civil liability on adults for hosting underage drinking on their property.
- Proposals for reductions in alcohol advertising.

In addition, the Surgeon General's report notes that "research has shown that policies focused on reducing alcohol misuse for the general population can effectively reduce alcohol consumption among adults as well as youth." Environmental-level strategies aimed at the general population that were found by the Surgeon General's report to be evidence-based include: (1) increasing alcohol taxes; (2) regulating alcohol outlet density; and (3) imposing commercial host (dram shop) liability.

(Note: These and other state legal policies identified as best practices for underage drinking prevention are discussed at length in the companion to this report, the *State Performance and Best Practices for the Prevention and Reduction of Underage Drinking Report*, available at <https://www.stopalcoholabuse.gov>).

Environmental-level interventions can be complemented by individual-, family-, and school-level approaches. As *Facing Addiction in America* (HHS, 2016) states:

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.

Evidence-based individual-, family- and school-level programs that are highlighted in the 2016 Report 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 been successful in delaying early use of alcohol and in reducing 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 alcohol use among participating youth through age 21.
- *Screening, Brief Intervention, and Referral to Treatment (SBIRT)*: A clinical prevention strategy that is intended to identify, reduce, and prevent problematic use, abuse, and dependence on alcohol and illicit drugs. While the United States Prevention Services Task Force (USPSTF) concluded there is not sufficient evidence to recommend SBIRT for youth age 17 and younger, these interventions are effective in populations ages 18 and older, which includes older underage drinkers. Adaptation of the interventions for younger age groups may increase effectiveness (Curry et al., 2018). NIAAA has developed a screening guide titled *Alcohol Screening and Brief Intervention for Youth: A Practitioner’s Guide* (NIAAA, 2011).

These and many other programs and policies are supported by federal agencies and described in more detail in Chapter 4.

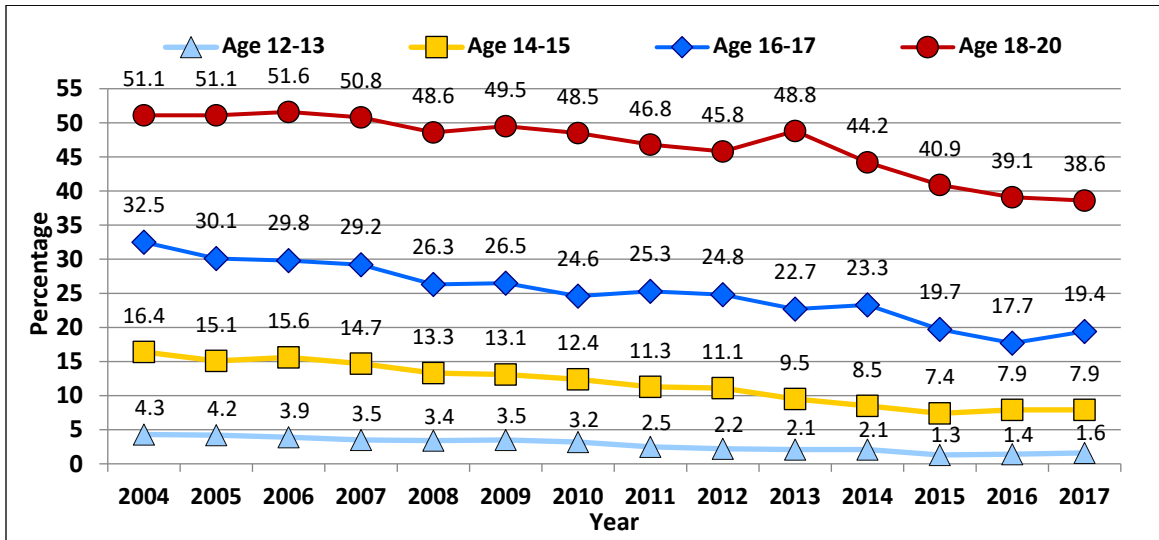
National Media Campaign

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 to directives set forth in Section 2(d) of the STOP Act. This campaign, a significant environmental strategy initiative, aims to prevent underage drinking among youth under age 21 by providing their parents and caregivers with information to address alcohol use early. The “Talk. They Hear You.”[®] campaign—which consists of television and print public service announcements (PSAs), a website, and a mobile app—has received an estimated 8.4 billion media impressions (number of times people have seen the ads or messages). The annual Report to Congress on this campaign is presented in Chapter 5.

Extent of Progress in Reducing Underage Drinking

As noted previously, national epidemiologic data demonstrate a reduction in the prevalence of underage drinking. Based on NSDUH data (CBHSQ, 2018a), there has been a 31.5 percent relative decline in the prevalence of past-month drinking among 12- to 20-year-olds since 2004. Past-month alcohol use was still high among people ages 18 to 20 in 2017 (38.6 percent). Although it decreased 24.5 percent since 2004, the relative decline was smaller than that among youth ages 12 to 17 (43.8 percent, Exhibit E.3; CBHSQ, 2018a). In addition, alcohol-related traffic deaths among drivers ages 15 to 20 have declined 83 percent since 1982, shortly before passage of the National Minimum Drinking Age Act (NCSA, 2018).

Exhibit E.3: Trends in Past-Month Alcohol Use for 12- to 20-Year-Olds by Age Group: NSDUH, 2004–2017 (CBHSQ, 2018a)

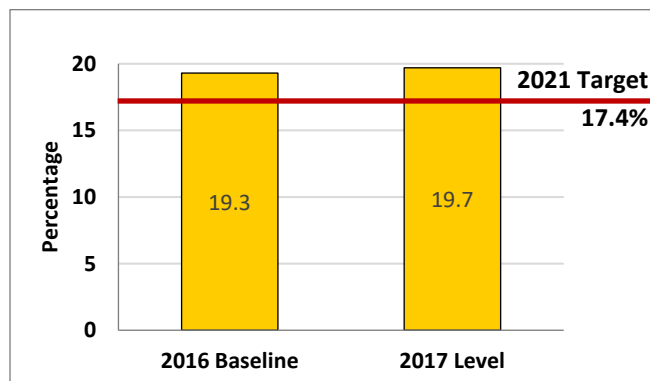


Progress on Achieving Comprehensive Plan Targets

As discussed above, the ICCPUD has created a comprehensive plan that includes three specific targets, to be achieved by 2021. The targets are described below and Exhibits E.4 through E.6 show current progress toward meeting them.

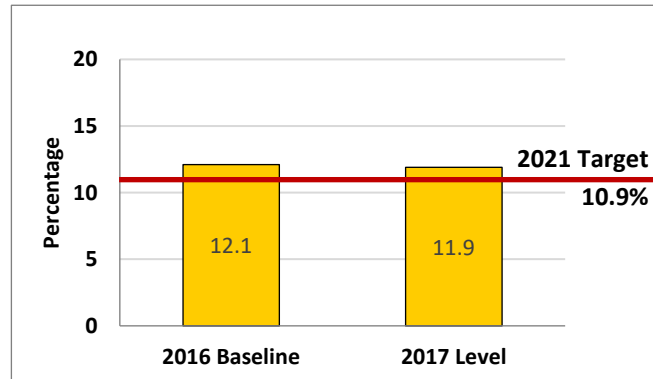
2021 Target 1: By 2021, **reduce** the prevalence of past-month alcohol use by 12- to 20-year-olds to 17.4 percent, as compared to the 2016 baseline of 19.3 percent (a reduction of 10 percent).

Exhibit E.4: 2017 Prevalence of Past-Month Alcohol Use Based on 2017 NSDUH Data, Compared to 2016 Baseline and 2021 Target (CBHSQ, 2018a)



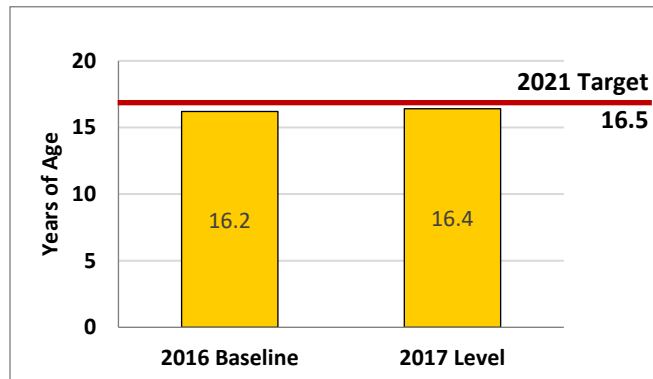
2021 Target 2: By 2021, **reduce** the prevalence of 12- to 20-year-olds reporting binge alcohol use in the past 30 days to 10.9 percent, as compared to the 2016 baseline of 12.1 percent (a reduction of 10 percent).

Exhibit E.5: 2017 Prevalence of Past-Month Binge Alcohol Use Based on 2017 NSDUH Data, Compared to 2016 Baseline and 2021 Target (CBHSQ, 2018a)



2021 Target 3: By 2021, **increase** the average age of first use of alcohol among those who begin drinking before age 21 to 16.5 years of age as compared to the 2016 baseline of 16.2 years of age (an increase of 2 percent).

Exhibit E.6: 2017 Average Age of First Alcohol Use Among Those Who Begin Drinking Before Age 21 Based on 2017 NSDUH Data, Compared to 2016 Baseline and 2021 Target (CBHSQ, 2018c)



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 prevalence of underage drinking along with the many problems associated with alcohol use. Wider adoption, implementation, and enforcement of evidence-based policies and programs will support this effort.

The shifting landscape of issues and trends related to underage drinking, as well as changes in youth drinking behavior, must be continuously identified, monitored, and addressed. These may include:

- Possible changes in laws governing the sale of alcohol products on the Internet.
- The development of new products that especially appeal to youth.
- The sale of high-alcohol-content grain beverages.

- Changes in marijuana policies and laws and possible resulting changes in consumption patterns and the perception of risk of substance use.
- Changes in youth drinking behavior, including the concurrent use of alcohol and other drugs (e.g., prescription opioids).
- Changes in the price of alcoholic beverages as a result of reductions in alcohol taxes or other policy changes at the federal, state, and local levels.

Ongoing engagement of policymakers, citizen coalitions, health professionals, educators, law enforcement, and others is essential to the implementation of effective prevention strategies for reducing underage drinking.

CHAPTER 1

Underage Drinking: Public Health Consequences and Prevention Efforts

CHAPTER 1: UNDERAGE DRINKING: PUBLIC HEALTH CONSEQUENCES AND PREVENTION EFFORTS

Summary of Chapter

This chapter introduces the contents of this volume, and summarizes the requirements of the Sober Truth on Preventing Underage Drinking Act (Pub. L. 109-422), known as the “STOP Act,” and how they are implemented in this report. An overview of adult and underage drinking trends, and the resulting impact on public health is provided. The chapter includes a discussion of the specific adverse consequences of underage drinking, including both direct consequences to the underage drinker and social costs. The national effort to address underage drinking from 1992 to the present is described, followed by a discussion of screening, brief intervention, and referral to treatment as applied to youth. The chapter concludes by covering emerging issues in underage drinking and the government response.

Overview

Alcohol use is responsible for approximately 4,300 deaths annually among youth under age 21 in the United States (U.S.), shortening their lives by an average of 60 years (Stahre, Roeber, Kanny, Brewer, & Zhang, 2014). Underage drinking also contributes to a wide range of costly health and social problems, including motor vehicle crashes (the greatest single mortality risk for underage drinkers); suicide; interpersonal violence (including homicides and sexual and other assaults); unintentional injuries (such as burns, falls, and drownings); cognitive impairment; alcohol use disorders;¹² risky sexual activity; poor school performance; and alcohol and other drug overdoses (National Research Council [NRC] & Institute of Medicine [IOM], 2004).

Underage alcohol use occurs in a context of significantly problematic adult use nationwide. Approximately 88,000 individuals of all ages in the U.S. die from alcohol-attributable causes each year, making excessive¹³ alcohol use the third leading preventable cause of death in the U.S. (Stahre et al., 2014). The economic burden of excessive (as defined by the Centers for Disease Control and Prevention [CDC]) alcohol use in the U.S. was estimated to be \$249 billion in 2010, and three-quarters of those costs are from binge drinking¹⁴ (Sacks, Gonzales, Bouchery, Tomedi, & Brewer, 2015).

Over the past two decades, alcohol use, binge drinking¹⁵, and alcohol use disorders have all increased in the adult population, especially among women, older adults, racial/ethnic minorities, and the socioeconomically disadvantaged (Han, Moore, Sherman, Keyes, & Palamar, 2017; Grucza et al., 2018). Alcohol also plays a role in many drug overdoses. Between 2002-2003 and 2014-2015, alcohol involvement in prescription opioid deaths increased from 8.5 percent to 13.7 percent (Kandel, Hu, Griesler, & Wall, 2017), and more than half of the 4.2 million people who misused prescription opioids during 2012-2014 were binge drinkers (Esser, 2019).

¹²The 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.

¹³“Excessive drinking” as defined by the CDC includes binge drinking, heavy drinking, and any drinking by pregnant women or people younger than age 21.

¹⁴Binge drinking was defined as four or more drinks on a single occasion for women and five or more drinks for men.

¹⁵Binge drinking definitions varied according to the survey data reviewed. See Exhibit E.1 for more detail regarding definitions of binge drinking and related terms.

Despite these concerning trends in overall alcohol use and in the association between alcohol consumption and drug overdoses, significant progress in reducing underage drinking has been achieved. For example, past-month alcohol use among individuals ages 12 to 20 has dropped by one-third since 2004 (CBHSQ, 2018a). Nevertheless, drinking rates for this group remain unacceptably high. Alcohol is still the most widely consumed substance among America's youth—used more often than marijuana or tobacco. Alcohol use often begins at a young age, and underage youth who drink tend to binge drink and to consume more on a single drinking occasion than adults do. Approximately 60.7 percent of individuals ages 12 to 20 who reported drinking in the past month on the NSDUH survey also reported binge drinking (CBHSQ, 2018a).

The benefits of reducing underage drinking are substantial, including saving lives and dollars and promoting the overall health of young people. In addition, delaying the age at which young people begin drinking may reduce their chances of developing an alcohol use disorder and of experiencing other negative consequences in adulthood (Grant & Dawson, 1997).

The implementation of effective policy and environmental strategies for reducing excessive alcohol use may help further reduce underage drinking, while also reducing excessive drinking among adults, which has been increasing. Research has clearly shown a correlation between youth drinking behaviors and those of adults living in the same state as well as a strong relationship between state alcohol policies affecting adult drinking and underage drinking rates (Xuan et al., 2015).

Similarly, it is important to monitor the effects of marijuana legalization on underage alcohol use. As of this writing, 11 states and the District of Columbia have legalized recreational use of marijuana by adults, and state laws appear to be changing rapidly (McCoppin, 2019; NIAAA, n.d.a). Legalization may lead to greater youth access to marijuana. As with underage alcohol use, marijuana use by youth is associated with the use of other substances, including alcohol, tobacco, and other drugs (Dupont, Han, Shea & Madras, 2018).

In 2006, Congress enacted the STOP Act to address underage drinking in the United States. The STOP Act, 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.

This volume includes those two Reports to Congress, addressing:

- 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 the U.S. Department of Health and Human Services (HHS) determines appropriate.
- A description of production and broadcasting activities of the “Talk. They Hear You.”[®] national media campaign mandated by the STOP Act and an evaluation of the effectiveness and reach of the campaign (Chapter 5).

(The STOP Act also requires annual reports for each state on underage drinking prevention and enforcement efforts, and an annual report on state performance and best practices, published separately. See <https://www.stopalcoholabuse.gov>).

As noted above, Chapter 1 describes the harmful public health consequences of underage drinking and provides background on the ongoing national effort to prevent and reduce underage drinking. Chapter 2 details progress in preventing and reducing underage drinking nationally by reporting on existing data on underage drinking patterns and trends. Chapter 3 examines environmental and individual factors affecting underage alcohol use. Chapter 4 provides information on the federally coordinated approach to address underage drinking. Chapter 5 is the Report to Congress on the national media campaign.

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.

Health and social impacts that directly affect the underage drinker include the risk of death due to:

- Motor vehicle crashes and other unintentional injuries (such as fires/burns, falls, and drowning).
- Alcohol and drug overdoses.
- Homicide and suicide (e.g., CDC, 2018a).

Other risks related to underage drinking include altered brain development, 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 related to underage drinking include risks to other drivers (including motorcyclists and bicyclists), passengers, and pedestrians; and interpersonal violence (NRC & IOM, 2004). These consequences are described in more detail in the following paragraphs.

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 cost 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 the short-term, but can also increase societal costs over time due to the increased risk of chronic conditions among youth who start drinking at young ages, including alcohol use disorders.

Direct Consequences to the Underage Drinker

Mortality and Injury from Traffic Crashes

The greatest mortality risk for underage drinkers continues to be from motor vehicle crashes. In 2017, of the 1,830 drivers ages 15 to 20 who were killed in motor vehicle traffic crashes:

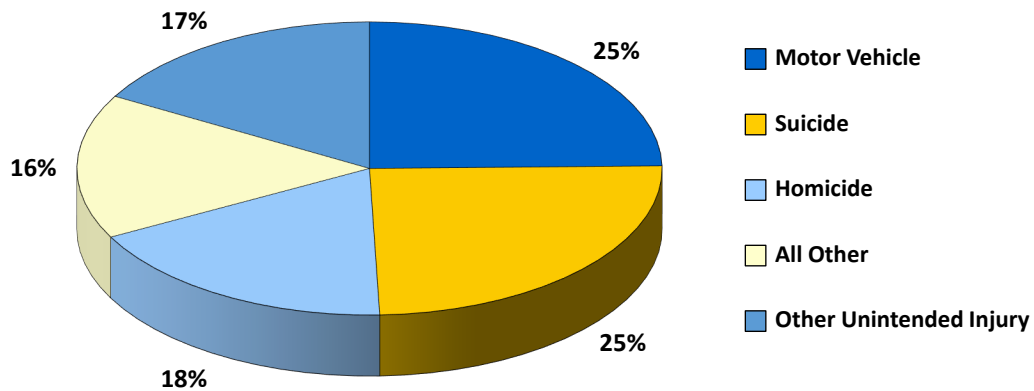
- 440 (24 percent) had a blood alcohol concentration (BAC) of 0.01 percent or higher. Of those 440 drivers who had a BAC of 0.01 g/dL or higher:
 - 362 (82 percent) had a BAC of 0.08 percent or higher.
 - 78 (18 percent) had a BAC of 0.01 to 0.07 percent.¹⁶

¹⁶Special data analysis provided by the National Highway Traffic Safety Administration (NHTSA) for this report; National Center for Statistics and Analysis [NCSA], 2018).

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 age 12 to 20 years, including suicide, homicide, and other unintentional injuries (CDC, 2019; see Exhibit 1.1).

Exhibit 1.1: Top Ten Leading Causes of Death for Youth Ages 12–20: 2017 (CDC, 2019)¹⁷



In 2017, an estimated 2,385 youth ages 12 to 20 died from unintentional injuries other than motor vehicle crashes, such as poisoning (which includes alcohol and other drug overdoses), drowning, falls, and fires/burns (CDC, 2019). A 1999 meta-analysis of alcohol involvement in unintentional injury deaths (other than those due to motor vehicle crashes) among persons ages 15 years and older reported an overall alcohol-attributable fraction of 31.0 percent, although rates 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 use (defined as the presence of a BAC of 0.10 percent or greater) was a major contributing factor in nearly one-third (31.5 percent) of homicides and almost one-quarter (22.7 percent) of suicides. Further, data from 17 states show that among youth ages 10 to 19 years who died by suicide and were tested for alcohol, 12 percent had BACs >0.08 percent (Crosby, Espitia-Hardeman, Ortega, & Clavel-Arcas, 2009). Another study estimated that 9.1 percent of youth under age 21 who were hospitalized following a suicide attempt had consumed alcohol beforehand, and of those cases, 72 percent were attributable to or caused by alcohol use (Miller, Levy, Spicer, & Taylor, 2006).

Alterations in Brain Development

Underage alcohol consumption can impair normal brain development in adolescence, which can have long-term consequences. During adolescence, dramatic changes to the brain's structure, neuron connectivity ("wiring"), and physiology occur (Restak, 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

¹⁷Percentages are based on sum of top ten leading causes of death.

impulsive decisions or actions, disregard for consequences, and emotional reactions that can lead to alcohol use or otherwise put teenagers at serious risk of harm.

Neurobiological research suggests that adolescence may be a period of unique vulnerability to the effects of alcohol (Spear, 2018). A recent review of research on adolescents who consume alcohol, particularly those who engage in binge drinking, shows that early and heavy alcohol use can have negative effects on the neural and cognitive development of the brain. Physiological effects include the attenuation of maturational changes in the adolescent brain. Negative effects on cognition and personality include decreased ability in planning, executive functioning, memory, spatial operations, verbal learning, and attention, all of which play important roles in academic performance and future levels of functioning. (Spear, 2018).

Adverse consequences of underage alcohol consumption include death, injury, and alterations in brain development.

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. 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.

Research to date does not address to what extent the negative consequences of adolescent alcohol exposure can be mitigated, and the effects of combining alcohol with other drugs are also not clear. As Spear (2018) notes, the potentially permanent and long-lasting effects of alcohol exposure on the adolescent brain are not generally communicated to the public. Since adolescents are biologically predisposed to seek out novel and potentially risky experiences (which include alcohol and drug use), this suggests that most effective prevention strategies for this age group involve policies that restrict access to alcohol (Spear, 2018).

Alcohol consumption by underage females who become pregnant may also pose developmental risks to their fetuses. Very early exposure to alcohol that occurs with alcohol consumption by the mother during pregnancy can result in fetal alcohol spectrum disorders, including fetal alcohol syndrome, which remains a leading cause of intellectual disabilities (May, et al., 2018; Jones, Smith, Ulleland, & Streissguth, 1973; Stratton, Howe, & Battaglia, 1996; Warren & Bast, 1988).

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).

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). A recent study of YRBS data found that students who received mostly As, mostly Bs, or mostly Cs had significantly higher prevalence estimates for most protective health-related behaviors, including all substance use, sexual risk, violence-related, and suicide-related behaviors, and significantly lower prevalence estimates for most health-related risk behaviors compared with students with mostly Ds/Fs (Rasberry et al., 2017).

A one-year longitudinal analysis of middle- and high school students using the National Longitudinal Study of Adolescent to Adult Health (Add 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 (NLSY; Rothstein, Carr, & Cooksey, 2019). 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.

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; 2015); Owens, Shippee, and Hensel (2008); and Harris and Udry (2018) tracked a panel of youth from their freshman to senior years of high school. The authors failed to find a significant link across the high school years between increased drinking and diminishing academic performance.

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).

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., 2005; Dawson, Goldstein, Chou, Ruan, & Grant, 2008; Hingson et al., 2006; Hingson & Zha, 2009; Pitkänen, Lyyra, & Pulkkinen, 2005; York, Welte, Hirsch, Hoffman, & Barnes, 2004). While most people who drink excessively are not alcohol-dependent, 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.¹⁸

¹⁸Note that the criteria for alcohol-related disorders in the DSM-V (American Psychiatric Association, 2013) do not specifically address adolescents.

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. Adults who started drinking at ages 14 to 15 were 5.2 times more likely to have been in a motor vehicle crash after drinking compared with adults who started drinking after age 21 (Hingson, Edwards, Heeren, & Rosenbloom, 2009).

Increased Risks from Concurrent and Simultaneous Substance Use

Marijuana is the second most commonly consumed illicit substance¹⁹, after alcohol. In the 2017 MTF survey, 24 percent of 12th grade males and 21.5 percent of 12th grade females reported past-month use of marijuana (Miech et al., 2018). 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 use of more than one substance is associated with an increased likelihood of a substance use disorder. Use of multiple substances in youth has also been linked to heavier consumption patterns in adulthood compared with single or dual substance use (Han, Compton, Blanco, & DuPont, 2017). A recent analysis of MTF trends revealed that marijuana is increasingly the first substance in the sequence of adolescent drug use (Keyes, Rutherford, & Miech, 2019).

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 69.4 percent; 46.5 percent among binge drinkers; and 22.6 percent among occasional alcohol users. Only 3.1 percent of those who do not consume alcohol reported marijuana use (CBHSQ, 2018a).

Analysis of high school seniors in the MTF study indicates that drinkers consuming 10 drinks or more in a row and marijuana users consuming 1 joint or more per day are more likely to use both substances simultaneously (Patrick, Veliz, & Terry-McElrath, 2017). Similarly, more than 25 percent of 12th graders who reported extreme binge drinking at the 15+ level also report non-medical use of prescription drugs, such as opioids, sedatives/anxiolytics, and stimulants (McCabe, Veliz, & Patrick, 2017). McCabe, West, Schepis, and Teter (2015) noted that more than six in every ten non-medical stimulant users surveyed for MTF report the simultaneous co-ingestion of prescription stimulants, alcohol, and other drugs in the previous year.

The simultaneous use of substances while driving has significant public safety implications; impairment increases as the number of substances increases. 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.

¹⁹Marijuana is classified as an illicit drug at the federal level, although a number of states have legalized consumption for adults. Tobacco is not illegal for youth ages 18 through 20 in about half the states.

Although the trends in driving under the influence of alcohol only, drugs only, and alcohol and drugs combined have decreased among individuals 16–20 years of age since 2002, they remain a concern (Lipari, Hughes, & Bose, 2016).

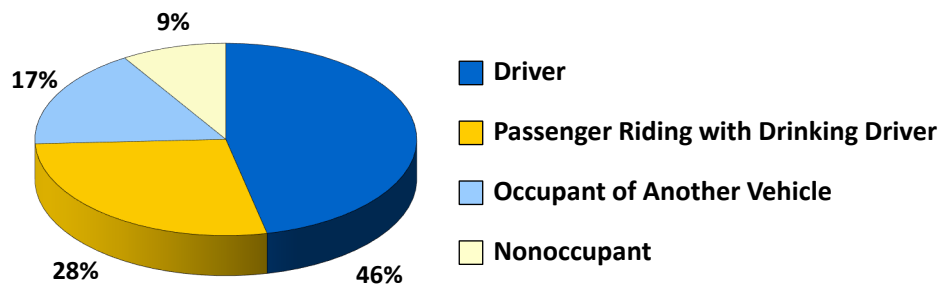
Another concern is the potential combined effect of alcohol with opioids. A recent study found that respiratory depression caused by opioids—which can be fatal—is exacerbated by the effects of alcohol in young adults (Schrier et al., 2017). NSDUH data indicate that 3.4 percent of current underage drinkers report use of opioids (CBHSQ, 2018a). A recent study by Esser and colleagues (2019), using combined NSDUH data from 2012 to 2014 found that prescription opioid misuse was most common among binge drinkers who were 12 to 17 years old (8.1 percent, compared to 3.5 percent for all binge drinkers).

Social Costs

Mortality and Injury

Individuals other than the underage drinker also experience the consequences of underage alcohol use, through destruction of property, unintentional injury, violence, and even death. In 2017, 943 people were killed in motor vehicle traffic crashes involving a 15- to 20-year-old driver with a BAC of .01 percent or higher. The distribution of fatalities by person type in 2017 is shown in Exhibit 1.2. As shown, 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, 2018).

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 2017
(NCSA, 2018)



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 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 et al., 2004; Seto & Barbaree, 1995; Testa, 2002). Abbey and colleagues (2004) 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.

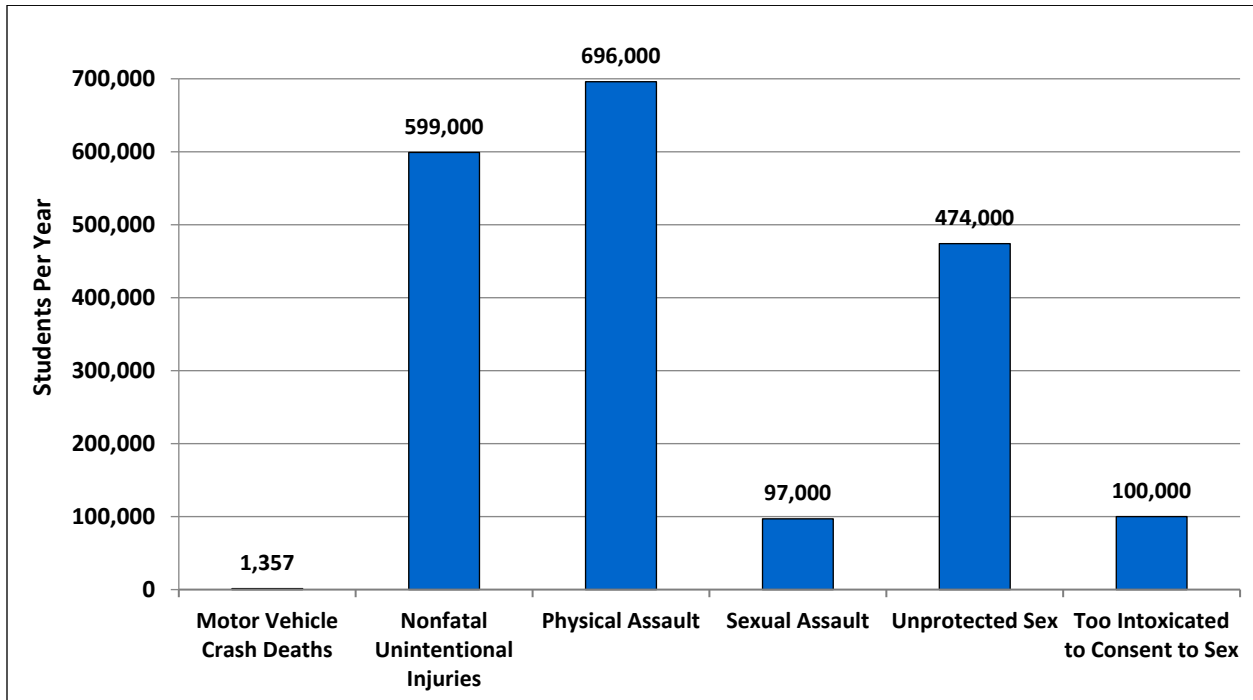
Many other adverse social consequences are linked with college student alcohol consumption. Hingson, Zha, and Weitzman (2009) estimated that annually, more than 696,000 college students were assaulted or hit by another student who had been drinking. Another 599,000 were unintentionally injured while 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. Further, 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 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).

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. As detailed below, the federal government has enacted policies (most notably the National Minimum Drinking Age Act of 1984), implemented national media campaigns, increased and supported the involvement of communities through grants and other mechanisms, and collaborated 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 environmental level (aimed at limiting the availability of alcohol and reducing driving after drinking) and the individual, family, and school level (aimed at changing individual behavior). 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).

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



Federal efforts are coordinated through the ICCPUD, which includes representatives from the following federal agencies:

- HHS/Administration for Children and Families (ACF)
- HHS/Centers for Disease Control and Prevention (CDC)
- HHS/Indian Health Service (IHS)
- HHS/National Institutes of Health (NIH)/National Institute on Alcohol Abuse and Alcoholism (NIAAA)
- HHS/NIH/National Institute on Drug Abuse (NIDA)
- HHS/Office of the Assistant Secretary for Health (OASH)–Office of Population Affairs (OPA)
- HHS/Office of the Assistant Secretary for Planning and Evaluation (ASPE)
- HHS/OASH/Office of the Surgeon General (OSG)
- HHS/Substance Abuse and Mental Health Services Administration (SAMHSA)
- Department of Defense (DoD)
- Department of Education (ED)/Office of Safe and Healthy Students (OSHS)
- Department of Homeland Security/U.S. Coast Guard (USCG)
- U.S. Department of Justice (DoJ)/Office of Juvenile Justice and Delinquency Prevention (OJJDP)
- Department of Transportation (DOT)/National Highway Traffic Safety Administration (NHTSA)
- Department of the Treasury/Alcohol and Tobacco Tax and Trade Bureau (TTB)
- Federal Trade Commission (FTC)
- Office of National Drug Control Policy (ONDCP)

Federally sponsored research has been synthesized into several publications summarizing evidence-based prevention research strategies. One recent publication that discussed underage drinking as well as other substance use issues 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* (HHS, 2007; discussed in more detail below); the CPSTF's *Guide to Community Preventive Services: Preventing Excessive Alcohol Consumption* (CPSTF, 2016); 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, 2015), 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 *State Reports*, available at <https://www.stopalcoholabuse.gov>) 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 years of age 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” (NIAAA, 2017b).

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, Craig, Langford, MacArthur, Statton, & Ferrence, 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 years of age. Only 22 states set an MLDA of 21 years of age.

Differences across states led to youth 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 years of age. By 1987, all remaining states had raised their MLDA to 21 years of age 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 evidence is clear that the MLDA of 21 years of age saves lives and improves health (DeJong, 2014; McCartt, Hellinga, & Kirley, 2010). The law has led to significant reductions in traffic crashes among youth (NHTSA, 2019; DeJong, 2014; Wagenaar & Toomey, 2002; Shults et al., 2001). 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, unintentional injuries, and injuries inflicted by others) in youth under 21 as well (Carpenter & Dobkin, 2016).

The CPSTF conducted a systematic review of 33 studies and strongly recommended the maintenance of the MLDA of 21 to maintain the decrease in alcohol-related crashes and associated injuries among 18- to 20-year-old drivers (CPSTF, 2013).

Congressional Actions Between 1992 and 2004

In 1992, Congress created 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.

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 served as a resource for the development of *A Comprehensive Plan for Preventing and Reducing Underage Drinking* that Congress called for in 2004 (SAMHSA, 2006). ICCPUD received input from experts and organizations representing a wide range of stakeholders, including public health advocacy groups, the alcohol industry, ICCPUD member agencies, and the U.S. Congress. The latest research 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.

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

3. Use research, evaluation, and scientific surveillance to improve the effectiveness of policies and programs designed to prevent and reduce underage drinking.

The *Comprehensive Plan* was updated in 2018, and is discussed in more detail below.

The STOP Act

In December 2006, Congress passed the STOP Act (Pub. L. 109-422). 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, the OSG worked closely with SAMHSA and NIAAA to develop the report. Based on their work on the 2006 *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 2006 *Comprehensive Plan*. The *Call to Action* built on the 2006 *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 <https://www.ncbi.nlm.nih.gov/books/NBK44360>.

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 almost 10,000 town hall meetings using the *Call to Action's Guide to Action for Communities* 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 the Surgeon General's report found 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. Environmental (or universal) 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 suspend 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 youth exposure to alcohol advertising.

In addition, environmental policies that were found in the report to be effective in reducing all drinking, and thus underage drinking, include alcohol tax increases, regulation of alcohol outlet density, and commercial host (dram shop) liability.

Programs for individuals and families identified in the Surgeon General's report 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
- Brief Alcohol Screening and Intervention of College Students

Community Preventive Services Task Force

The CPSTF was created by HHS in 1996 to develop guidance on which community-based health promotion and disease prevention intervention approaches are effective, based on available scientific evidence. The CPSTF is an independent, nonfederal panel of public health and prevention experts whose members represent a broad range of research, practice, and policy expertise in community preventive services, public health, health promotion, and disease prevention.

The CPSTF has evaluated and recommended the following interventions aimed at prevention of underage drinking and/or underage drinking and driving:

- Maintaining current MLDA laws (strongly recommended).
- Enhanced enforcement of laws prohibiting sales to underage youth.
- School-based instructional programs to reduce alcohol-impaired driving.
- Lower BAC laws for young or inexperienced drivers.

In addition, the CPSTF has made the following recommendations regarding population-level environmental strategies to reduce excessive alcohol consumption in general, which would also reduce underage consumption:

- Dram shop (alcohol retailer) liability (strongly recommended).
- Maintaining limits on days of sale (strongly recommended).
- Increasing alcohol taxes (strongly recommended).
- Maintaining limits on hours of sale.
- Regulation of alcohol outlet density.
- Privatization of retail alcohol sales (recommended against).

These recommendations are published online in the Guide to Community Preventive Services (<https://www.thecommunityguide.org>), which is a collection of all of the CPSTF's evidence-based findings.

Dietary Guidelines for Americans

The *2015-2020 Dietary Guidelines for Americans* are published jointly by HHS and the U.S. Department of Agriculture. These Guidelines specifically recommend that alcohol should only be consumed by those of legal drinking age, and do not recommend that non-drinkers start drinking for any reason (U.S. Department of Agriculture, 2015).

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, 2015) 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 (e.g., increasing alcohol taxes) 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. (For more details about these strategies, see <https://www.collegedrinkingprevention.gov/collegeaim>).

The ICCPUD 2018 Comprehensive Plan

In 2018, the ICCPUD principals (the statutorily-designated members or their appointed representatives), met to discuss an update to the 2006 Comprehensive Plan. The group approved a new plan with updated targets (described more fully in Chapter 4) for reduction of underage past-month alcohol use and binge drinking and for increasing the average age of initiation of alcohol use, based upon the latest available federal survey data. The 2018 Comprehensive Plan also sets out the vision, mission, and principles of the ICCPUD, and is attached as Appendix E to this report.

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 the *State Performance and Best Practices Report* 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:

- CPSTF (*Guide to Community Preventive Services. Preventing Excessive Alcohol Consumption*; CPSTF, 2016).
- The Surgeon General (*The Surgeon General’s Call to Action to Prevent and Reduce Underage Drinking*; HHS, 2007).
- The National Research Council (NRC) and the Institute of Medicine (IOM; *Reducing Underage Drinking: A Collective Responsibility*; NRC & IOM, 2004).
- NIAAA (*CollegeAIM: Alcohol Intervention Matrix*, NIAAA, 2015).
- The Surgeon General (*Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs, and Health*; HHS, 2016).

Exhibit 1.6 lists the 26 evidence-based 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 the *State Performance and Best Practices Report*, which is available at <https://www.stopalcoholabuse.gov>. The federal government’s approach to evidence-based practices is described in more detail in Chapter 4.

Exhibit 1.4: NIAAA College Alcohol Intervention Matrix, Individual-Level Strategies (NIAAA, 2015)

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> ³ [#], 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): AlcoholEdu [®] for College ² [#], 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% Public health reach: B = Broad F = Focused Research amount: ●●●● = 11+ studies ●●● = 7 to 10 studies ●● = 4 to 6 studies ● = 3 or fewer studies Barriers: ### = Higher # = Moderate # = Lower 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> ³ [#], F, ●●, IPG | |
| | Not effective X | IND-7 Skills training, alcohol focus: Expectancy challenge intervention (ECI)—By proxy/didactic/discussion <i>alone</i> ³ [#], F, ●●, IPG | IND-1 Information/knowledge/education <i>alone</i> ³ [#], B, ●●●●, IPG IND-5 Values clarification <i>alone</i> ³ [#], 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, 2015)

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

Barriers:
 ### = Higher
 ## = Moderate
 # = Lower
 C = Barriers at college level
 S/L = Barriers at the state/local level

Research amount/quality:
 ●●●● = 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

Public health reach:
 B = Broad
 F = Focused

0 = No studies

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.

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 | NRC & 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 |
| 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 | | X |
| Loss of driving privileges for alcohol violations by minors (use/lose law) | X | | | | | X |
| Graduated driver's licensing systems | 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 |
| 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 | | | | | |

| 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 | NRC & 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 affecting alcohol pricing | | | | | | |
| Increasing alcohol tax rates | X | X | | X | X | X |
| Restrictions on drink specials | X | | X | X | X | |
| Wholesaler pricing provisions, including limits on price and extension of credit | X | | | | | |

Screening, Brief Intervention, and Referral to Treatment

The importance of screening, brief intervention, and referral to treatment (often abbreviated as 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.”

Considerable literature has been published indicating that 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 also been published on this topic (Scott-Sheldon, Carey, Elliott, Garey, & Carey, 2014; Tanner-Smith & Lipsey, 2015). However, the U.S. Preventive Services Task Force (USPTF) concluded in 2019 that the current evidence is insufficient to assess the balance of benefits and harms of screening and brief behavioral counseling interventions for alcohol use in primary care settings in adolescents ages 12 to 17 years. These interventions are recommended in populations ages 18 and older, which includes older underage drinkers. Adaptation of the interventions for younger age groups may increase effectiveness (Curry et al., 2013), and further research regarding the use of SBIRT in the 12- to 17-year-old population is needed. NIAAA has developed a screening guide titled *Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide* (NIAAA, 2011) available at <https://www.niaaa.nih.gov/sites/default/files/publications/YouthGuide.pdf>.

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 drinking. 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).

A recent study examined the effectiveness of individually delivered screening and brief intervention delivered in schools for youth and another evidence-based prevention strategy (Communities Mobilizing for Change on Alcohol) 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 demonstrated the effectiveness of both interventions 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.

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.

Topics that will be monitored closely by ICCPUD include:

- Possible changes in laws governing the sale of alcohol products on the Internet.
- The development of new products that especially appeal to youth.
- The sale of high-alcohol-content grain beverages.
- Changes in marijuana policies and laws, and possible resulting changes in consumption patterns and substance use perception of risk.
- Changes in youth drinking behavior, such as combining alcohol with other drugs (e.g., prescription opioids).

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.²⁰
- 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.

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.²¹

Nonetheless, young people continue to mix alcohol and energy drinks on their own, despite the federal government’s removal of pre-mixed 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

²⁰ 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).

²¹ 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).

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 alcohol could intentionally or unintentionally be made much stronger than standard drinks and could be consumed in other ways that may prove harmful (Firger, 2014).

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, 33 states and the District of Columbia have enacted a permanent or temporary ban on the sale of powdered alcohol. (For details, go to <https://www.stopalcoholabuse.gov> and navigate to “Supplemental Material.”)

Currently, Palcohol is not available for purchase in the United States.

CHAPTER 2

The Nature and Extent of Underage Drinking in America

CHAPTER 2: THE NATURE AND EXTENT OF UNDERAGE DRINKING IN AMERICA

Summary of Chapter

Chapter 2 provides an overview of the current nature and extent of underage drinking, utilizing data provided by three major national surveys funded by the federal government. The chapter then covers the extent of progress in reducing underage drinking in several key areas, including rates and prevalence, binge drinking, age of initiation, and driving after drinking. The chapter concludes by summarizing the progress made to date.

STOP Act Requirements for the Report to Congress

The STOP Act requires the U.S. Department of Health and Human Services (HHS) Secretary to report to Congress annually on the “extent of progress in preventing and reducing underage drinking nationally.”

The report is to include:

- Information on the onset and prevalence of underage drinking.
- Patterns of underage consumption as described in research, including federal surveys.
- 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).

Chapters 2 and 3 set out detailed updates in response to the STOP Act’s 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 and in Chapter 3. In general, NSDUH data are used as the primary source; MTF and YRBS data are cited as the primary source when NSDUH does not have comparable information. For ease of reading, MTF and YRBS data that merely support or supplement NSDUH findings are described in gray boxes.

Each survey makes a unique contribution to an understanding of the nature of alcohol use, and each survey was developed for a specific purpose. Direct comparison of findings across the three surveys (e.g., prevalence of underage drinking) is not generally appropriate because each survey has a unique design, uses a different data collection method (e.g., Chen, 2017; Fendrich, 2001; and Harrison, 2001) and a different sampling frame and weighting approach (see for example, 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). Even so, reviewing trends

over time for data collected within each survey is informative, as each survey provides a different perspective on the status of underage drinking.

Each of these surveys is revised periodically to reflect the current state of the research in underage drinking. For example, in 2015, the NSDUH definition of binge drinking was changed from 5 drinks on a single occasion in the past 30 days to 5 drinks for males or 4 drinks for females. This change was made to reflect the evidence that there are differences in how alcohol is processed by males and females and to harmonize the definition of binge drinking in the NSDUH with the definition used in other national surveys. Trend data for female and total binge drinking prior to 2015 are therefore not currently available from this data source (CBHSQ, 2017a).

For the 2017 survey, the YRBS also adopted a gender-specific definition of binge drinking that uses 4 or more drinks of alcohol in a row for females and 5 or more drinks in a row for males, based on a 30-day recall period (Kann et al., 2018). The MTF survey continues to define binge drinking as having 5 or more drinks on at least one occasion in the 2 weeks prior to the survey for both males and females (Johnston et al., 2018b). Exhibit 2.2 provides a summary of the definitions of alcohol consumption across the various surveys.

Exhibit 2.1: Summary of Major Federal Surveys Assessing Underage Drinking²²

| 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. Civilian, noninstitutionalized population ages 12 and older | Civilian, noninstitutionalized population ages 12– or older in the U.S. (residents of households and individuals in noninstitutional group quarters) | Annually since 1991 | In-person visit to home; audio computer-assisted self-interviews |
| Monitoring the Future (MTF) ²³ – National Institutes of Health (NIH) National Institute on Drug Abuse (NIDA) | Measurement of alcohol, tobacco, and other drug use by secondary school students | Secondary school students in the coterminous U.S. in grades 8, 10, and 12; a randomly selected sample from each senior class has been followed up biennially after high school until age 30, and then every 5 years. | Annually for 12th graders since 1975 and for 8th and 10th graders since 1991; biennially for college students and adults ages 19–30 and every 5 years thereafter through age 55 | Self-administered questionnaire |

²²See Chen, Yoon, & Faden (2017) for details on differences in the surveys.

²³For comparability with 2017 NSDUH (the data available as this report was being prepared in 2018), the latest MTF data included in this report are also from 2017. The 2018 MTF data became available in December 2018, and will be included in the next report.

| Survey/ Sponsoring Agency | Purpose | Target Population | Administration Schedule | Data Collection Method |
|--|---|--|----------------------------|--|
| Youth Risk Behavior Survey (YRBS)—Centers for Disease Control and Prevention (CDC) | Assessment of a variety of behaviors that affect adolescent health, including alcohol consumption | Public and private school students in grades 9–12 in the U.S. and the District of Columbia | Biennially since 1991 | School-based, self-administered questionnaire in classroom |

Exhibit 2.2: Definitions of Alcohol Consumption by Survey

| Measure | Survey Source | Definition |
|-----------------------------|---------------|--|
| Current Alcohol Use | NSDUH | Any reported use of alcohol in the past 30 days (also referred to as "past-month use"). |
| | MTF | Any reported use of alcohol during the last 30 days |
| | YRBS | Had at least 1 drink of alcohol on at least 1 day during the 30 days before the survey |
| Lifetime Alcohol Use | NSDUH | Reported use or misuse of alcohol at least once in the respondent's lifetime. |
| | MTF | Used alcohol at least once during respondent's lifetime |
| | YRBS | Had at least 1 drink of alcohol on at least 1 day during their life |
| Binge Use of Alcohol | NSDUH | [As of 2015] Females: reported drinking 4 or more drinks Males: reported drinking 5 or more drinks... on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days |
| | MTF | Reported 5 or more drinks in a row over the past 2 weeks |
| | YRBS | [As of 2017] Females: reported 4 or more drinks of alcohol in a row .. Males: reported 5 or more drinks of alcohol in a rowwithin a couple of hours on at least 1 day during the 30 days before the survey |
| Heavy Use of Alcohol | NSDUH | [As of 2015] Females: reported drinking 4 or more drinks on the same occasion (i.e., at the same time or within a |

| Measure | Survey Source | Definition |
|--|---------------|---|
| | | <p>couple of hours of each other) on each of 5 or more days in the past 30 days</p> <p>Males: reported drinking 5 or more drinks on the same occasion on each of 5 or more days in the past 30 days</p> <p>Heavy alcohol users are also, by definition, binge users of alcohol.</p> |
| Extreme Binge, also referred to as High-Intensity | MTF | <p>10+ - Reported drinking 10 or more drinks in a row over the past 2 weeks</p> <p>15+ Reported drinking fifteen or more drinks in a row over the past 2 weeks</p> |
| Largest Number of Alcoholic Drinks in a Row Was 10 or More (Similar to Extreme Binge) | YRBS | 10+ Reported 10 or more as the largest number of drinks in a row |

Extent of Progress

Progress in the reduction of underage drinking is assessed both by examining self-reported 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 has been made in reducing the extent of underage drinking over the past two decades. However, some measures of alcohol use were either static or showed increases this year. For example, data from the 2017 MTF survey revealed that most measures of underage alcohol consumption (lifetime prevalence, annual prevalence, 30-day prevalence, and daily prevalence of use) showed little or no change across all three high school grades surveyed compared to 2016 results. Johnston and colleagues (2018a) note: ‘This is the first time in some years that this has happened, and may herald the end of the long-term decline in adolescent alcohol use’ (Johnston, Miech, O’Malley, Bachman, & Schulenberg, 2018a).

Data from the NSDUH survey also showed no significant differences for the prevalence of lifetime, past-year, and past-month alcohol use; past-month binge and heavy alcohol use; and past-year alcohol use disorders from 2016 to 2017 among youth ages 12 to 17. YRBS measures on alcohol consumption (lifetime alcohol use; current alcohol use; drinking before age 13; and having 10 or more drinks in a row) also did not show significant change from the previous survey administration (2015). Trends will be carefully watched in upcoming years.

Extent of Progress: Alcohol Consumption

There are several ways to measure underage alcohol use. The 2017 NSDUH survey data is the basis for the current status and trends over time for three measures of alcohol consumption—past-month use; lifetime use; and binge and heavy alcohol use—that are provided in this section. Related measures from the MTF and YRBS surveys are provided when available. Additional details on differences by age and gender are also included within each section.

7.4 million underage youth reported using alcohol in the past month (CBHSQ, 2018a)

Past-Month Alcohol Use: Current Data

Past-month is defined for the NSDUH survey as having had at least one drink in the 30 days prior to the survey interview. NSDUH data from 2017 indicate that approximately 19.7 percent of 12- to 20-year-olds in the U.S. (or about 7.4 million young people) reported alcohol use in the past month (CBHSQ, 2018a).

Past month alcohol consumption by underage youth has declined almost 32 percent relative to the levels reported in 2004 (CBHSQ, 2018c)

To put these numbers into context, alcohol continues to be the most widely used substance of misuse among U.S. youth. According to the results from a special analysis of NSDUH 2017 data, a higher percentage of youth who are 12 to 20 years old used alcohol in the past month (19.7 percent) than tobacco (11.4 percent) or illicit drugs (13.2 percent; CBHSQ, 2018c; see Exhibit 2.3).

Exhibit 2.3: Past Month Use of Alcohol, Illicit Drugs, and Tobacco by 12- to 20-Year-Olds (CBHSQ, 2018c)

| | % * |
|---------------------------|------|
| Used Alcohol | 19.7 |
| Used Illicit Drugs | 13.2 |
| Used Tobacco | 11.4 |

*Weighted percentage estimates

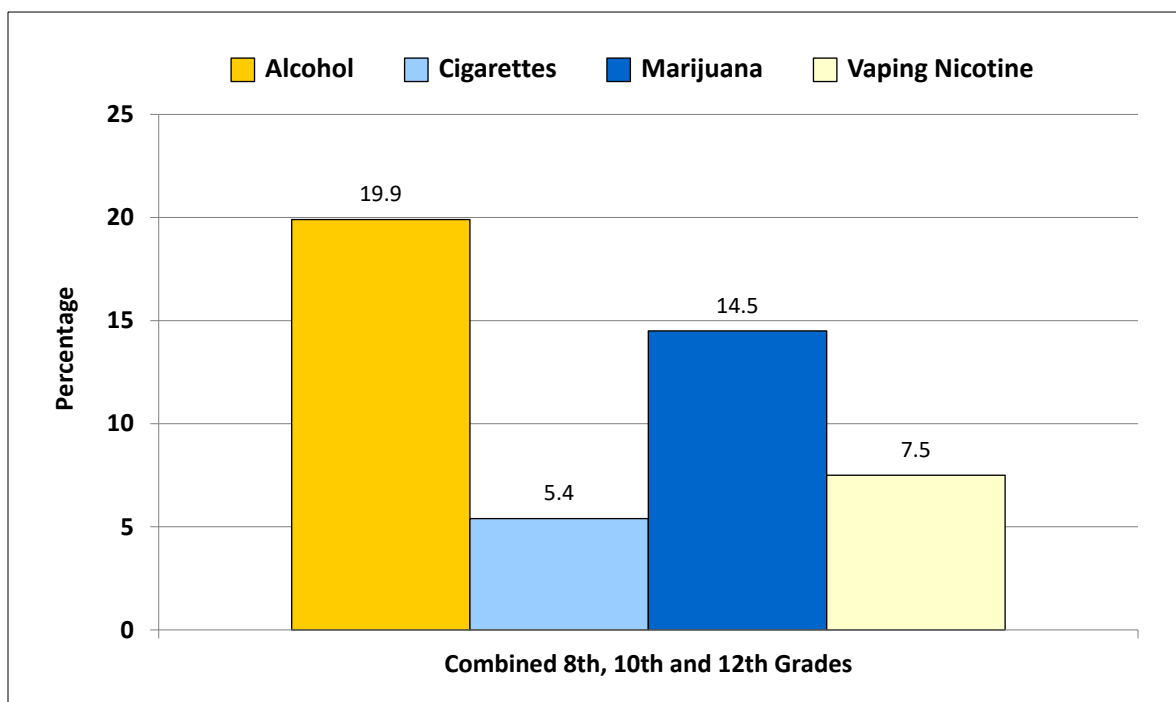
Past-Month Alcohol Use: MTF and YRBS

MTF survey (2017) results are similar to NSDUH: 19.9 percent of students (Grades 8, 10, and 12 combined) reported drinking in the 30 days prior to the survey (Miech et al., 2018). YRBS (2017) records higher rates of drinking: 29.8 percent of students in grades 9 to 12 reported having had at least one drink in the 30 days before the survey (Kann et al., 2018).

MTF data show the same patterns of substance use. As shown in Exhibit 2.4, based on MTF data, a higher percentage of youth in grades 8, 10, and 12 combined used alcohol (19.9 percent) in the month prior to being surveyed than used marijuana, the illicit drug most commonly used

by adolescents, (14.5 percent), tobacco (5.4 percent report smoking cigarettes), or nicotine by vaping (7.5 percent;²⁴Miech et al., 2018).

Exhibit 2.4: Past-Month Alcohol, Cigarette, Marijuana Use, and Vaping - Combined Grades: 2017 MTF Data (Miech et al., 2018)



Past-Month Alcohol Use: Trends

An assessment of NSDUH-based *past-month use trends* indicates there has been a general decline in underage past-month alcohol consumption over time among 12- to 20-year-old youth. There has been a 31.5 percent relative decline since 2004²⁵—when the ICCPUD was first convened—through the current time period (Exhibit 2.5; CBHSQ 2018c).

Past-Month Alcohol Use: Age and Gender Differences

Exhibit 2.5 also provides a summary of past-month underage consumption trends by selected age groups. While drinking increases with age, declines in past-month drinking have been substantial for most age groups over the years. Not unexpectedly, changes among 18- to 20-year-olds were smaller but still statistically significant (CBHSQ, 2018c).

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. According to 2017 NSDUH data, among underage drinkers, the overall prevalence of past-month alcohol use by females is equivalent to use by males: 19.7 percent of both males and females ages 12 to 20 were current drinkers (CBHSQ, 2018a). This differs by age. Prevalence was higher for females than males in 2017

²⁴ Vaping has become a common method of consuming nicotine by underage youth. Past 30-day nicotine vaping is more common than past 30-day cigarette use in all grades.

²⁵This decrease is statistically significant at the 0.05 level.

for ages 14 to 15 and 16 to 17, but was similar between females and males for ages 12 to 13 and 18 to 20 (Exhibit 2.6; CBHSQ, 2018c).

**Exhibit 2.5: Past-Month Alcohol Use for 12- to 20-Year-Olds:
2004–2017 NSDUH Data (CBHSQ, 2018c)**

| Age | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017* | % Change 2004– 2017 |
|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|--------|---------------------------|
| 12–13 | 4.3% | 4.20% | 3.90% | 3.5%* | 3.4%* | 3.5%* | 3.2%* | 2.5%* | 2.2%* | 2.1%* | 2.1%* | 1.3%* | 1.4%* | 1.6%* | -63.7% |
| 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% | 7.9%* | -51.5% |
| 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% | 19.4%* | -40.4% |
| 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% | 38.6%* | -24.5% |
| 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% | 9.9%* | -43.8% |
| 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% | 19.7%* | -31.5% |

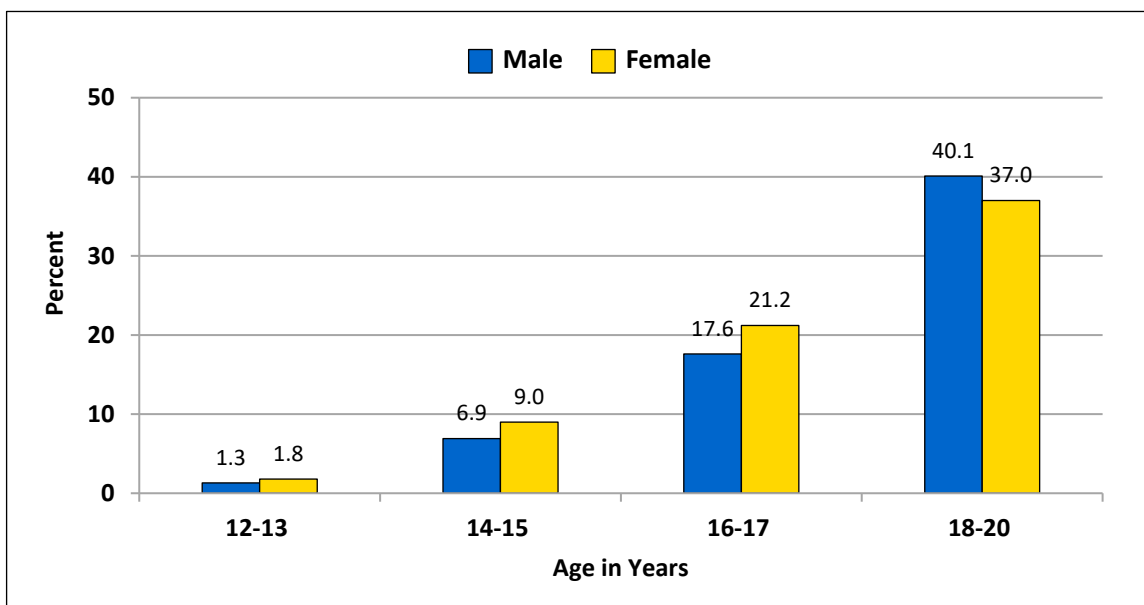
*Difference between 2004 estimate and this estimate is statistically significant at the 0.05 level.

Similarly, in the 2017 MTF data, females were more likely to report drinking in the lower grades, with 8th-grade females at 9.1 percent and males at 6.8 percent; 10th-grade females at 22.1 percent and males at 17.1 percent. In the 12th grade, a slightly higher percentage of males (34.2 percent) than females (32.3 percent) reported drinking in the past 30 days.

Lifetime Alcohol Use: Current Data

Lifetime alcohol use in the NSDUH represents respondents reporting ever having had alcohol (more than a sip) in their lifetime. In 2017, 41.0 percent of underage (ages 12 to 20) youth reported lifetime alcohol use (CBHSQ, 2018a).

Alcohol has been consumed by 41 percent of underage youth at some point in their lives (CBHSQ 2018a)

Exhibit 2.6: Past Month Alcohol Use by Age and Gender: 2017 NSDUH Data (CBHSQ, 2018c)**Lifetime Use: MTF and YRBS**

MTF: 41.7 percent of students (8th, 10th and 12th grades combined) have had alcohol at some point in their lives (Miech et al., 2018).

YRBS: 60.4 percent of students have had at least one drink of alcohol on at least one day in their lives (drinking alcohol does not include drinking a few sips of wine for religious purposes; Kann et al., 2018).

Lifetime Alcohol Use: Trends

The lifetime alcohol use trend, as demonstrated in Exhibit 2.7, has declined 25.3 percent over the period from 2004 to 2017 (CBHSQ, 2018a).

The percentage of underage youth who have used alcohol in their lifetimes continues to decline (CBHSQ, 2018a)

Binge Drinking: Current Data

Among underage drinkers (12- to 20-year-olds), 11.9 percent engaged in **binge drinking**²⁶ on at least 1 day in the past 30 days, according to NSDUH. This represents 4.5 million underage youth.

4.5 million underage youth reported binge drinking in the past 30 days (CBHSQ, 2018b)

²⁶Binge drinking is defined in the NSDUH as four (for females) or five (for males) or more drinks on the same occasion either at the same time or within a few hours (CBHSQ 2018b).

Binge Use of Alcohol: MTF and YRBS

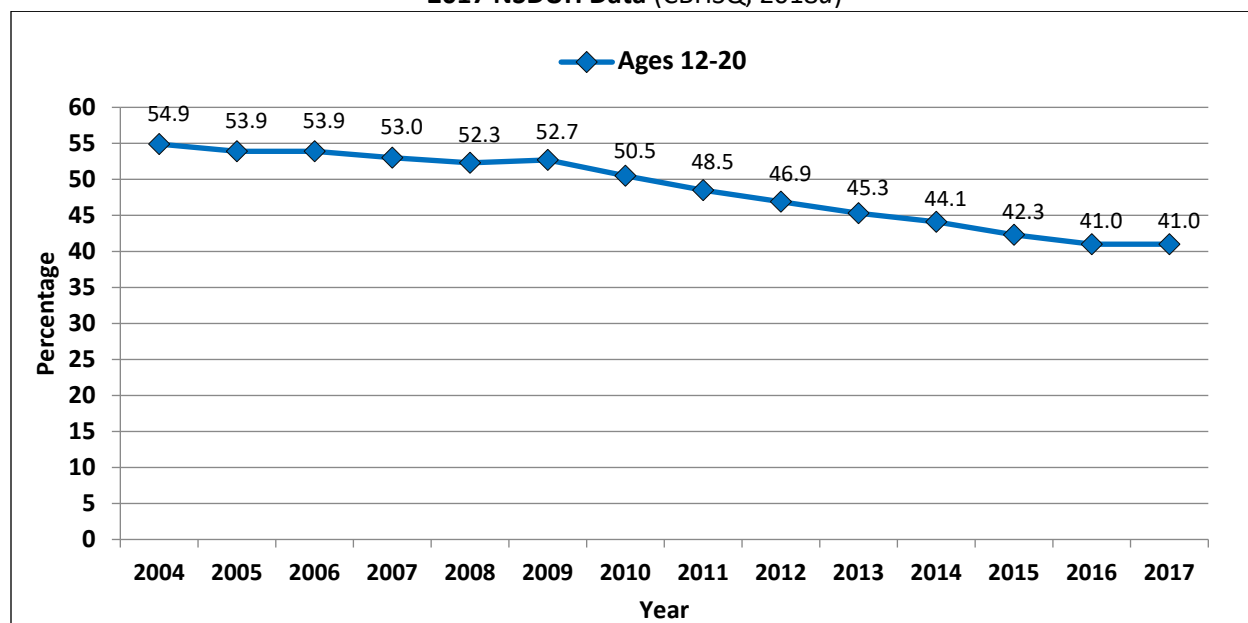
MTF: 9.9 percent of students (8th, 10th and 12th grades combined) reported consuming 5 or more drinks in a row in the 2 weeks prior to the survey (Miech et al., 2018).

YRBS: 13.5 percent of students in grades 9-12 reported 4 (for females) or 5 (for males) or more drinks in a row in the 30 days prior to the survey (Kann et al., 2018).

Binge Drinking: Trends

Trends in binge drinking are shown in Exhibit 2.8. As noted, due to a change in the definition of binge drinking in the 2015 NSDUH survey (which lowered the number of drinks for females from five to four), trend data from NSDUH are only available from 2015 forward. There was a significant relative decline overall for youth ages 12 to 20 for binge drinking in 2017 compared with 2015²⁷ (CBHSQ, 2018c).

**Exhibit 2.7: Trends in Lifetime Use of Alcohol by 12- to 20-Year-Olds:
2017 NSDUH Data (CBHSQ, 2018a)**



**Exhibit 2.8: Past-Month Binge Alcohol Use for 12- to 20-Year-Olds,
2015–2017 NSDUH Data (CBHSQ, 2018a)**

| Age | 2015 | 2016 | 2017 | % Change 2015–2017 |
|-------|-------|--------|--------|--------------------|
| 12–20 | 13.4% | 12.1%* | 11.9%* | 11.2% |

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

²⁷NSDUH 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.

Binge Trend Data: MTF and YRBS

MTF trend data among students in grades 8, 10, and 12 indicate binge drinking²⁸ increased slightly in the 1990s, leveled off in the early 2000s, and then began a gradual decline in 2002. A recent article in *Pediatrics*, the official journal of the American Academy of Pediatrics, provides a detailed analysis of this trend (Jang, Patrick, Keyes, Hamilton, & Schulenberg, 2017). Declines in binge drinking continued through 2016, which marked the lowest levels in all three grades measured by the MTF survey.

The MTF authors also note that although the declines in binge drinking from 1991 to 2016 were quite substantial—with 8th graders declining by 70 percent, 10th graders by 50 percent, and 12th graders by 30 percent—binge drinking rates remained unchanged for all grades surveyed in 2017, signaling a potential leveling off of the rates (Johnston, 2018b).

A similar assessment of binge drinking trends based on YRBS data indicates binge drinking increased significantly from 1991 through 1999, and then declined significantly from 1999 through 2015. Using only current drinkers in the denominator, it was determined that most high school students who drink are also binge drinkers (57.8 percent). Of those who binge drank, 43.8 percent consumed eight or more drinks in a row (Esser, 2017).

Binge Drinking: Age and Gender

In 2017, binge drinking increased steadily from age 12 to 20, peaked at age 22 (47.0 percent), and then decreased beyond young adulthood (data not shown for adult drinkers). Exhibit 2.9 provides a summary of trends for past-month binge alcohol use by selected age categories (for data from 2015 on). Significant declines in binge drinking from 2015 to 2017 are evident for 16- to 17-year-olds and 18- to 20-year-olds, and for 12- to 20-year-olds overall (CBHSQ, 2018c). Rates of binge drinking in 2017 are similar for males (12.0 percent) and females (11.9 percent (CBHSQ, 2018a).

Binge Use by Age: MTF

Data from the MTF reveal similar increases in alcohol consumption and binge drinking by age (Exhibit 2.10; Miech et al., 2018).

MTF trend data demonstrate that since 1991, rates of binge drinking have generally been *decreasing* across all grade groups, including college-age respondents (ages 19-22), with rates for males decreasing faster than for females. As a result, binge drinking rates among males and females have been converging since 1991 (Exhibit 2.11). For example, in 1991, among 12th graders, there was a 16.6 percentage point difference in the prevalence of binge drinking between males and females; in contrast, in 2017, the difference was only 3.9 percentage points (Miech et al., 2018).

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) may result in a greater blood alcohol concentration

²⁸Binge drinking in the MTF survey is defined as five drinks for both males and females.

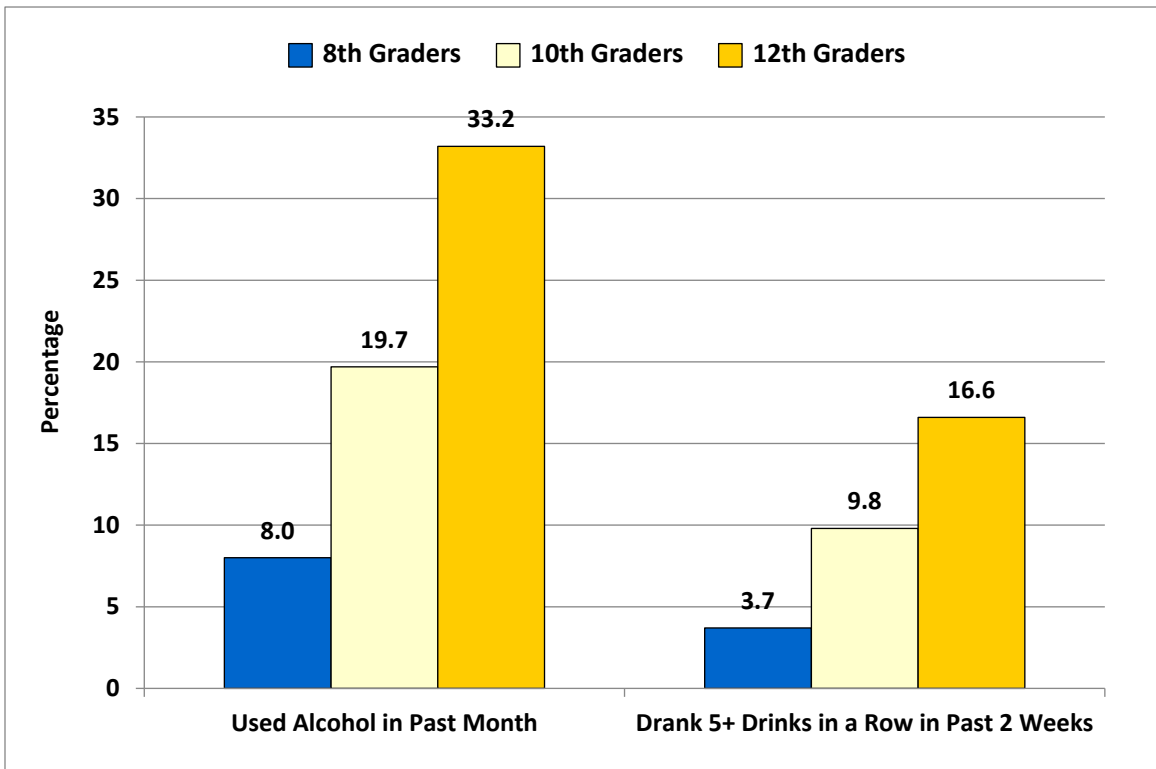
(BAC) in females compared with males consuming the same amount of alcohol. These physiological differences suggest that females may experience alcohol-related problems at lower doses of alcohol than males. On the other hand, males tend to have lower reactivity (perceived effects of alcohol as a function of amount consumed), putting them at greater risk for binge and heavy drinking (Schulte, Ramo, & Brown, 2009).

Exhibit 2.9: Past-Month Binge Alcohol Use for 12- to 20-Year-Olds by Age, 2015–2017 (CBHSQ, 2018c)

| Age | 2015 | 2016 | 2017 | % Change 2015–2017 |
|-------|------|------|-------|--------------------|
| 12–13 | 0.7 | 0.3 | 0.6 | -14.3% |
| 14–15 | 3.8 | 3.7 | 3.8 | 0% |
| 16–17 | 12.6 | 10.2 | 10.9* | -13.5% |
| 18–20 | 27.8 | 26.2 | 24.9* | -10.4% |
| 12–17 | 5.8 | 4.9 | 5.3 | -8.6% |
| 12–20 | 13.4 | 12.1 | 11.9* | -11.2% |

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

Exhibit 2.10: Alcohol Use Within the Past Month and Binge Drinking Among 8th, 10th, and 12th Graders: 2017 MTF Data (Miech et al., 2018)



Heavy Alcohol Use: Current Data

Heavy alcohol use is assessed in the NSDUH as binge drinking on 5 or more days in the past 30 days. By definition, all heavy alcohol users are also binge drinkers (CBHSQ, 2018a).

Approximately 2.5 percent of 12- to 20-year-old respondents (slightly under 1 million) are classified as heavy drinkers in the 2017 NSDUH; 2.6 percent of males ages 12 to 20 report heavy drinking and 2.3 percent of females (CBHSQ 2018a).

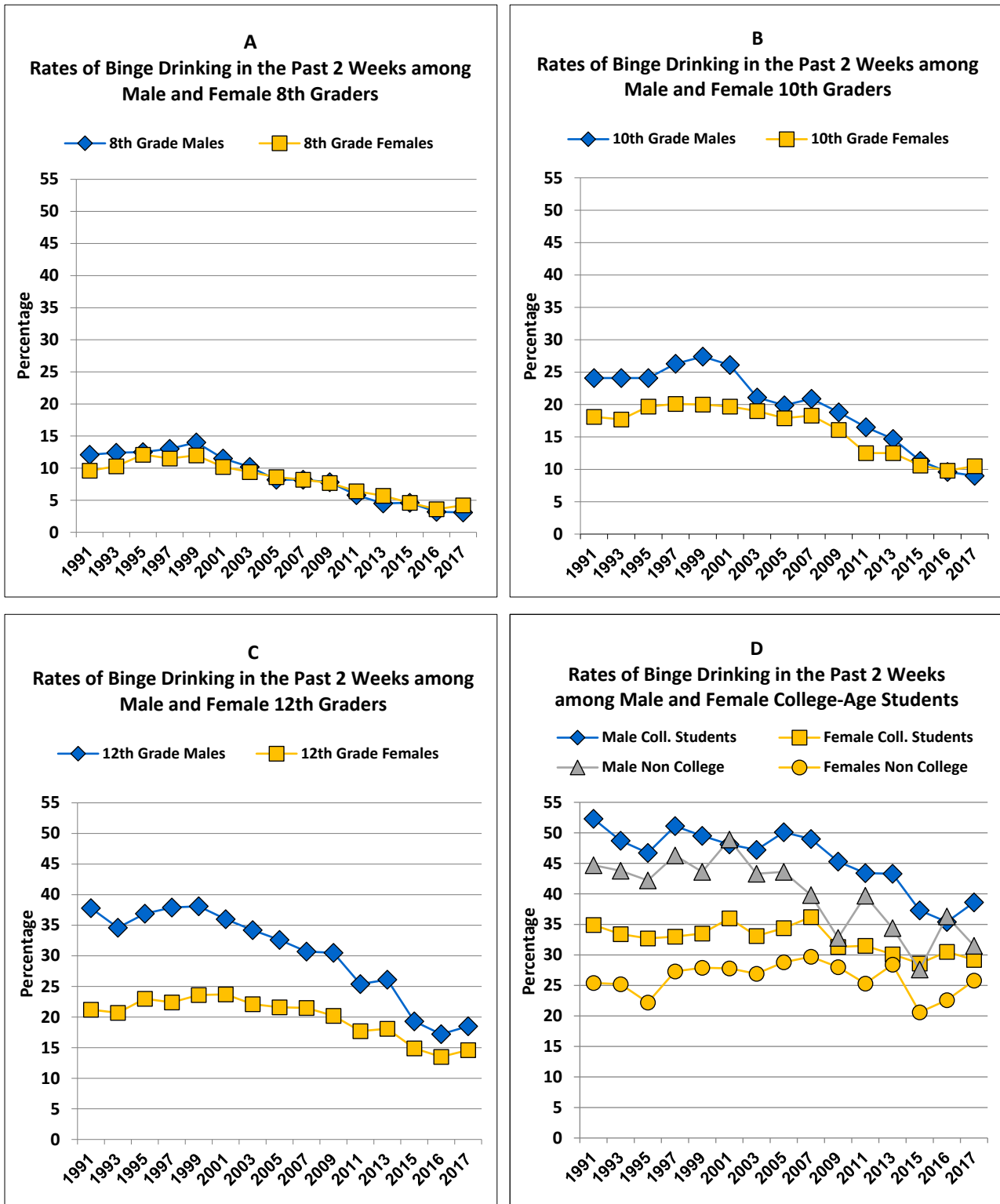
Almost 1 million underage youth reported heavy alcohol use in the past 30 days (CBHSQ, 2018a)

Heavy Alcohol Use: Trends

Trends in heavy alcohol use based on NSDUH survey results indicate that heavy consumption declined significantly in both 2016 and 2017, compared to 2015 (Exhibit 2.12; CBHSQ, 2018c).

Heavy alcohol use in underage drinkers has declined since 2015 (CBHSQ, 2018c)

Exhibit 2.11: Rates of Binge Drinking in the Past 2 Weeks Among Male and Female 8th, 10th, and 12th Graders and College/College-Age Students:²⁹ 1991–2017 MTF Data
 (Johnston et al., 2018a; Miech et al., 2018)



**Exhibit 2.12: Trends in Heavy Alcohol Use for 12- to 20-Year-Olds:
2015–2017 NSDUH Data (CBHSQ, 2018c)**

| Age | 2015 | 2016 | 2017 | % Change |
|-------|------|-------|-------|----------|
| 12–20 | 3.3% | 2.8%* | 2.5%* | 24.2% |

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

Extreme Binge Drinking: Current Data

A troubling subset of binge drinking is high-intensity (also referred to as extreme binge) drinking, defined by the MTF using two measures: the consumption of 10 or more drinks or 15 or more drinks on one or more occasions during the previous 2-week period. Such drinking represents an even higher level of a consumption pattern (binge drinking) that is already known to be dangerous. According to MTF data for 2017, 6.0 percent of 12th graders reported consuming 10 or more drinks in a row, and 3.1 percent reported consuming 15 or more drinks in a row within the previous 2 weeks (Miech et al., 2018).

Similarly, YRBS data from 2017 indicated that 4.4 percent of high school students (grades 9 through 12) reported consuming 10 or more drinks within a couple of hours at least once in the last month (Kann et al., 2018).

Extreme Binge Drinking: Trends

Trends in extreme binge or high-intensity drinking have been tracked by MTF since 2005. During this time period, there has been a decline of 4.6 percent for 10 or more drinks in a row and a decline of 2.6 percent for 15 or more drinks in a row, compared with a decline of 10.5 percent for all binge drinking. Rates for 2016 for extreme binge drinking were at the lowest levels recorded by the MTF to date; rates for 2017 were not significantly different from 2016 (Miech et al., 2018). However, an in-depth analysis of binge and extreme binge drinking at the 10+ and 15+ drinks level conducted in 2013 suggests extreme binge drinking at the 15+ level may be more entrenched in some adolescent subcultures than binge drinking (5+ drinks; Patrick, Schulenberg, Martz, Maggs, O'Malley, & Johnston, 2013).³⁰

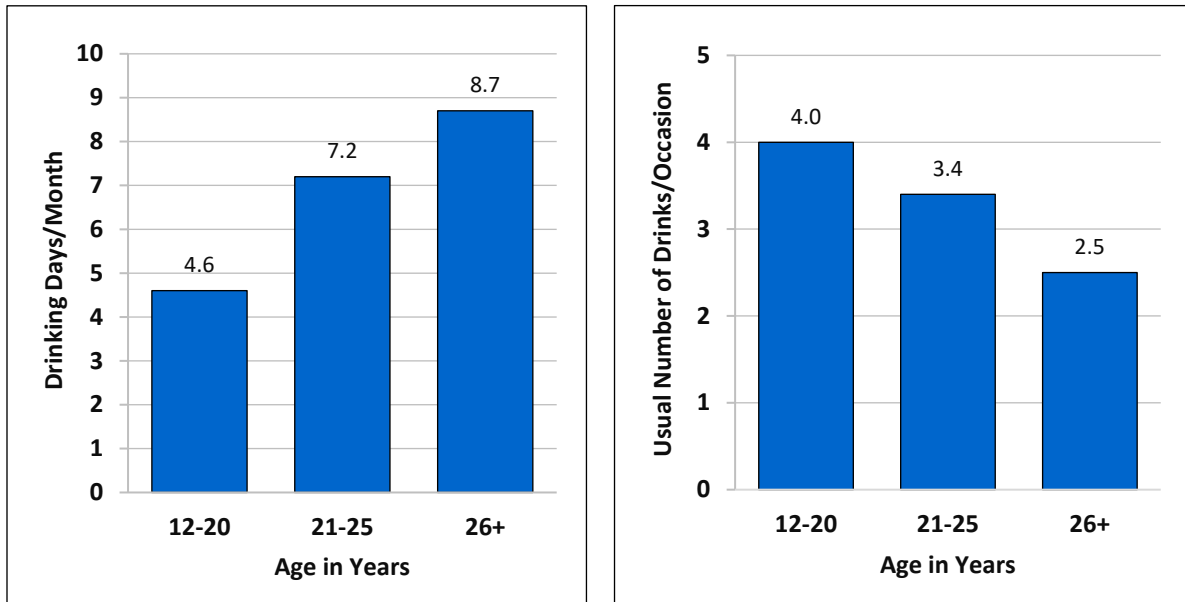
Binge Drinking Patterns

According to NSDUH data, underage drinkers tend to drink less often than adults; however, when they do drink, they drink more intensely. As part of the NSDUH survey, participants were asked about the number of drinks consumed on their last occasion of alcohol use in the past month. Underage drinkers consumed, on average, about four drinks per occasion, about four times a month, whereas adult drinkers (26 and older) averaged two and one-half drinks per occasion, about nine times a month (CBHSQ, 2018c; Exhibit 2.13).

²⁹MTF 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.

³⁰MTF authors note 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: Number of Drinking Days per Month and Usual Number of Drinks per Occasion for Youth (12–20), Young Adults (21–25), and Adults (≥26): 2017 NSDUH Data (CBHSQ, 2018c)



Youth ages 12 to 15 can, according to a theoretical analysis, reach the same BAC after consuming 3 to 4 drinks within 2 hours as people ages 18 and older who consume 4 to 5 drinks during this same time period (Donovan, 2009). This suggests that binge and heavy alcohol use may be even more of a problem than is reflected in survey data, and that it may be particularly dangerous for younger adolescents.

Combining the results from the 2016 and 2017 surveys, slightly more than half (53 percent) of underage drinkers report consuming three or more drinks on a single occasion. Nearly 1 out of 3 underage youth consume 5 or more drinks, and almost 8 percent consume 9 or more drinks (Exhibit 2.14; CBHSQ, 2018c).

According to 2017 NSDUH data (Exhibit 2.15), the number of drinks consumed on the 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, 2018c). Using students who drink as the denominator, YRBS data indicates that more than half who drink are binge drinkers (Esser, 2017).

Exhibit 2.14: Number of Drinks Consumed on a Single Occasion by Underage (Ages 12 to 20) Youth: 2016, 2017 Combined Data NSDUH (CBHSQ, 2018c)

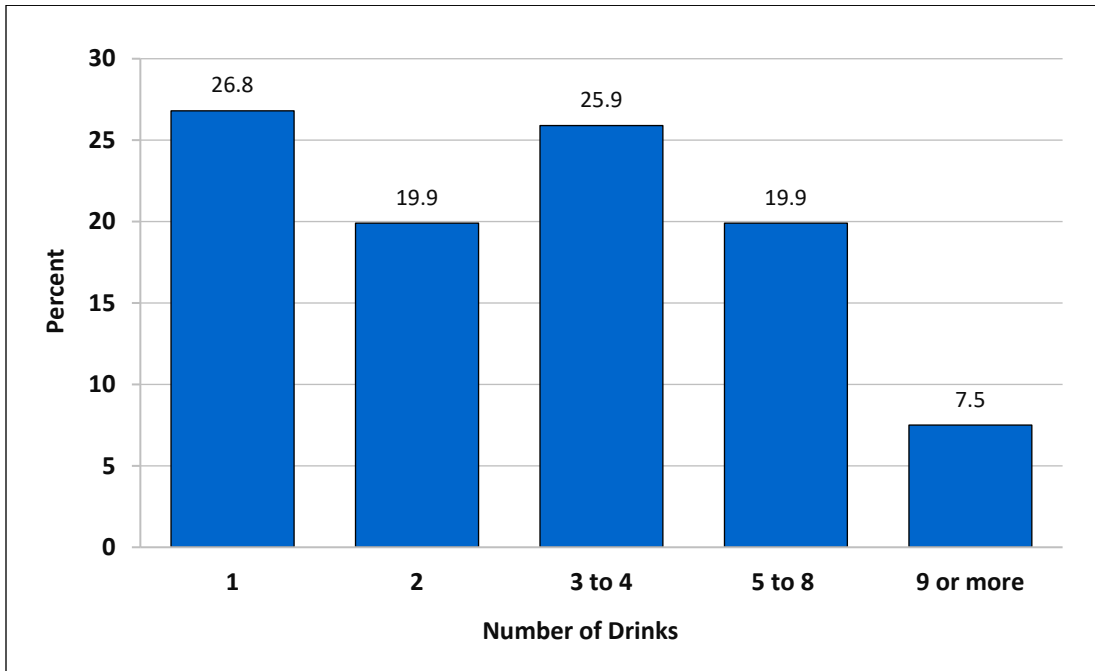
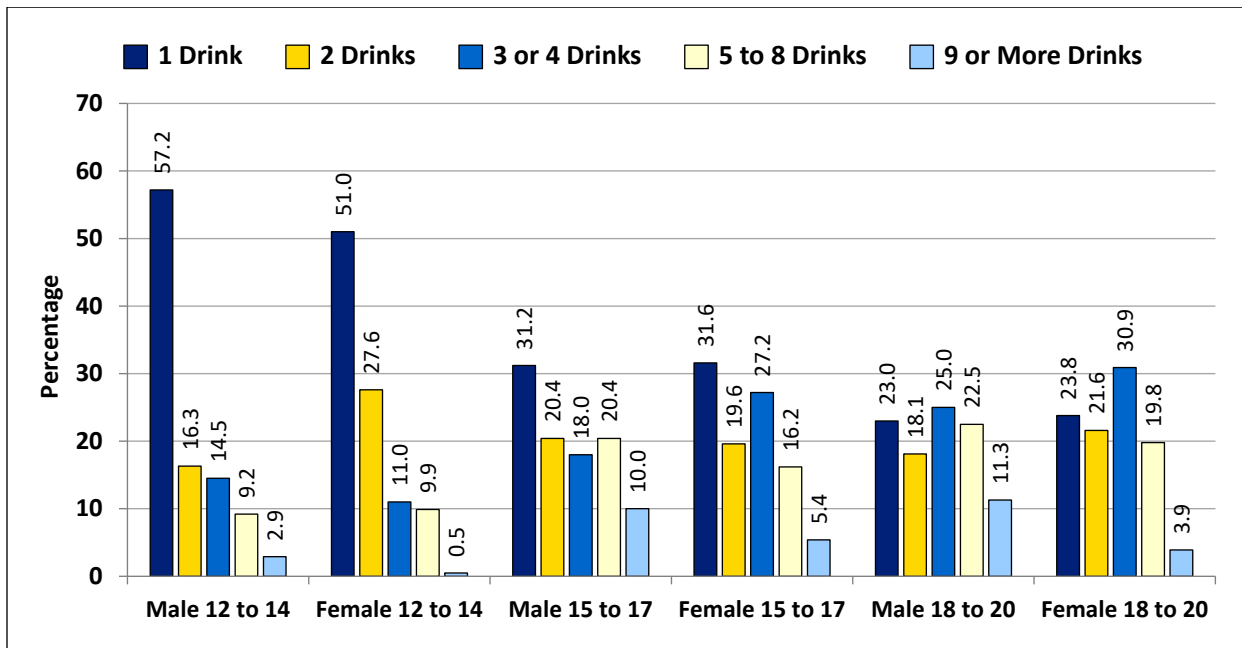


Exhibit 2.15: Number of Drinks Consumed on Last Occasion of Alcohol Use in the Past Month Among Past-Month Alcohol Users Ages 12–20, by Gender and Age Group: 2016, 2017 Combined Data NSDUH (CBHSQ, 2018c)



Race and Ethnicity

According to combined 2002–2017 NSDUH data,³¹ Whites ages 12 to 20 were more likely to report past 30-day alcohol use than any other racial or ethnic group of the same age. The detailed prevalence of past-month alcohol use by gender and race/ethnicity was:

- White males (29.5 percent); White females (28.6 percent).
- American Indian or Alaska Native males (21.2 percent); American Indian or Alaska Native females (24.2 percent).
- Males of multiple races (22.2 percent); females of multiple races (24.0 percent).
- Native Hawaiian or Other Pacific Islander males (23.7 percent); Native Hawaiian or Other Pacific Islander females (23.8 percent).
- Hispanic or Latino males (23.5 percent); Hispanic or Latina females (21.3 percent).
- Black or African American males (18.1 percent); Black or African American females (17.5 percent).
- Asian males (16.4 percent); and Asian females (15.1 percent; CBHSQ 2018c).

NSDUH data (2015–2017 combined) on binge alcohol use among males and females ages 12 to 20 by gender and race/ethnicity are shown in Exhibit 2.16 (CBHSQ, 2018c). Estimates of underage binge drinking by gender and race/ethnicity include:

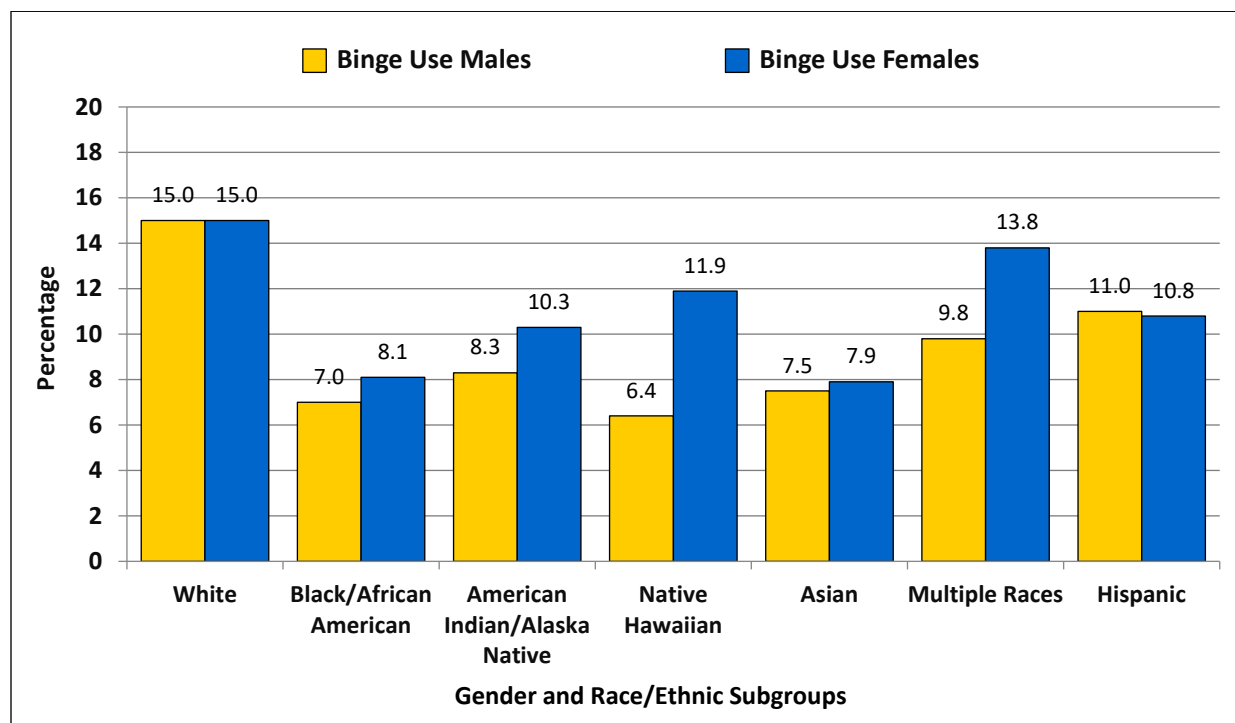
- White males (15 percent); White females (15 percent).
- Males of multiple races (9.8 percent); females of multiple races (13.8 percent).
- American Indian or Alaska Native males (8.3 percent); American Indian or Alaska Native females (10.3 percent).
- Native Hawaiian or Other Pacific Islander males (6.4 percent); Native Hawaiian or Other Pacific Islander females (11.9 percent).
- Hispanic males (11.0 percent); Hispanic females (10.8 percent).
- Black males (7.0 percent); Black females (8.1 percent).
- Asian males (7.5 percent); Asian females (7.9 percent).

Extent of Progress: Early Initiation of Drinking and Alcohol Use Disorders

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).

³¹To 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.

Exhibit 2.16: Binge Drinking in the Past Month Among People Ages 12–20 by Race/Ethnicity and Gender, Annual Averages: 2016–2017 Combined Data NSDUH (CBHSQ, 2018c)



Recent NIAAA-funded research on the effects of alcohol on the developing brain indicates that heavy alcohol use is linked to disruptions in typical patterns of brain maturation and other structural changes associated with cognitive deficits (Meda et al., 2018; Pfefferbaum et al., 2017). 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).

Age of First Use of Alcohol: Current Data

Drinking often begins at a very young age. The average age of first use for youth who initiated drinking before age 21 is about 16.4 years old. However, among those who initiated alcohol use in the past year, 757,000 reported being ages 12 to 14 when they initiated. This means that for every day in 2017, approximately 2,075 young people 12 to 14 years of age drank alcohol for the first time (CBHSQ, 2018c).

The NSDUH survey (CBHSQ, 2018c) indicates that the average age of initiation of alcohol use is:

- 15.1 years old among lifetime alcohol users.
- 15.2 years among past-month users.
- 14.9 years among current binge drinkers.

Age at First Use: MTF and YRBS

Alcohol use by the end of 6th grade was reported by 9.8 percent of 8th grade respondents in 2017, 6.2 percent of 10th grade respondents, and 3.6 percent of 12th grade respondents³² (Miech et al, 2018). Similarly, YRBS data shows that 15.5 percent of high school students begin drinking before age 13 (Kann et al., 2018).

Age of First Use: Trends

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.

As shown in Exhibit 2.17, among past-year initiates³³ 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 16.4 in 2017 with significant increases since 2006. This indicates a delay in initiation of drinking (CBHSQ, 2018c).³⁴

Prevalence of DSM-IV-TR Alcohol Abuse or Dependence Among Youth: Current Data

Problematic alcohol use as defined by NSDUH is determined by the presence of a *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*³⁵ (DSM-IV-TR; American Psychiatric Association [APA], 2000) diagnosis of alcohol abuse or dependence. According to 2017 NSDUH data, about 3.8 percent of 12- to 20-year-olds met criteria for DSM-IV-TR alcohol abuse or dependence (CBHSQ, 2018c).

Almost 4 percent of underage youth met criteria for alcohol abuse or dependence (CBHSQ, 2018c)

Prevalence of DSM-IV-TR Alcohol Abuse or Dependence Among Youth: Trends

Trends in DSM-IV-TR alcohol use disorders (abuse or dependence) among people ages 12 to 20 from 2004 to 2017 are provided in Exhibit 2.18. There has been an ongoing and significant decline in alcohol use disorders (a 60.2 percent decline since 2004).

Nonetheless, the prevalence of DSM-IV-TR alcohol abuse or dependence among underage drinkers remains high (CBHSQ, 2018c).

Underage alcohol abuse or dependence disorders have declined since 2004 (CBHSQ, 2018c)

³²The authors note differences between grades can be due to cohort differences, memory errors, and differences in the definition of the event of drinking as individuals age.

³³Past-year initiates are those who drank alcohol for the first time in their lives in the 12 months before the survey interview.

³⁴Appendix B further discusses methodological issues in measuring age at first use and other indicators of alcohol initiation.

³⁵The DSM-IV-TR (APA, 2000) criteria for abuse or dependence used in this study were originally developed for use with adults, and using them to assess abuse or 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 2.17: Average Age of First Use Among Past-Year Initiates of Alcohol Use
Who Initiated Before Age 21: 2004–2017 NSDUH Data (CBHSQ, 2018c)**

| Year | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|--------------------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 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* | 16.4* |

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

**Exhibit 2.18: Past Year DSM-IV-TR Alcohol Abuse or Dependence for 12- to 20-Year-Olds:
2004–2017 NSDUH Data (CBHSQ, 2018c)**

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | % Change 2004–2017 |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|
| 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* | 3.8* | -60.4% |

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

Prevalence of DSM-IV -TR Alcohol Abuse or Dependence: Age and Gender

As shown in Exhibit 2.19, according to combined 2016–2017 NSDUH data, the prevalence for DSM-IV-TR alcohol abuse or dependence for 18- to 20-year-olds (8.0 percent) is significantly lower than for 21- to 24-year-olds (12.0 percent) and 25- to 29-year-olds (9.5 percent), but not significantly different than for 30- to 34-year-olds (8.3 percent). In addition, 0.4 percent of 12- to 14-year-olds and 3.2 percent of 15- to 17-year-olds met criteria for DSM-IV alcohol abuse or dependence (CBHSQ, 2018c). The prevalence of alcohol abuse or dependence as defined by DSM-IV-TR is highest among those ages 21–29 (Exhibit 2.19).

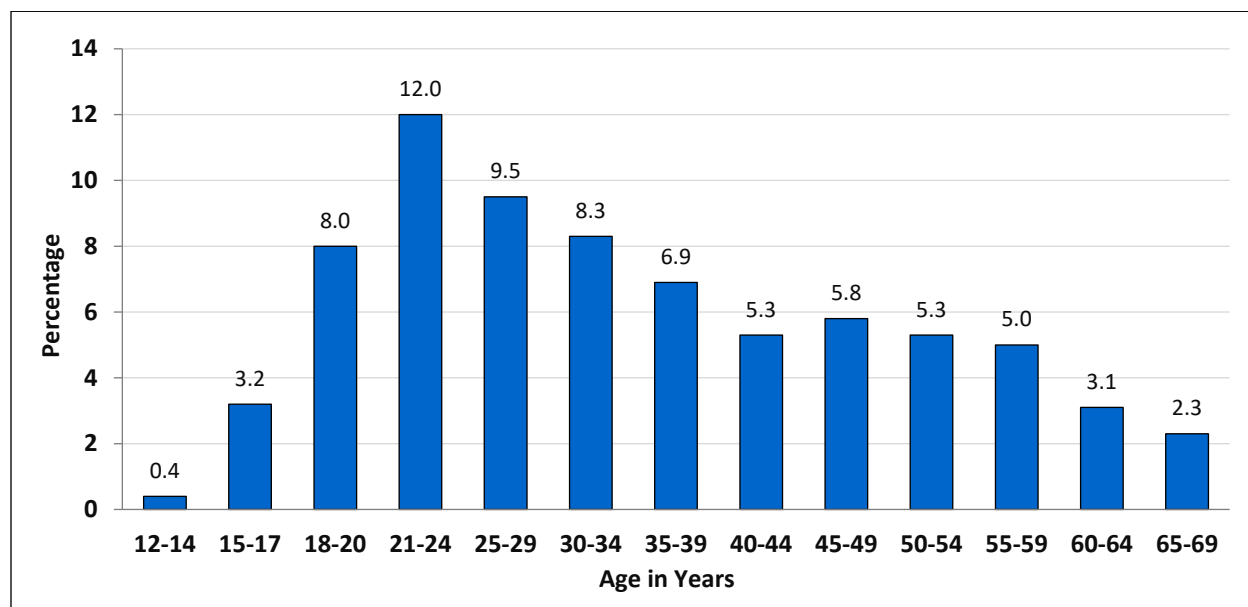
Exhibit 2.20 provides trends in DSM-IV-TR diagnoses by age and gender from 2004 through 2017. There has been a significant decline in prevalence for all groups since 2004.

Driving After Drinking: Current Data

As detailed in Chapter 1, the greatest mortality risk for underage drinkers continues to be from motor vehicle crashes. In 2017, slightly more than 60 percent of unintentional injury deaths among individuals 12 to 20 years of age were due to motor vehicle traffic crashes (CDC, 2019).

The 2017 NSDUH survey indicates that 4.1 percent of youth ages 16 to 20 reported driving after drinking at least once in the past year. Although this represents a significant decline from the 5.1 percent reported in 2016, it is still a troubling number of drivers likely to cause property damage, injuries, and deaths related to traffic crashes (almost 0.9 million in 2017; CBHSQ, 2018a).

Exhibit 2.19: Prevalence of Past-Year DSM-IV-TR Alcohol Abuse or Dependence by Age: 2016–2017 NSDUH Data (CBHSQ, 2018c)



Driving After Drinking: Trends

One important sign of progress in addressing underage drinking is that alcohol-related traffic deaths among young drivers ages 15 to 20 have declined 83 percent since 1982, shortly before passage of the National Minimum Age Drinking Act in 1984 (National Center for Statistics and Analysis [NCSA], 2018). Data since 1997 from NHTSA’s NCSA are provided in Exhibit 2.21.

Using MTF data, O’Malley and Johnston (2013) reported—and have subsequently updated through annual special analyses—trend data for high school seniors who reported any of the following behaviors in the past 2 weeks: driving after drinking any alcohol; driving after 5 or more drinks; being a passenger when the driver has had any alcohol; or being a passenger with a driver who has had 5 or more drinks (Exhibit 2.22; O’Malley, 2018, personal correspondence). As demonstrated in Exhibit 2.22, 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.

YRBS Trend Data

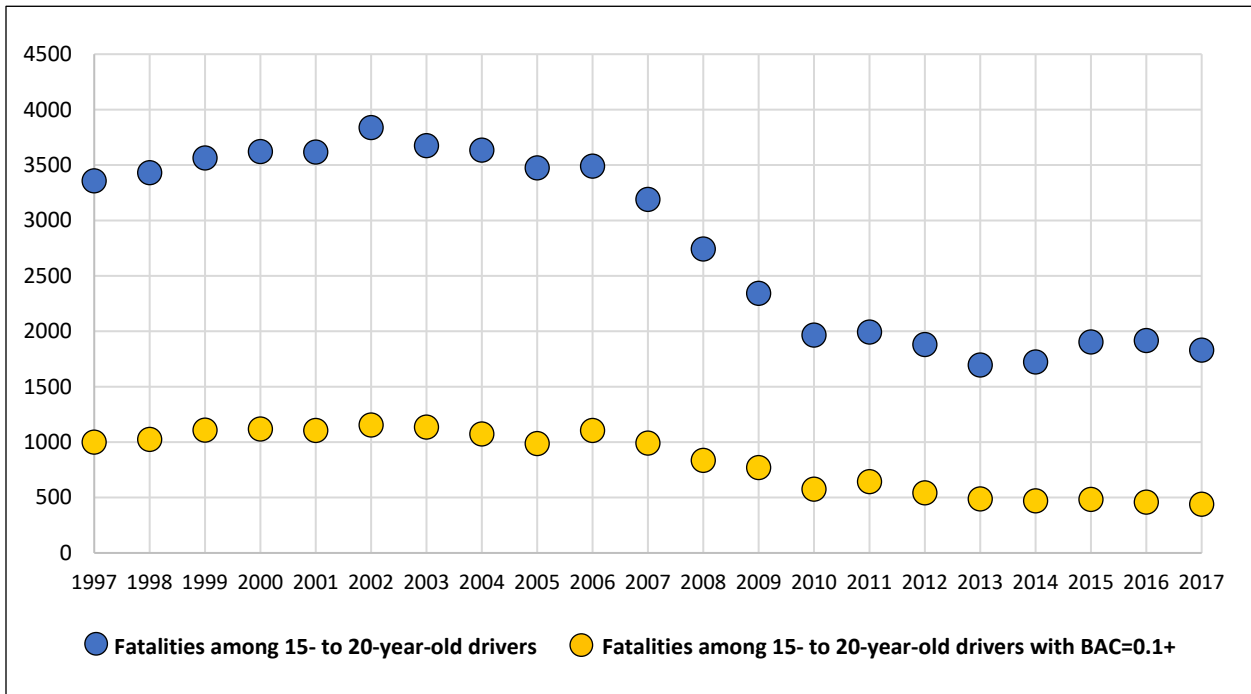
YRBS data for 2017 indicate that among the 62.6 percent of high school students who drove a car or other vehicle during the 30 days before the survey, 5.5 percent of these students drove when they had been drinking alcohol. Trend analysis of data from 2013 through 2017 indicate that there has been a significant linear decrease in the prevalence of students having driven when they had been drinking alcohol (10.0%–5.5%) (among those who drove during the 30 days before the survey; Kann, 2018).

Exhibit 2.20: Past-Year DSM-IV-TR Alcohol Abuse or Dependence for 12- to 20-Year-Olds, by Age and Sex: 2004–2017 NSDUH Data (CBHSQ, 2018c)

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | % Change 2004–17 |
|--------------------|------|------|------|------|------|-------|-------|-------|-------|-------|------|------|------|------|------------------|
| 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* | 3.8* | -60.4% |
| 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* | 1.8* | -70.5% |
| 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* | 7.8* | -53.6% |
| 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* | 3.9* | -63.9% |
| 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* | 3.7* | -55.4% |

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

Exhibit 2.21: Trends in Fatalities for 15- to 20-Year-Old Drivers, 1997–2017 NHTSA Data (NCSA, 2018)



Driving After Drinking: Age and Gender

Males in the 12th grade were more than twice as likely as 12th-grade females to report driving after five or more drinks in the last two weeks (O'Malley & Johnston, 2013). Very high percentages of high school seniors who drove after drinking five or more drinks in the last two weeks experienced consequences. O'Malley and Johnston (2013) reported that in the past 12 months, 43.2 percent of these seniors received a ticket or warning and 30.2 percent were involved in a crash.

In high school seniors, an increased probability of driving after drinking was associated with driving more miles, spending more evenings out for fun or recreation, working more than average, or having engaged in truancy more than average (O'Malley & Johnston, 2013). Driving after drinking in college students is associated with living off campus (Quinn & Fromme, 2012b). Higher socioeconomic status and driving someone's car without permission during adolescence were associated with self-reported DUI in young adulthood (Delcher, Johnson, & Maldonado-Molina, 2013).

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 on 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 driving under the simultaneous influence of alcohol and illicit drugs has decreased among individuals 16 to 20 years of age since 2002, it remains a concern (Lipari, Hughes, & Bose, 2016).

Summary of Progress

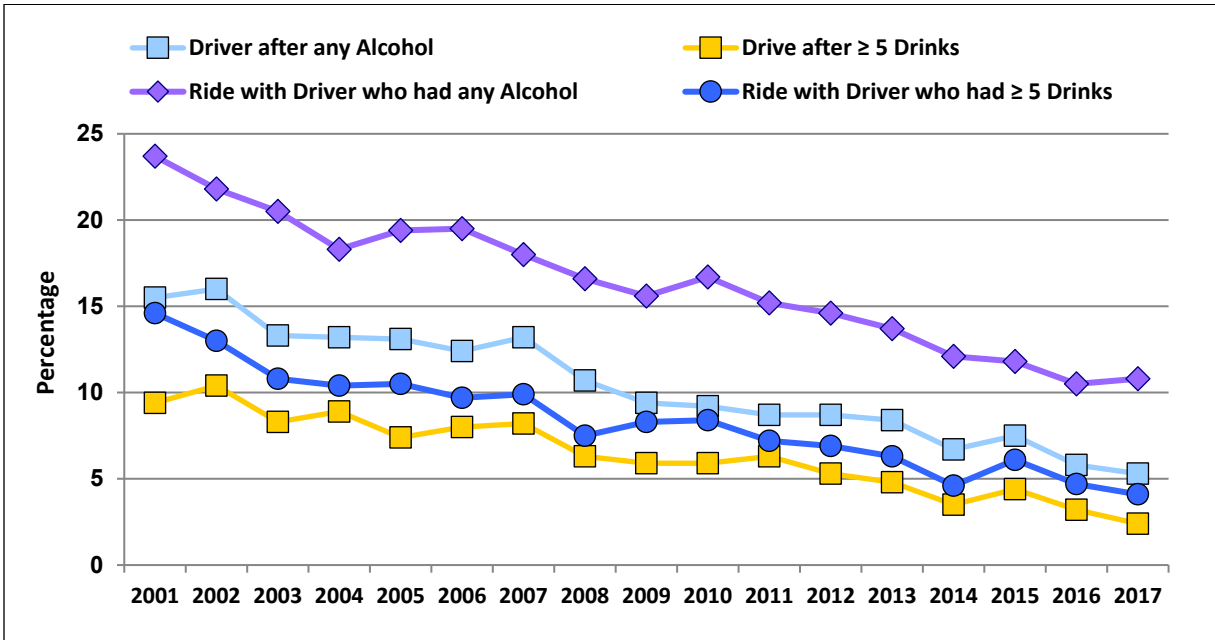
The above data demonstrate that meaningful progress has been made in reducing underage drinking prevalence, DSM-IV-TR alcohol use disorders, and related problems such as traffic fatalities.

Factors that have contributed to this progress are varied and complex; however, one factor has likely been increased attention to the risks of underage drinking over the past few decades. During this time period, federal initiatives, particularly adoption of the age-21 minimum legal drinking age (MLDA), have lifted underage drinking to a more prominent place on the national public health agenda, supported the creation of a policy climate in which relevant legislation has been passed by states and localities, raised awareness of the importance of aggressive enforcement, and stimulated coordinated citizen action. Although room for improvement in national, state, and local policy environments remains, these changes have provided a framework for a national commitment to reducing underage drinking.

Despite progress, underage alcohol use, particularly binge 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, particularly binge drinking, are still unacceptably high, resulting in preventable and tragic health and safety consequences for the nation's youth, families, communities, and society. The recent leveling off of declines or increases in some measures of drinking indicate that ongoing attention is needed to all of these factors to ensure

rates continue to stay low or decline further. Therefore, ICCPUD remains committed to an ongoing, comprehensive approach to preventing and reducing underage drinking.

Exhibit 2.22: Trends in Percentage of 12th Graders Reporting Driving after Alcohol Use or Riding with a Driver Who Had Been Using Alcohol³⁶, 2017 MTF Data (O'Malley, 2013, 2018)



³⁶Respondents were asked if they had engaged in either behavior (driving after drinking or riding with driver who had been drinking) in the past two weeks.

CHAPTER 3

Factors Affecting Underage Alcohol Use

CHAPTER 3: FACTORS AFFECTING UNDERAGE ALCOHOL USE

Summary of Chapter

Chapter 3 discusses factors influencing underage drinking, beginning with population-level factors, including the policy environment, adult drinking patterns, availability and access to alcohol, and advertising. The chapter then discusses social contexts, including locations such as underage drinking parties and the college environment. The chapter concludes with a description of parent and peer influences and genetic factors.

Factors Influencing Underage Drinkers

Adolescent alcohol consumption is a complex behavior influenced by multiple factors, including the normal maturational changes that all adolescents experience; the various physical, social and cultural contexts in which adolescents live (e.g., family, peers, school); genetic, neurobiological, psychological, and social factors specific to each adolescent; and environmental factors that influence availability and appeal of alcohol (e.g., alcohol policies and their enforcement, marketing practices, media exposure). The discussion below begins with those factors that have the broadest population-level impact and ends with those that are specific to the individual.

Population-Level Factors

Factors that operate at the population level include:

- Public policies regarding alcohol and the enforcement of those policies, including laws limiting youth access to alcohol.
- Perceived acceptance of alcohol use by society as exhibited by adult drinking patterns.
- Types of beverages consumed.
- Advertising and marketing both nationally and locally.

Effects of Policy Environment

There is a large body of scientific literature on the effectiveness of alcohol policies such as increasing alcohol taxes, regulating alcohol outlet density, and commercial host (dram shop) liability in reducing excessive drinking, including underage drinking.³⁷ 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 under age 21 from 2000 to 2013 were alcohol-related, stronger alcohol policy environments were associated with lower mortality rates from alcohol-related motor vehicle crashes (Hadland et al., 2017).

The most significant alcohol policy related specifically to underage drinking is the age-21 minimum legal drinking age (MLDA). As described in earlier chapters, enactment and enforcement of that law has reduced underage fatalities and injuries, in large part through reductions in traffic crashes among underage drivers.

³⁷For a detailed review of these and 23 other alcohol policies, including data on their adoption by the 50 states and the District of Columbia, see the *State Performance and Best Practices Report*, produced concurrently with this report and available at <https://www.stopalcoholabuse.gov>.

The higher MLDA in the U.S. relative to other countries may be partially responsible for the lower binge drinking rates among teenagers in the U.S. Data from 2015 indicate that in many European countries, a significant proportion of young people ages 15 to 16 report binge drinking at rates much higher than in the U.S. (Exhibit 3.1; Kraus et al., 2016; European Monitoring Centre for Drugs and Drug Addiction, 2016). In all other countries listed in Exhibit 3.1, the MLDA is lower than in the United States. These data call into question the suggestion that having a lower MLDA might result in less problem drinking by adolescents.

Effects of Adult Drinking Patterns

Generational transmission has been widely hypothesized as one factor shaping the alcohol consumption patterns of young people. Whether through genetics, social learning, cultural values, community norms, or the overall influence of policy and environmental factors on the drinking behaviors of adults and youth, researchers have repeatedly found a correlation between youth drinking behaviors and those of their adult relatives, other adults living in their household or community, or some combination of these.

Nelson, Naimi, Brewer, and Nelson (2009) demonstrated this relationship at the population level as well, using Youth Risk Behavior Survey (YRBS) state-based estimates for youth and data from the Behavioral Risk Factor Surveillance System (BRFSS) for adults. When pooled across years, state estimates of youth and adult current drinking and binge drinking from 1993 through 2005 were significantly correlated. 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, and showed how these behaviors were affected by state alcohol policies. Based on their findings, 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, and 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 (which they defined as 5 or more drinks on a single occasion) 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.

Availability and Access to Alcohol

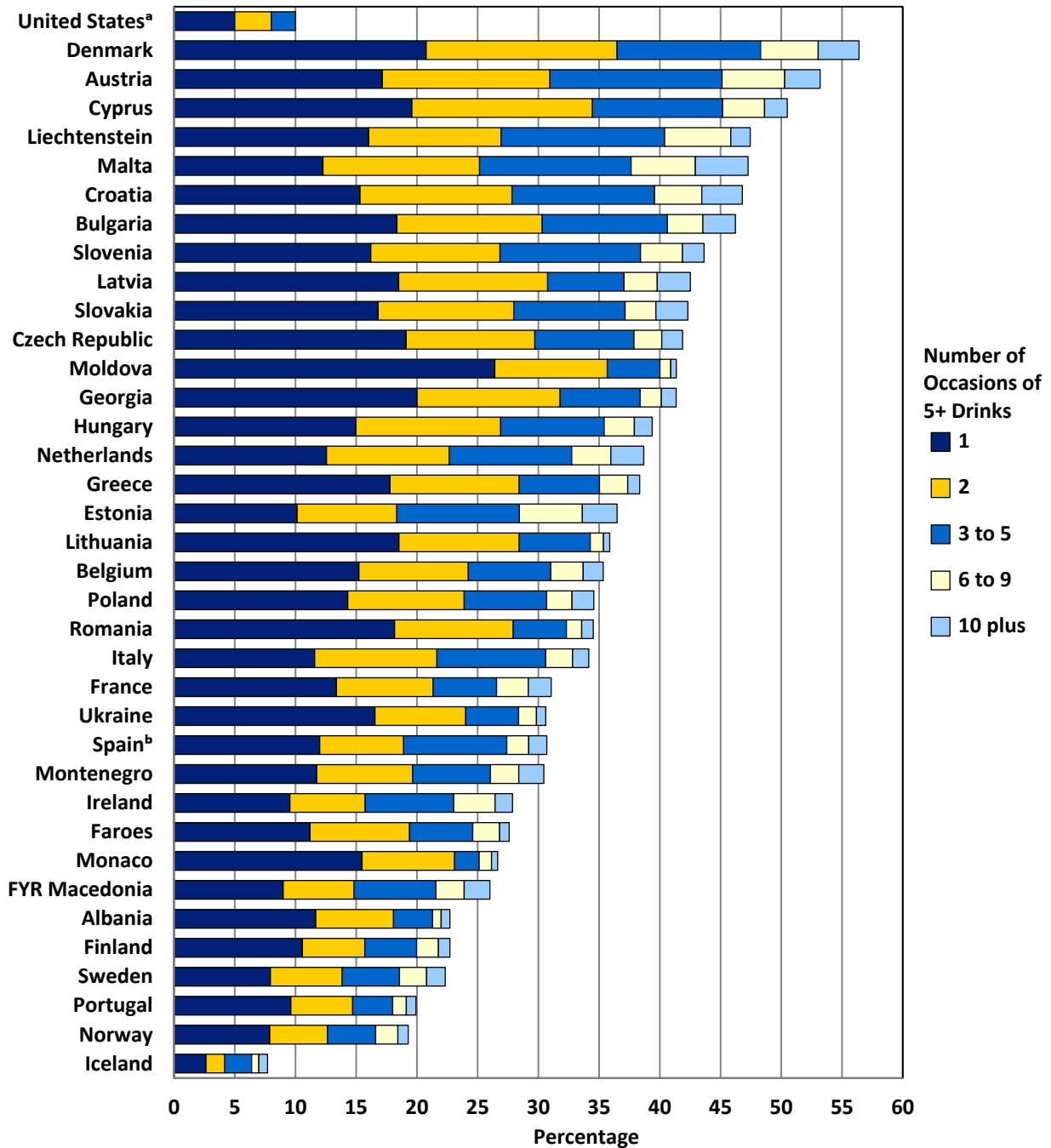
Ease of concealment, palatability, alcohol content, marketing strategies, media portrayals, parent modeling, and economic and physical availability may all contribute to the quantity of consumption as well as to the age of alcohol initiation. Beverage preferences may also affect the policies and enforcement 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 Call to Action* (U.S. Department of Health and Human Services [HHS], 2007). As shown in Exhibit 3.2, most teens see alcohol as readily available.

Exhibit 3.1: Percentage of European Students Ages 15–16 Who Reported Drinking 5+ Drinks on a Single Occasion in the Past 30 Days Compared with U.S. 10th Graders: Data from 2015 European School Survey Project on Alcohol and Drugs

(Kraus et al., 2016; European Monitoring Centre for Drugs and Drug Addiction, 2016)



Notes: Survey question asks: “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 are from MTF

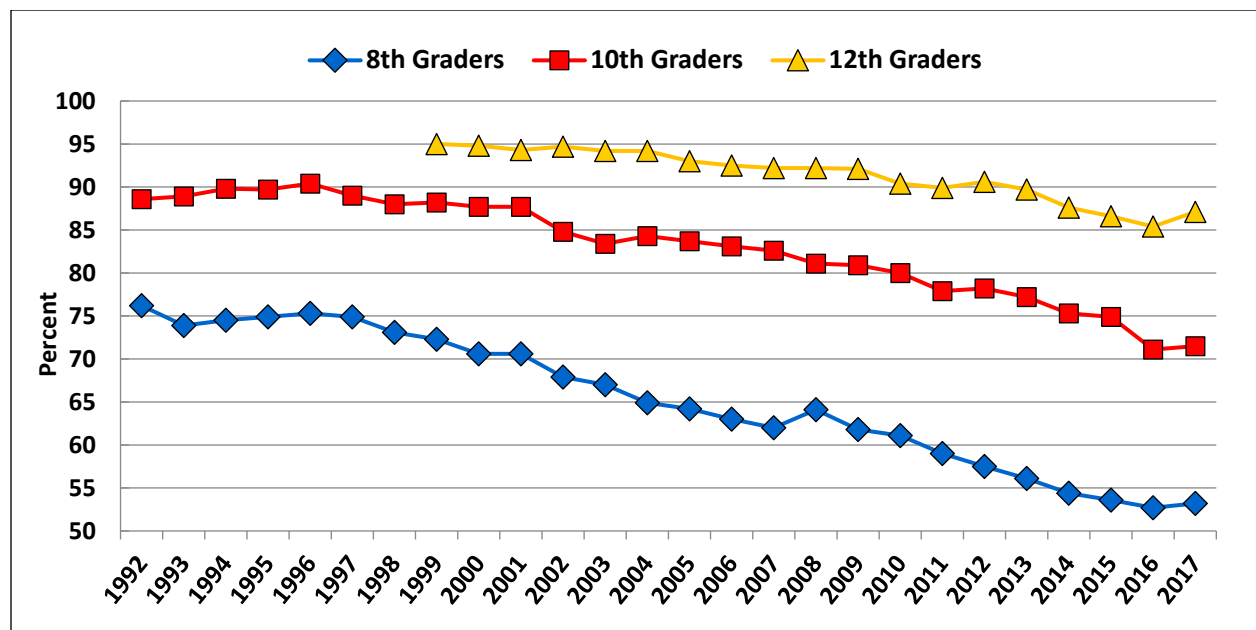
^b – Number of days, not occasion

In 2017, student survey respondents stated that alcohol would be “fairly easy” or “very easy” to get as follows:

- 52.7 percent of 8th graders.
- 71.1 percent of 10th graders.
- 85.4 percent of 12th graders (Miech et al., 2018).

Perceived availability has declined since the 1990s (although there is a slight uptick for 2017). These reductions in perceived availability may be attributable in part to the policies and enforcement practices described in the *State Performance and Best Practices Report* (available at <https://www.stopalcoholabuse.gov>). Continued attention to these policies and practices may lead to further reductions.

Exhibit 3.2: Changes Over Time in Percentage of 8th, 10th, and 12th Graders Who Say Alcohol Is Fairly Easy or Very Easy to Get: 2017 MTF Data (Miech et al., 2018)



Alcohol is Available from a Variety of Sources

The most common sources of alcohol varied substantially by age as shown in Exhibit 3.3.

For youth ages 12 to 14, the most common sources were:

- Taking it from their own home (21.5 percent).
- Receiving it from a parent or guardian (17.8 percent).
- Receiving it free from another family member age 21 or older (13.3 percent).

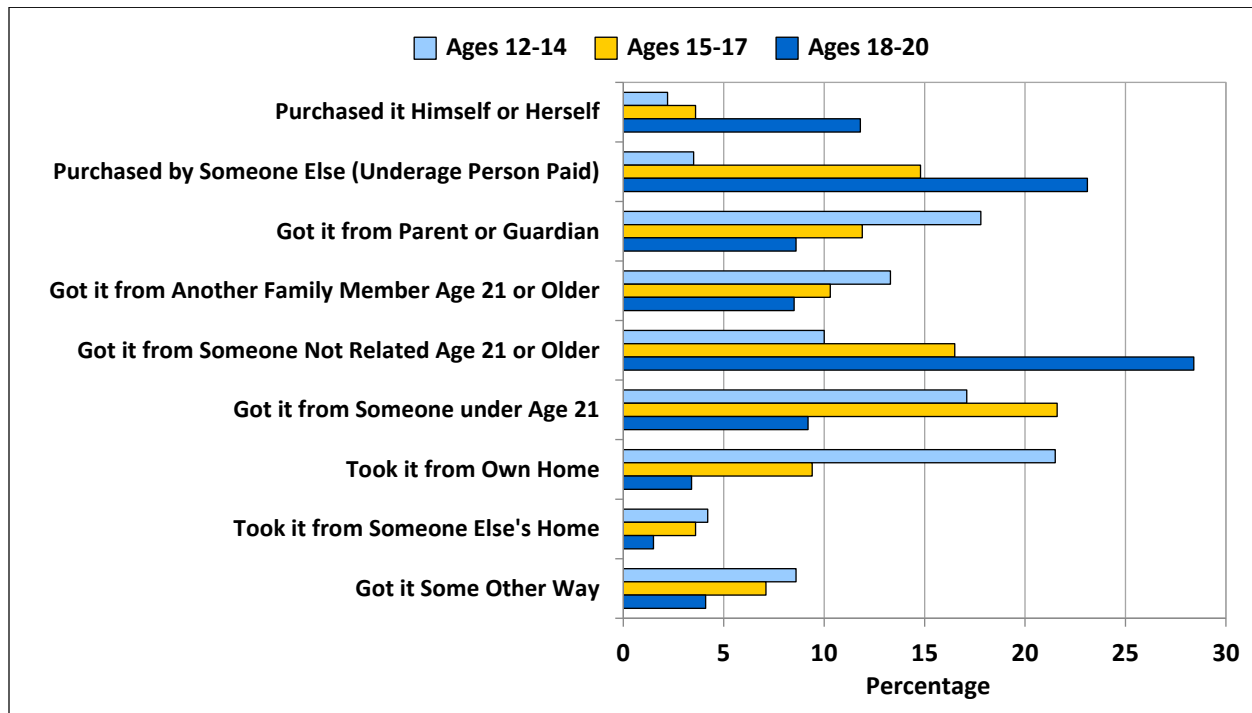
For youth ages 15 to 17, the most common sources were:

- Receiving it free from someone under age 21 (21.6 percent).
- Receiving it free from an unrelated person age 21 or older (16.5 percent).
- Giving someone else money to purchase the alcohol (14.8 percent).

For youth ages 18 to 20, the most common sources were:

- Receiving it from an unrelated person age 21 or older (28.4 percent).
- Giving someone else money to purchase the alcohol (23.1 percent; CBHSQ, 2018c).

Exhibit 3.3: Source of Last Alcohol Used Among Past-Month Alcohol Users Ages 12–20, by Age Group: 2016–2017 Combined Data NSDUH (CBHSQ, 2018c)



NSDUH divides sources of last alcohol use into two categories: (1) the underage drinker paid (he or she purchased it or gave someone else money to do so) or (2) 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 2016 and 2017 show that among all underage current drinkers, 29.4 percent paid for alcohol the last time they drank, either purchasing the alcohol themselves or giving money to someone else to do so (CBHSQ, 2018c).

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: 35.0 percent of 18- to 20-year-olds did so, compared with 18.5 percent of 15- to 17-year-olds and .1 percent of 12- to 14-year-olds. Male underage drinkers were more likely to have paid for alcohol themselves on their last drinking occasion (34.1 percent) than their female counterparts (24.7 percent; CBHSQ, 2018c). YRBS data showed that high school students who drank usually obtained alcohol from others, but binge drinkers were three times more likely than current drinkers who did not binge drink to give others money to purchase alcohol for them and to purchase alcohol themselves (Esser, Clayton, Demissie, Kanny & Brewer, 2017).

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, Grube, Paschall, Biglan, Kraft, & Ruscoe, 2013). Similarly, a South Carolina program that increased compliance checks showed a decline of drinking and driving crashes for drivers under age 21 (George, Holder, Shamblen, et al., 2018). In another study, a high-visibility enforcement campaign targeting underage drinking and driving appeared to reduce underage driving after drinking among U.S. college students (Johnson, 2016).

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, data from the MTF survey indicate beverage choices have shifted markedly for both male and female 12th graders (Exhibit 3.4; Johnson et al., 2018a). 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, with an uptick in beer consumption in 2017. 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 (Johnston et al., 2018a).

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).

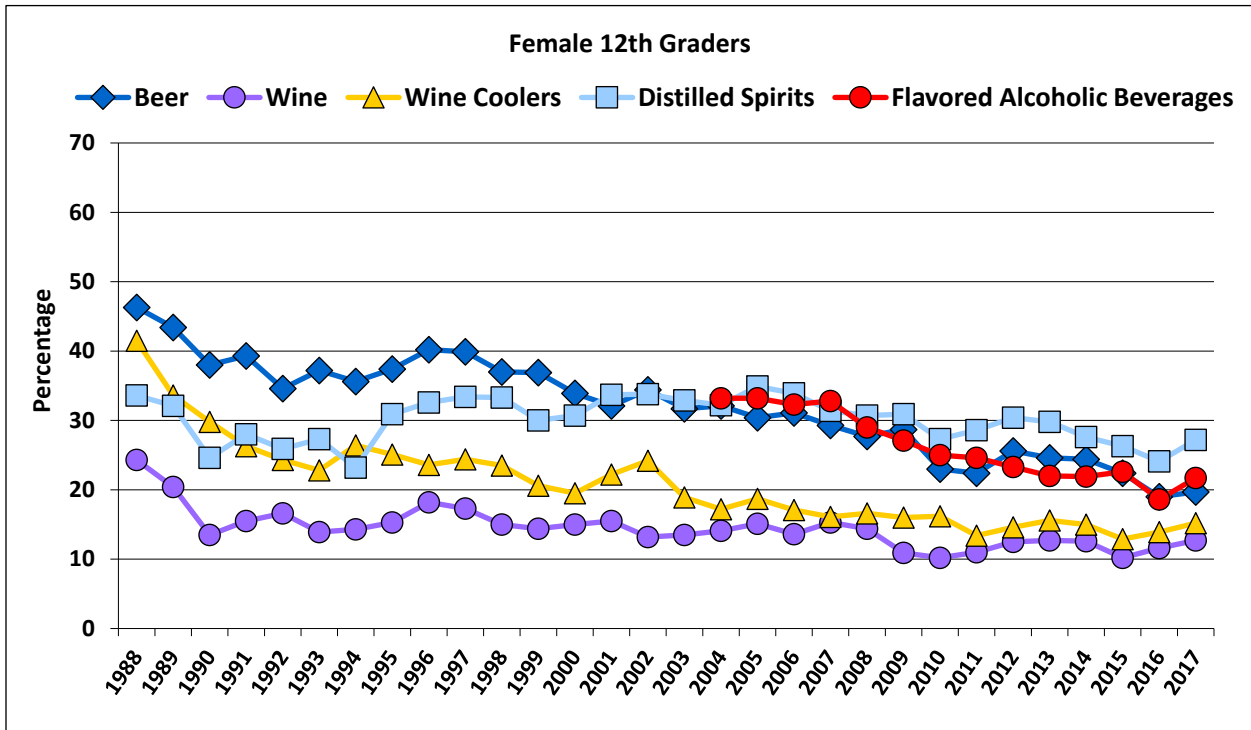
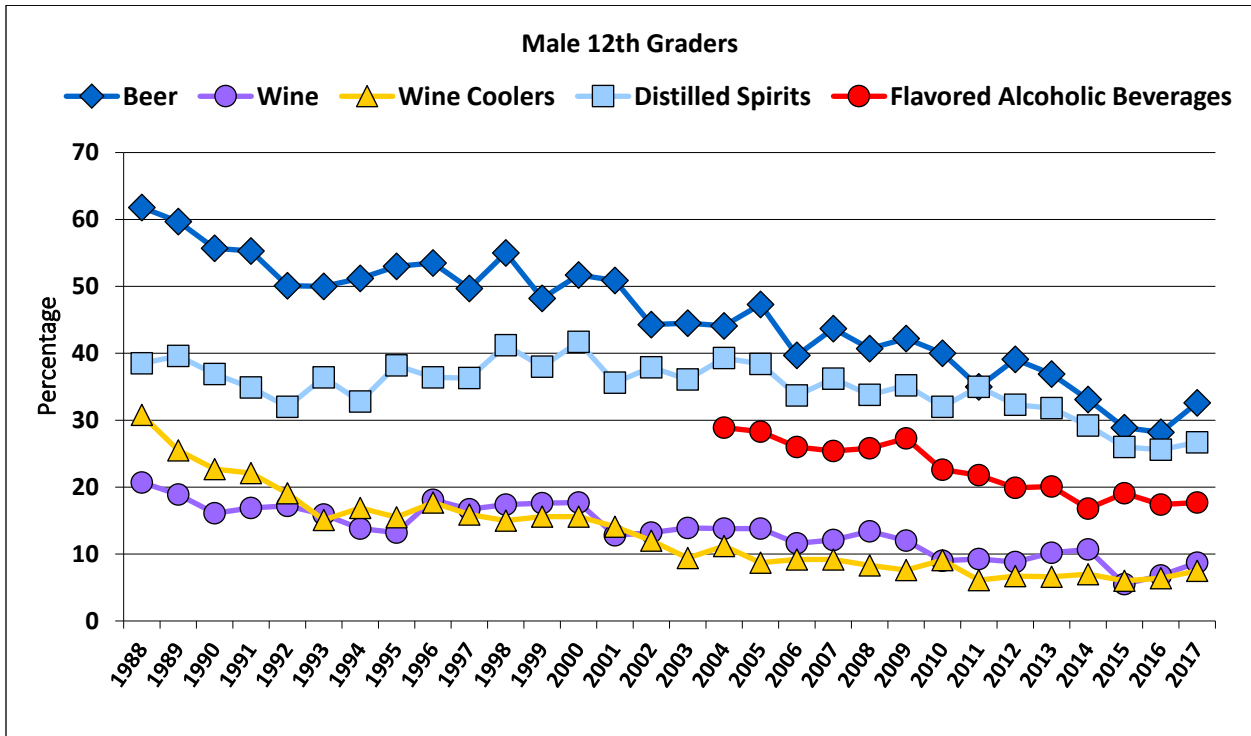
Several studies (Albers, Siegel, Ramirez, Ross, DeJong, & Jernigan, 2015; Fortunato et al., 2014; Naimi et al., 2015; Siegel et al., 2013) focused on underage drinkers' brand preferences, consistently finding that underage drinkers prefer a limited number of brands. Naimi and colleagues (2015), using 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. As is discussed in the next section, youth are most likely to consume the most heavily-advertised alcohol brands.

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 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.³⁸ Improved data on these products, including underage use and related injury, would help policymakers evaluate appropriate responses.

³⁸Maryland (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.

Exhibit 3.4: Trends in Percentage of Male & Female 12th Graders Using Specific Types of Alcoholic Beverages in the Past 30 Days: 1988–2017 MTF Data (Johnston et al., 2018a)



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

As previously noted, many factors influence youth drinking decisions. Although evidence of a causal relationship is lacking, there is a substantial body of evidence showing 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 to alcohol advertising and alcohol consumption in all 12 studies (Jernigan, Noel, Landon, Thornton, & Lobstein, 2017).

Advertising may also play a role in underage brand preference. A study analyzing the population-level exposure of youth ages 12 to 20 to brand-specific advertising found that underage youth were more than 5 times more likely to consume brands that advertise on national television and 36 percent more likely to consume brands that advertise in national magazines (Siegel, Ross, Albers, DeJong, King, Naimi & Jernigan, 2016).

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* (FTC, 1999) 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 subsequently 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 (age 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; further, 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).

When data were aggregated across companies and media, 85.4 percent of alcohol advertising impressions (individual ad exposures) were seen by adults (age 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).

Another study of youth exposure to alcohol advertising found that from 2001 to 2009, youth exposure to alcohol advertising on television in the U.S., 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). A subsequent analysis of the 2005-2012 television advertising data noted that if alcohol advertisers avoided media (primarily on cable television) already identified as non-compliant with the underage restrictions, exposure of underage youth to more than 14 billion non-compliant alcohol advertising impressions could have been avoided. The authors advise incorporation of these 'no-buy' lists into industry self-regulation practices (Ross, Brewer, & Jernigan, 2016).

A subsequent series of quarterly reports analyzing youth exposure to alcohol advertising during 2016 and 2017 found that underage youth saw 31 billion total alcohol ads on cable TV in 2016 and 2017; 1.1 billion (3.4 percent) of which exceeded the alcohol industry's voluntary placement standard (Henehan, Simsa, & Jernigan, et al., 2016). During this same time period, total underage exposures to alcohol advertising declined by 10.5 percent—from 16.4 billion impressions in 2016 to 14.7 billion impressions in 2017—and noncompliant alcohol advertising exposures declined by 51.2 percent—from 719 million impressions in 2016 to 351 million impressions in 2017.

Despite these improvements, underage youth are still exposed to billions of alcohol advertisements annually on cable TV alone. Therefore, given the strong association between youth exposure to alcohol advertising and underage drinking, some advocates have proposed additional limits on alcohol marketing. However, as noted by the Surgeon General in his report on alcohol, drugs, and health (HHS, 2016), 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). Therefore, current public health efforts to reduce youth exposure to alcohol

advertising remain focused on encouraging alcohol advertisers to avoid placing alcohol ads on cable television programs and in other media that have been found to result in high levels of noncompliant alcohol advertising exposures, while also encouraging research to further assess the impact of reductions in youth exposure to alcohol advertising on underage drinking.

Social Contexts for Underage Drinking

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 (74.4 percent) people ages 12 to 20 who consumed alcohol in the past month were with two or more people the last time they drank, 17.4 percent were with one other person the last time they drank, and 8.2 percent were alone (CBHSQ 2018c).

The effect of social context on underage drinking tends to vary by gender. Although most male and female underage drinkers were with two or more other people on their last drinking occasion (73.8 percent and 75.0 percent, respectively) male drinkers were more likely to drink alone (10.4 percent) than were female drinkers (5.9 percent). Female drinkers were also more likely to drink with one other person (19.1 percent) than were males (15.8 percent; CBHSQ 2018c).

Social context also has an effect on the number of drinks consumed. 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 (4.1 drinks) than did those who drank with one other person (2.8 drinks) or drank alone (2.7 drinks; CBHSQ, 2018c).

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 4.6 drinks, whereas females averaged 3.6 drinks (CBHSQ, 2018c).³⁹ Number of drinks consumed by social context also varies by age group, as shown in Exhibit 3.5.

Location of Alcohol Use

Most underage drinkers reported last using alcohol in someone else's home (50.0 percent, averaging 4.2 drinks) or in their own home (36.4 percent, averaging 3.2 drinks).⁴⁰ The next most popular drinking locations were at a restaurant, bar, or club (7.2 percent, averaging 4.3 drinks); at some other place (6.1 percent, averaging 4.4 drinks); or at a park, beach, or parking lot (4.7 percent, averaging 4.5 drinks; CBHSQ, 2018c).

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 4.9 drinks (CBHSQ, 2018c). 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 (44.7 percent) than were 15- to 17-year-olds (31.4 percent) or 18- to 20-year-olds (37.8 percent). By contrast, 12- to 14-year-olds were less

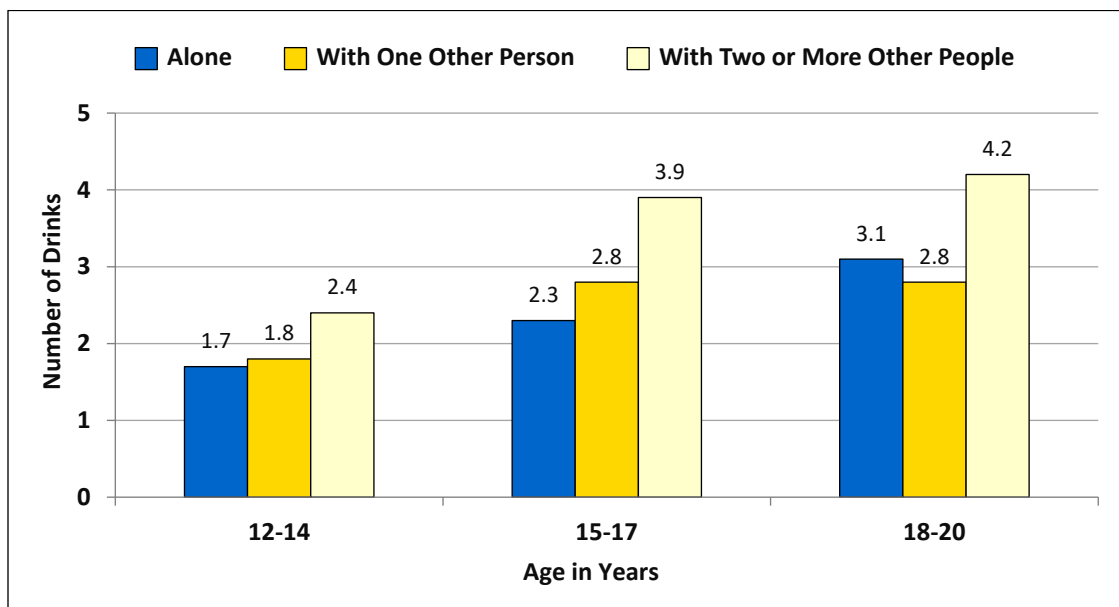
³⁹The discussion in this section combines data for 2016 and 2017.

⁴⁰For the analyses in this section, 2016 and 2017 NSDUH data are combined to provide sufficient sample sizes.

likely to report being in someone else’s home the last time they drank (38.8 percent) than the 15- to 17-year-olds (55.9 percent; CBHSQ, 2018c).

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 (9.4 percent for those ages 18 to 20 versus 3.1 percent for those ages 12 to 14, and 2.3 percent for those ages 15 to 17; Exhibit 3.6). 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 (9.0 percent versus 5.5 percent) or in a car (4.2 percent versus 2.7 percent; CBHSQ, 2018c).

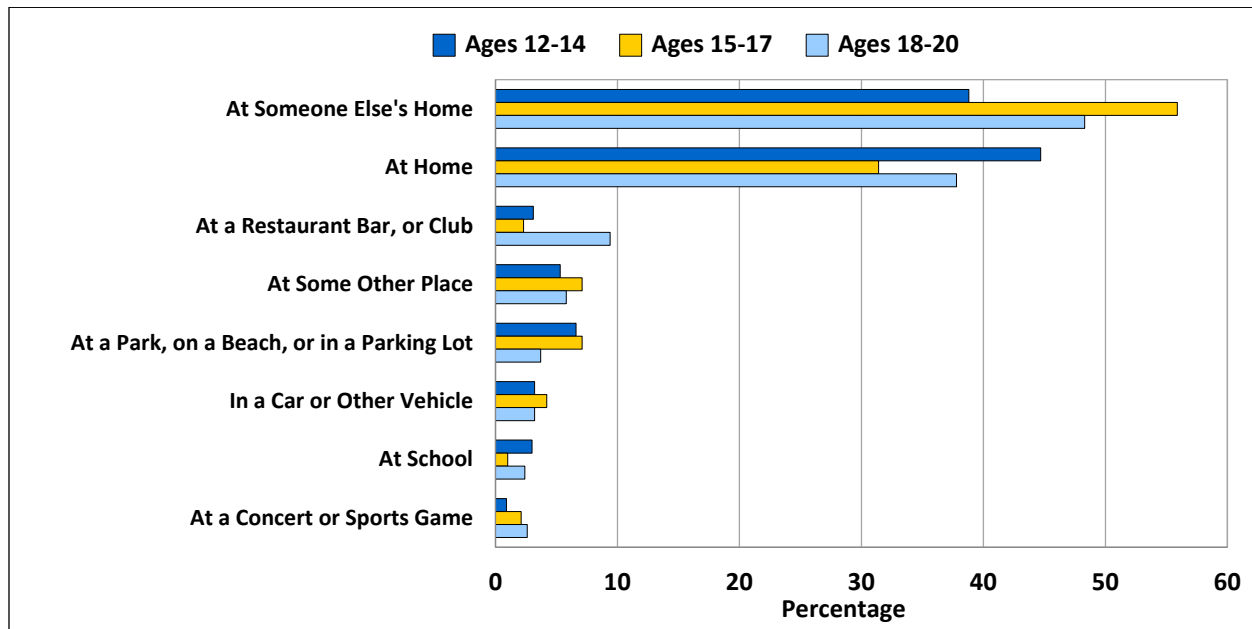
Exhibit 3.5: Average Number of Drinks Consumed on Last Occasion of Alcohol Use in the Past Month Among Past-Month Alcohol Users Ages 12–20, by Social Context and Age Group: Annual Averages Based on 2016–2017 NSDUH Data (CBHSQ, 2018c)



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, Francisco, Sparks, Wyrick, Nichols, & Wolfson, 2012).

Exhibit 3.6: Drinking Location of Last Alcohol Use Among Past-Month Alcohol Users Ages 12–20 by Age Group: Annual Averages Based on 2016–2017 NSDUH Data (CBHSQ, 2018c)



Parties are settings for binge drinking and other patterns of consumption leading to high blood alcohol concentrations (BACs); Clapp, Min, Shillington, Reed, & Ketchie Croff, 2008; Clapp, Reed, Holmes, Lange, & Voas, 2006; Demers, Kairouz, Adlaf, Gliksman, Newton-Taylor, & Marchand, 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 than on women’s drinking. Drinking parties are also often settings for aggression, including serious arguments, pushing, fights, and sexual assault (Wagoner et al., 2012).

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).

One policy approach aimed specifically at underage drinking parties is social host laws, which impose criminal or civil liability on adults who host or allow such events to take place on their property. Paschall, Lipperman-Kreda, Grube, and Thomas (2014) rated such policies 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. (Note: For more information on state social host laws and on party-related enforcement practices, see the *State Performance and Best Practices Report* at <https://www.stopalcoholabuse.gov>).

The College Environment

In its landmark 2002 report, *A Call to Action: Changing the Culture of Drinking at U.S. Colleges* (NIAAA, 2002), 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.*⁴¹

Campus drinking culture persists. 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 college-bound 12th graders are consistently less likely than non-college-bound counterparts to report heavy drinking, individuals in college⁴² report higher rates of binge drinking than do individuals of the same age who are not attending college (Johnston et al., 2018a; Exhibit 3.7). Of full-time college students, 62.0 percent drink currently, compared with 56.4 percent of those of the same age but not in college; 32.9 percent report binge drinking behavior in the past 2 weeks, compared with 28.1 percent of their non-college peers (Schulenberg, Johnston, O’Malley, Bachman, Miech, & Patrick, 2018).

These findings suggest that college environments influence drinking behaviors (Hingson, Heeren, Levenson, Jamanka, & Voas, 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).

Binge-drinking rates among college students have declined from 40.2 percent in 1993 to a current rate of 32.9 percent (Schulenberg et al., 2018); 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). While binge drinking tends to be lower among non-college peers (28.1 percent in 2017), extreme binge drinking (which represents the upper levels of already dangerous levels of consumption) is of concern among both college students and noncollege youth, particularly for males.

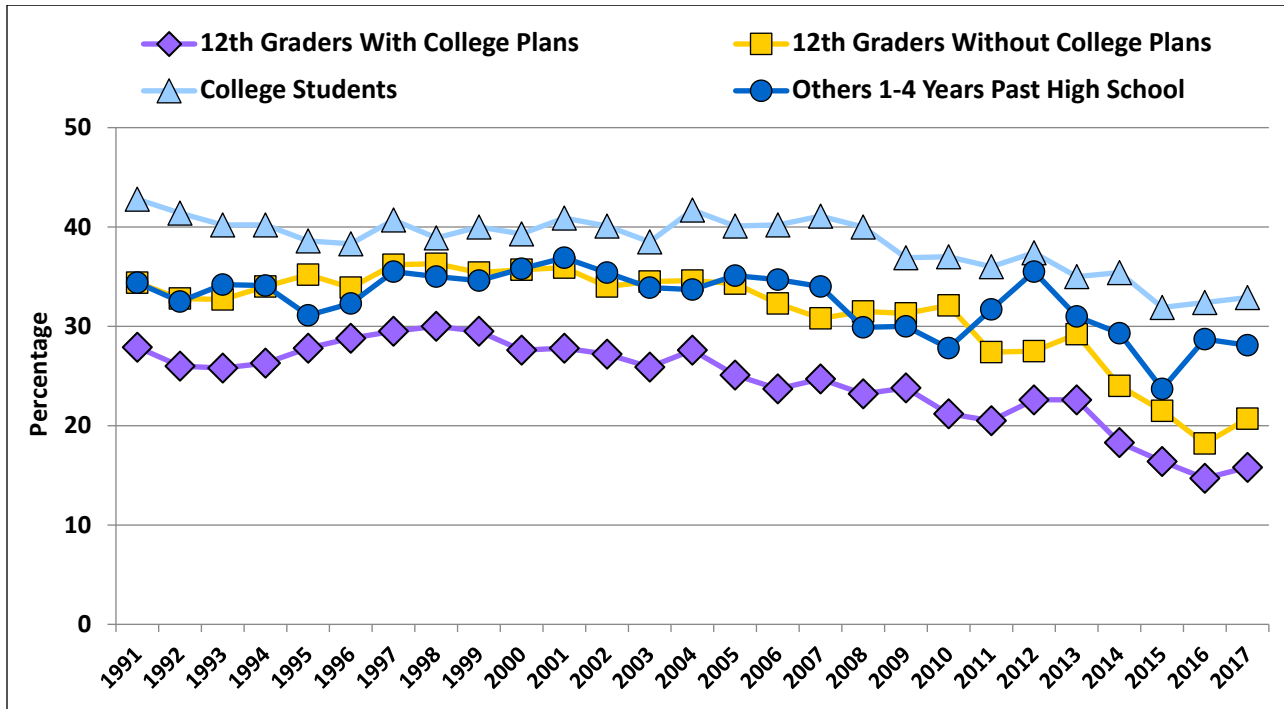
According to combined 2012 through 2017 MTF data,⁴³ 10.1 percent of college students (16.2 percent of males, 6.5 percent of females) reported consuming 10 or more drinks in a row in the past 2 weeks. In comparison, for non-college peers, 10.3 percent (16.8 percent of males and 5.0 percent of females) reported consumption of 10 or more drinks (Schulenberg et al., 2018).

⁴¹ For 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, Leichter, & Presley, 1999; Meilman, Presley, & Cashin, 1995; Meilman, Presley, & Lyster, 1994).

⁴² College 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).

⁴³ Data are combined due to the low number of cases resulting from a single questionnaire form.

Exhibit 3.7: 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: 1991–2017 MTF Data
(Johnston et al., 2018a)



Additional information about detailed 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 by Hingson, Zha, and Smyth (2017). Of particular concern is the finding that alcohol-related overdose deaths increased in this age group during the 1998 to 2014 timeframe.

It is also important to recognize that there is a strong correlation between binge drinking by college students and by adults living in the same state, and that both binge drinking by college students and adults is strongly influenced by the alcohol policy environment at the state and local levels (Nelson, Naimi, Brewer, & Wechsler, 2005). These findings emphasize the need to implement effective population-based strategies to reduce excessive drinking among youth and adults, such as those included in the Community Guide (www.thecommunityguide.org/alcohol).

Family, Peer, and Individual Factors

Biological factors (such as genes and hormones) and social factors (such as family, peers, school, and the overall culture) interact and influence the likelihood that an adolescent will use alcohol. Consequently, the risk that young people will initiate underage drinking, and the amount they drink when they do, can vary on an individual and societal basis. The next sections address some of the individual and social factors correlated with alcohol consumption and related outcomes.

Parental and Peer Influences

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, Bearman, Blum, Bauman, Harris & Udry, 1997; Watkins, Howard-Barr, Moore, & Werch, 2006).

Youth drinking is correlated with adult drinking behaviors (Nelson, 2009; Xuan, 2015).

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 authors concluded that allowing children to drink underage, even when supervised by the parent, is always associated with a greater likelihood of drinking during adolescence over time.

As previously noted, research has also shown that drinking by underage youth (e.g., high school students) is strongly correlated with drinking by adults living in the same state, and that the drinking of youth and adults is strongly influenced by state alcohol control policies (Nelson, Naimi, Brewer, & Nelson, 2009; Xuan et al., 2015). These findings underscore both the influence of parental modeling and the need for parents to set a good example for youth by not drinking excessively (e.g., binge drinking), as well as the need to implement effective alcohol policies that reduce the risk of excessive drinking among youth and adults, such as those recommended by the Community Guide (www.thecommunityguide.org/alcohol).

Another recent article assessing the interaction of peer and parental influences found that adolescents whose parents engaged in binge drinking were more like to adopt the negative drinking patterns of their peers (Olson & Crosnoe, 2018). Peer selection may also play a significant role in facilitating drinking behavior similarity in adolescents' friendship networks. One study found that adolescents preferred to form friendships with those who displayed similar levels of alcohol use (Wang, Hipp, et al., 2015). A 2013 review by Chassin and colleagues noted that there appears to be an interaction between neurobiological factors and peers. The presence of peers seems to activate the same reward centers that lead to risky behavior in adolescents; the presence of peers may therefore accentuate reward-seeking and make alcohol use particularly rewarding for adolescents (Chassin, Sher, Hussong & Curran, 2013).

Genetic Influences

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 and gene-environment interactions 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 (NIAAA, n.d.b).

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, Hewitt, Young, Corley, Crowley, & Stallings, 2003).⁴⁴ For example, 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). This suggests that policies and practices should be adopted in and around college campuses that reduce the risk of excessive alcohol consumption to help protect all students, including those who may be most vulnerable to drinking excessively due to genetic factors or prior exposure to excessive drinking in their homes.

⁴⁴Problematic use” was defined as having at least one DSM-IV abuse or dependence symptom for alcohol.

CHAPTER 4

A Coordinated Federal Approach To Preventing And Reducing Underage Drinking

CHAPTER 4: A COORDINATED FEDERAL APPROACH TO PREVENTING AND REDUCING UNDERAGE DRINKING

Summary of Chapter

Chapter 4 describes the coordinated approach of the Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) to addressing underage drinking, including the federal agencies involved and how the agencies and programs work together. The ICCPUD's commitment to evidence-based practices is described. The chapter provides an inventory of federal programs offered by each of the ICCPUD agencies. The chapter concludes with a table showing federal agency expenditures on underage drinking prevention by year.

A Coordinated Approach

The 2006 Sober Truth on Preventing Underage Drinking (STOP) Act reflects 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.”

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 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 chapter 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 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 data and 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. The U.S. Department of Justice (DoJ), through its Office of Juvenile Justice and Delinquency Prevention (OJJDP), previously worked 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 and strategies 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 in the agencies listed below.

- **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:* <https://www.acf.hhs.gov>.
- **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 specifically strengthens the scientific foundation for the prevention of excessive drinking, including underage and binge drinking, by improving public health surveillance on excessive alcohol use and related harms, supporting state and local health agencies to prevent excessive alcohol use, and translating evidence-based recommendations on excessive drinking into public health practice. CDC also works to prevent specific alcohol-related harms, including various injuries and violence, sexually transmitted diseases, and fetal alcohol spectrum disorders. *Website:* <https://www.cdc.gov>. The CDC Alcohol Portal is available at: <https://www.cdc.gov/alcoholportal>.
- **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 2.2 million AI/AN who belong to 573 federally recognized tribes in 37 states. The IHS Division of Behavioral Health is responsible for the Alcohol and Substance Abuse Program (ASAP). The goals of ASAP are to improve the quality of and access to care

for AI/AN communities; to assist tribes in the planning, development, and implementation of culturally-informed programming; and to transition from direct service only to primary direct service support. *Website:* <https://www.ihs.gov>.

- **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:* <https://www.niaaa.nih.gov>.
- **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:* <https://www.drugabuse.gov>.
- **HHS / Office of the Assistant Secretary for Health (OASH)–Office of Disease Prevention and Health Promotion (ODPHP) / Office of Population Affairs (OPA):** 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. <https://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 and include policies on alcohol from other agencies. *Websites:* <https://www.healthypeople.gov>, <https://health.gov>, <https://health.gov/dietaryguidelines>.

OPA 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. OPA is also the convener and catalyst for the development of a national adolescent health agenda. (*Note: The Office of Adolescent Health, which previously performed this work, has been merged into the OPA.*) *Website:* <https://opa.hhs.gov/adolescent-health>.

- **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, and policy research, evaluation, and economic analysis. The Division of Behavioral Health and Intellectual Disabilities Policy 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 as they affect individuals with mental and substance use disorders; and prevention of mental health conditions and substance misuse, including prevention of underage drinking. In addition, the Division Director of ASPE’s Children and Youth Policy Office is the HHS Secretary’s designee to chair the Interagency Working Group on Youth Programs, which was established

via Executive Order in 2008 to promote enhanced federal collaboration to improve outcomes for youth. *Website:* <https://aspe.hhs.gov>.

- **HHS / OASH / Office of the Surgeon General (OSG):** The Surgeon General, 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 more than 6,700-member Commissioned Corps of the U.S. Public Health Service and assists the Surgeon General with other duties. *Website:* <https://www.hhs.gov/surgeongeneral/index.html>.
- **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 leads the nation in providing prevention, treatment, and recovery support services to communities, and 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:* <https://www.samhsa.gov>.
- **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:* <https://www.defense.gov>.
- **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:* <https://www2.ed.gov/about/offices/list/oese/oshs/index.html>.
- **Department of Homeland Security (DHS) / U.S. Coast Guard (USCG):** 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. The USCG’s workforce includes young people between ages 17 and 20. *Website:* <https://www.uscg.mil>.
- **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. *Website:* <https://www.ojjdp.gov>.

- **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:* <https://www.nhtsa.gov>.
- **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>.
- **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:* <https://www.ftc.gov>.
- **Office of National Drug Control Policy (ONDCP):** A component of the Executive Office of the President (EOP), the Office of National Drug Control Policy (ONDCP) works to reduce drug use and its consequences by leading and coordinating the development, implementation, and assessment of U.S. drug policy. The ONDCP Director is the principal advisor to the President on drug control issues. ONDCP coordinates the drug control activities and related funding of 16 federal departments and agencies. ONDCP also produces the *National Drug Control Strategy*, which outlines administration efforts for the nation to reduce illicit drug use, manufacturing and trafficking; drug-related crime and violence; and drug-related health consequences. *Website:* <https://www.whitehouse.gov/ondcp>.

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

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.

In developing plans to combat underage drinking, communities use 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), to promote effective strategies for preventing underage drinking and related harms.

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 (IOM; 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 (APA) 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 (EBP) Resource Center, which aims to provide communities, clinicians, policymakers and others in the field with the information and tools they need to incorporate evidence-based practices into their communities or clinical settings. The EBP 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, as can be seen on the Resource Center's webpage: <https://www.samhsa.gov/ebp-resource-center>.

The EBP 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 findings; 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.

SAMHSA's vision for the EBP Resource Center is to be dynamic and responsive to changing science and evidence. Thus, SAMHSA plans to develop and disseminate additional resources such as new or updated Treatment Improvement Protocols, guidance documents, clinical practice policies, toolkits, and other actionable materials that incorporate the latest scientific evidence on mental health and substance use and address priority areas where more information or guidance are needed to help the field move forward.

The Guide to Community Preventive Services (The Community Guide)

CDC's Alcohol Program collaborates with the staff of *The Guide to Community Preventive Services* (The Community Guide), SAMHSA, NIAAA, and other partner organizations to systematically review the scientific evidence on the effectiveness of population-based interventions to prevent excessive alcohol consumption, including underage and binge drinking, as well as several strategies to prevent alcohol-impaired driving. The Community Guide is the model for CDC's evidence-based approach to evaluating and disseminating the scientific evidence on the effectiveness of population-based strategies for preventing health outcomes and risk behaviors, including excessive drinking. Under the auspices of the independent, nonpartisan, nonfederal Community Preventive Services Task Force (CPSTF), Community Guide staff systematically review the scientific evidence on the effectiveness of population-based prevention strategies as well as the economic benefit of these interventions, when available. The CPSTF then reviews this evidence; makes recommendations for public health practice and policy; and identifies gaps in existing scientific evidence on intervention effectiveness. The results of these reviews are then published in peer-reviewed journals and posted on the Community Guide website: <https://www.thecommunityguide.org>.

CDC's Alcohol Program works with Community Guide staff, SAMHSA, NIAAA, and other partner organizations to systematically review the scientific evidence on the effectiveness of

population-based interventions to prevent excessive alcohol consumption, including underage and binge drinking, as well as several strategies to prevent alcohol-impaired driving. CPSTF-recommended strategies for preventing excessive alcohol consumption include the following:

- **Dram shop liability**—which holds the owner of a retail alcohol establishment legally responsible for harms related to the illegal sale of alcohol to a patron who is intoxicated, underage, or both, depending on the applicable state law.
- **Increasing alcohol taxes**—which, by increasing the price of alcohol, reduces excessive drinking, including underage drinking, and alcohol-related harms. 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), at least in the U.S.
- **Maintaining limits on hours of sale**—which prevents excessive alcohol consumption and related harms by limiting the hours of the day when alcohol can be legally sold.
- **Regulating alcohol outlet density**—which is using regulatory authority (e.g., licensing and zoning) to limit the number of retail alcohol outlets in a given area.
- **Electronic screening and brief intervention (e-SBI)**—which is the use of electronic devices – such as computers, telephones, and mobile devices – to screen individuals for excessive drinking, and provide a brief intervention (e.g., personalized feedback about the risks and consequences of excessive drinking) to help those who are drinking excessively to drink less.
- **Recommending against the privatization of retail alcohol sales**—because privatization results in increased per capita alcohol consumption, a well-established proxy for excessive alcohol consumption.
- **Enhancing enforcement of laws prohibiting alcohol sales to minors**—which help reduce youth access to alcoholic beverages in retail settings.

More information on the CPSTF recommendations for preventing excessive alcohol consumption and related harms can be found at

<https://www.thecommunityguide.org/topic/excessive-alcohol-consumption>.

The CPSTF also recommends the following interventions for preventing alcohol-impaired driving:

- **0.08 percent blood alcohol concentration (BAC) laws**—which make it illegal to drive with a BAC of 0.08 percent or greater.
- **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 make it illegal to sell alcohol to youth under age 21, or for youth to purchase or consume alcohol in public.

- **Publicized sobriety checkpoint programs**—where law enforcement officers systematically stop drivers to assess whether they are impaired by alcohol. 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 by spreading messages about the physical dangers and legal consequences of driving while impaired.
- **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 the operation of the vehicle by a driver who has a BAC above a specified level (usually 0.02 percent 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 <https://www.thecommunityguide.org/content/task-force-findings-motor-vehicle-injury#alcohol-impaired-driving>.

Underage Drinking–Related Goals

The ICCPUD has set three broad underage drinking-related goals and three data-based targets in its 2018 *Comprehensive Plan*, as discussed in the Executive Summary and Chapters 1 and 4, and appended to this report as Appendix E. In addition, 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.⁴⁵

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.

⁴⁵For details regarding these substance use-related objectives, go to: <https://www.healthypeople.gov/2020/topics-objectives/topic/substance-abuse/objectives?topicId=40>

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: <https://www.healthypeople.gov/2020/topics-objectives>. Objectives for Healthy People 2030 are currently in development.

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)

ICCPUD was created in 2004 when Congress directed the Secretary of HHS to establish the ICCPUD to coordinate all federal agency activities related to the problem of underage drinking. The ICCPUD’s role was formalized in the 2006 Sober Truth on Preventing Underage Drinking (STOP) Act, which was reauthorized in 2016 as part of the 21st Century Cures Act. SAMHSA was directed by the HHS Secretary to convene the ICCPUD and serve as the lead agency. As specified in the STOP Act, the ICCPUD is composed of 16 federal officials, some of whom have delegated participation to specific agencies and/or staff. (See Appendix A for a list of ICCPUD members).

The ICCPUD’s vision is to provide national leadership in federal policy and programming to support state and community activities that prevent and reduce underage drinking.

The mission of the ICCPUD is twofold:

1. To facilitate collaboration among the federal ICCPUD 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.

Members of the ICCPUD and other federal partners commit to the following principles:

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

- Speak with a common voice on the prevalence, risks, and consequences of underage drinking.
- Increase public awareness about underage drinking and its consequences.
- Reinforce effective, evidence-based practices as part of a federally coordinated approach to prevent and reduce underage drinking.

Each ICCPUD agency contributes their leadership and vision to developing a national commitment to prevent and reduce underage alcohol use. Every participating agency also has a specific role to play in keeping with its mission and mandate.

The ICCPUD consults and collaborates with all appropriate and interested parties, including state and local governments, public health research and interest groups, foundations, community-based organizations and coalitions, and alcohol beverage industry trade associations and companies.

Recent Activities

- The ICCPUD principals met on November 7, 2018 to discuss and approve a new Comprehensive Plan, “Preventing and Reducing Underage Drinking.”
- ICCPUD convened a meeting of the national STOP Act stakeholders in December 2017 to discuss the 2017 and 2018 Reports to Congress and to solicit feedback.
- The ICCPUD agency staff representatives held monthly conference calls to coordinate efforts.
- The ICCPUD Data Committee met to review federal data and related text in Chapters 1 and 2 of the 2018 RTC.
- A technical expert panel was formed of ICCPUD members to review materials from the national media campaign “Talk. They Hear You.”[®]
- The STOP Act Governors’ Survey on prevention activities, enforcement and expenditures was administered to all 50 states and the District of Columbia with a 100 percent response rate.
- The ICCPUD initiated community engagement efforts, including postcards, posters, and an enhanced presence on the ICCPUD portal, <https://www.stopalcoholabuse.gov>.

New Targets for Reducing Underage Drinking (from 2018 Comprehensive Plan)

The ICCPUD has set new targets to ensure that current trends of reducing alcohol use continue:

- **2021 Target 1:** By 2021, reduce the prevalence of past-month alcohol use by 12- to 20-year-olds to 17.4 percent, as compared to the 2016 baseline of 19.3 percent (a reduction of 10 percent).
- **2021 Target 2:** By 2021, reduce the prevalence of 12- to 20-year-olds reporting binge alcohol use in the past 30 days to 10.9 percent, as compared to the 2016 baseline of 12.1 percent (a reduction of 10 percent).⁴⁶

⁴⁶In 2015, the NSDUH definition of binge drinking was changed from five drinks on a 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. Therefore, the 2014 and 2016 actual percentages are based on different measures. The target for 2021 was calculated on the basis of the 2016 percentage (and therefore, the new measure of binge drinking).

- **2021 Target 3:** By 2021, increase the average age of first use of alcohol among those who begin drinking before age 21 to 16.5 years of age as compared to the 2016 baseline of 16.2 years of age (an increase of 2 percent).

Looking Forward

The ICCPUD agencies are committed to using a comprehensive approach to prevent and reduce underage drinking and the associated costs and consequences that burden both individuals and society. Working as an interagency group, ICCPUD can support effective programs and strategies, eliminate duplication, and address programming gaps.

Agency-specific initiatives and activities are described in the following paragraphs.

HHS/Administration for Children and Families (ACF)/HHS/Family and Youth Services Bureau (FYSB)

Activities Related to Underage Drinking

Runaway and Homeless Youth (RHY) Program: FYSB provides funding to local communities to support young people, particularly runaway and homeless youth and their families. These grants help organizations provide short- and longer-term shelter and comprehensive support services, street outreach, maternity group homes, and other services to youth in three areas.

Website: <https://www.acf.hhs.gov/fysb/programs/runaway-homeless-youth>.

- *Basic Center Program (BCP)* grants help community-based organizations meet the immediate needs of runaway and homeless youth under age 18 with temporary shelter for up to 21 days, counseling, family reunification/connection, crisis intervention, and aftercare services. BCPs provide youth with an opportunity to receive individual and family counseling, education, employment assistance, and mental and physical health services.
- *Street Outreach Program (SOP)* funding supports street-based services with runaway, homeless, and street youth in areas that increase the risk of sexual abuse, sexual exploitation, and other forms of victimization, with the goal being to help young people get off the streets and into safe settings.
- *Funding for the Transitional Living Program (TLP)*, including the Maternity Group Home (MGH) program, supports community-based, adult-supervised group homes, host homes, supervised apartments, and supportive services to older homeless youth, ages 16 to under 22 who cannot safely live with their families. For MGH, the funding provides 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 young families.

Family Violence Prevention and Services: The Family Violence Prevention and Services Program administers the Family Violence Prevention and Services Act (FVPSA), the primary federal funding stream dedicated to the support of emergency shelter and related assistance for victims of domestic violence and their children. In 2018, the appropriation level was \$160,000,000. *Website:* <https://www.acf.hhs.gov/fysb/programs/family-violence-prevention-services>.

- FVPSA formula grants are awarded to every state and territory and more than 260 tribes, reaching 1,239 domestic violence shelters, 247 nonresidential programs, and 144 tribal domestic violence programs that provide both a safe haven and an array of supportive services to intervene in and prevent abuse.
- FVPSA-funded programs do not just serve survivors but also reach their communities; in 2016, programs provided more than 107,800 presentations and public awareness events reaching 4.6 million people, of which almost half were youth.
- The program also operates the National Domestic Violence Hotline.

Adolescent Pregnancy Prevention Program (APP): To prevent pregnancy and the spread of sexually transmitted diseases among adolescents, FYSB supports state, tribal and community efforts to teach abstinence and contraceptive education.

- Supports seven grant programs, including the Personal Responsibility Education Program and Title V State Sexual Risk Avoidance.
- Provides research and evaluation resources to support program evaluation efforts of APP grantees.

HHS/Centers for Disease Control and Prevention (CDC)

Activities Specific to Underage Drinking

Reducing Youth Exposure to Alcohol Marketing: In FY18, CDC funded the Center on Alcohol Marketing and Youth (CAMY) at the Johns Hopkins Bloomberg School of Public Health to conduct public health surveillance on youth exposure to alcohol marketing to improve adherence to voluntary industry standards on the placement of alcohol advertising on cable TV. *Website:* <http://www.camy.org>.

- CAMY publishes semiannual reports on youth exposure to alcohol advertising on cable television.
- From January 2016 to December 2017, youth exposure to alcohol advertisements on cable TV declined by 10.5 percent.

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. *Website:* https://nccd.cdc.gov/DPH_ARDI/default/default.aspx.

- ARDI estimates the proportion of deaths due to any of 54 acute and chronic conditions that are alcohol-attributable.
- ARDI users can create custom data sets to generate local estimates of deaths and YPLL due to excessive alcohol use.
- Users can also estimate alcohol-attributable deaths and YPLL for youth under age 21.

Behavioral Risk Factor Surveillance System (BRFSS): The BRFSS is a state-based, random-digit-dial landline and cellular telephone survey of noninstitutionalized, civilian U.S. adults aged 18 years and older that is conducted monthly in all states, the District of Columbia, and participating U.S. territories. BRFSS collects data on leading health conditions and risk behaviors, including binge drinking and drinking and driving. *Website:* <https://www.cdc.gov/brfss>.

- The BRFSS 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), the largest number of drinks consumed on a drinking occasion, and the number of alcohol-impaired driving episodes in the past 30 days.
- States can include an optional, seven-question binge drinking module to obtain more detailed information on binge drinking behavior, including beverage-specific alcohol consumption among binge drinkers and driving after binge drinking.
- States can also include an optional module to assess the delivery of alcohol screening and brief intervention (ASBI) in clinical settings.

Youth Risk Behavior Surveillance System (YRBSS): The YRBSS monitors priority health risk behaviors through a biennial, national school-based survey of 9th- through 12th-grade students conducted by CDC, and state and local surveys of 9th- through 12th-grade students conducted by education and health agencies. *Website:* <https://www.cdc.gov/healthyyouth/data/yrbs/index.htm>.

- The YRBSS includes standard questions about 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.
- The survey allows state and local agencies to include additional alcohol questions on their questionnaires, such as type of beverage usually consumed and usual location of alcohol consumption.
- The YRBSS 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.

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. *Website:* <https://www.cdc.gov/prams>.

- PRAMS collects state-specific data on maternal attitudes and experiences before, during, and shortly after pregnancy.
- The survey 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.

National Violent Death Reporting System (NVDRS): The NVDRS collects detailed information on violent deaths in all 50 states, the District of Columbia and Puerto Rico. This information can be used to develop, inform and tailor violence prevention efforts. *Website:* https://www.cdc.gov/violenceprevention/datasources/nvdrs/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Fnvdrs%2Findex.html.

- This system uses information from death certificates, coroner/medical examiner reports (including toxicology), and law enforcement reports.
- NVDRS includes information on (1) alcohol dependence or problem drinking (i.e., 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).

- The system has the support of various organizations, including the American Public Health Association, the International Association of Chiefs of Police, the National Sheriff's Association, the National Association of Public Health Statistics and Information Systems, and the National Association of Medical Examiners.
- Select NVDRS data are available via CDC's WISQARS™ (Web-based Injury Statistics Query and Reporting System). A Restricted Access Database (RAD) is also available through the CDC's National Center for Injury Prevention and Control (NCIPC) to researchers who meet specific criteria.

HHS/Indian Health Service (IHS)

Activities Related to Underage Drinking

Alcohol and Substance Abuse Program (ASAP): The objective of ASAP is to reduce the incidence and prevalence of alcohol and substance abuse among the American Indian and Alaska Native (AI/AN) population to a level that is at or below the general U.S. population. More than 90 percent of the alcohol and substance abuse programs are tribally operated. *Website:*

<https://www.ihs.gov/asap>.

- Implements alcohol and substance abuse programs within tribal communities, including emergency treatment, inpatient and outpatient treatment, and rehabilitation services, in rural and urban settings.
- Nurtures holistic approaches promoting healthy lifestyles, families, and communities.
- Improves access to behavioral health services through telebehavioral health methods, and by providing a comprehensive array of preventative, educational and treatment services.
- Is part of the IHS Generation Indigenous Initiative, designed to build resiliency and promote positive development among indigenous youth.

Youth Regional Treatment Centers (YRTCs): Part of the IHS Generation Indigenous Initiative designed to build resiliency and promote positive development among indigenous youth. The IHS operates or provides recurring funding to 12 Youth Regional Treatment Centers (YRTCs) to address the ongoing issues of substance abuse and co-occurring disorders among AI/AN youth. *Website:* <https://www.ihs.gov/yrtc>.

- Centers provide a range of clinical services rooted in a culturally relevant, holistic model of care.
- YRTC services include: clinical evaluation; substance abuse education; group, individual and family psychotherapy; art therapy; adventure-based counseling; life skills; medication management or monitoring; evidence-based/practice-based treatment; aftercare relapse prevention; and post-treatment follow-up services.
- The IHS California Area Office plans to develop an additional YRTC in Northern California to address California's unmet need for AI/AN youth residential treatment services.

Substance Abuse and Suicide Prevention (SASP) Program: The SASP program, formerly known as the Methamphetamine and Suicide Prevention Initiative, is a nationally coordinated

program focusing on providing much-needed substance use and suicide prevention and intervention resources for AI/AN communities. In FY 2019, IHS funded 174 SASP-related grants and federal program awards, totaling \$27,772,247. *Website:* <https://www.ihs.gov/mspi>.

- 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.
- Increases tribal, Urban Indian Organization (UIO), and federal capacity to operate successful methamphetamine prevention, treatment, and aftercare and suicide prevention, intervention, and postvention services through implementing community and organizational needs assessment, data sharing systems, and strategic plans.
- Promotes positive AI/AN youth development and family engagement through the implementation of early intervention strategies to reduce risk factors for suicidal behavior and substance abuse.
- Is part of the IHS Generation Indigenous Initiative, designed to build resiliency and promote positive development among indigenous youth.

Addressing Fetal Alcohol Spectrum Disorder (FASD): IHS supports the Northwest Tribal FASD Project’s efforts to reduce the incidence of FASD and to assist tribal communities to improve the quality of life of those living with FASD. *Website:* <http://www.npaihb.org/fetal-alcohol-spectrum-disorder-2>.

- Works in collaboration with the Northwest Portland Area Indian Health Board (NPAIHB) member tribes (43 federally recognized tribes of Oregon, Washington, and Idaho) to provide prevention education to tribal communities regarding the effects of fetal exposure to alcohol, to gain skills in diagnosing FASD, and to develop support and protection for those community members already affected.
- Aims to develop pre- and post-diagnostic protocols that demonstrate that diagnosis is for identifying solutions that include community-specific services.
- Approaches and activities proceed in a culturally congruent context to create circles of collaborative care.
- Provides technical assistance to facilitate appropriate cognitive tailoring of behavioral health strategies.

Indian Children’s Program: The IHS DBH Indian Children’s Program (ICP) provides education, training, and consultation on issues affecting AI/AN youth via IHS’s Telebehavioral Health Center of Excellence (TBHCE), including training and consultations on FASD. *Website:* <https://www.ihs.gov/icp>.

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

Activities Specific to Underage Drinking

Underage Drinking Research Initiative (UDRI): A key NIAAA program that aims to better understand and address the factors that contribute to drinking among youth and adolescents.

- Is guided by a developmental perspective that considers the biological, psychological, and social processes that occur during adolescence. Along with advances in epidemiology, developmental psychopathology, and enhanced understanding of human brain development

and behavioral genetics, this developmental perspective continues to inform the work of ICCPUD, the related efforts of its member federal agencies and departments, and the work of the Behavioral Health Coordinating Council.

- Provided the scientific foundation for the *Surgeon General's Call to Action to Prevent and Reduce Underage Drinking* (HHS, 2007).
- Supports a broad program of underage drinking research, including studies on the epidemiology of underage drinking; the effects of alcohol use on the developing body and brain; the interplay of development, genes, and the environment in the etiology and prevention of underage drinking; developing and testing both individual- and environmental-level interventions, including policies to prevent and reduce underage drinking; implementing and evaluating alcohol screening and brief intervention (SBI) in primary care and other settings; developing and testing alcohol use disorder treatments for adolescents; translating and disseminating evidence-based interventions for underage drinking; and understanding how recovery from alcohol use disorder in youth differs from adult recovery, as well as how to best promote and sustain it.

Studying the Impact of Adolescent Drinking on the Developing Brain: NIAAA supports multiple research consortia and projects examining the long-term consequences of alcohol exposure during adolescence.

- *Neurobiology of Adolescent Drinking in Adulthood (NADIA) Consortium:* (<https://www.med.unc.edu/alcohol/nadiaconsortium>). For nearly a decade, NIAAA has supported the NADIA Consortium, which aims to define the neurobiological mechanisms underlying the effects of adolescent alcohol exposure on adult brain function and behavior using rodent models. During the first phase of the Consortium, NADIA researchers demonstrated that adolescent alcohol exposure may lead to long-lasting brain and behavioral changes in adulthood. In its current phase, the Consortium is building upon these findings to further investigate the mechanisms through which adolescent alcohol exposure impacts brain maturation and adult brain function.
- *National Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA):* (<http://ncanda.org>). Launched in FY 2012, NIAAA's NCANDA is a multisite longitudinal study to elucidate the effects of alcohol exposure on the developing adolescent human brain and to identify brain characteristics that may predict alcohol use disorder and related problems. The five NCANDA sites have enrolled more than 800 youth, ages 12 to 21. NCANDA researchers recently demonstrated that adolescents who initiated heavy alcohol use during the course of the study experienced faster declines in brain gray matter volume and slower expansion of brain white matter relative to those who engaged in no or low alcohol consumption during the same time. In FY 2017, NIAAA renewed the consortium for a second period of funding (RFA-AA-17-003, RFA-AA-17-004, and RFA-AA-17-005).
- *Adolescent Brain Cognitive Development Study: (ABCD Study®).* The ABCD Study is the largest long-term study of brain and cognitive development in children in the United States. ABCD is following children ages 9-10 into early adulthood to determine how individual and environmental factors influence brain structure and function and other health outcomes, including substance use. In 2018, enrollment in the study was completed with 11,874 children, and imaging and assessment data from the first 4,500 participants have been made available to researchers through the National Institute of Mental Health (NIMH) Data

Archive (<https://data-archive.nimh.nih.gov/abcd>). ABCD-derived data will enable researchers to better understand the myriad factors that contribute to brain and cognitive development and how alcohol and other drugs affect these processes. ABCD is led by the Collaborative Research on Addiction at NIH initiative (NIAAA, NIDA, National Cancer Institute), in partnership with NICHD, NIMH, National Institute of Minority Health and Health Disparities, National Institute of Neurological Disorders and Stroke, NIH Office of Behavioral and Social Sciences Research, the National Institute of Justice, the National Science Foundation, the National Endowment for the Arts, and CDC.

Alcohol Screening and Brief Intervention for Youth: A Practitioner’s Guide: Concerns about the effects of alcohol on the developing brain combined with data from national surveys showing the popularity of binge drinking among adolescents prompted NIAAA to produce a guide for screening children and adolescents for their risk for alcohol use and alcohol use disorder, *Alcohol Screening and Brief Intervention for Youth: A Practitioner’s Guide* (<https://www.niaaa.nih.gov/publications/clinical-guides-and-manuals/alcohol-screening-and-brief-intervention-youth>).

- The *Guide* was empirically developed by NIAAA in collaboration with a working group of experts.
- It includes an age-specific (9-18 years), two-question screener for current and future alcohol use with an innovative youth alcohol risk estimator and screening guide.
- It was produced in collaboration with and endorsed by the American Academy of Pediatrics (AAP) which recommends screening all adolescents regarding alcohol use. As of 2018, about 225,000 copies of the *Guide* had been distributed.
- The *Guide* also includes general 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 individuals who need any level of intervention.
- The *Guide* has been evaluated: NIAAA issued a Funding Opportunity Announcement in FY 2012 titled “Evaluation of NIAAA’s Alcohol Screening Guide for Children and Adolescents” (RFA-AA-12-008) to solicit applications evaluating 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 meritorious five-year projects were funded to evaluate the *Guide* in a variety of settings. Results that have been published from these and other studies that have evaluated the *Guide* support the utility of the NIAAA two-question screening tool in primary care, emergency department, and school settings, and among youth with chronic health conditions.
- An online training course based on the *Guide’s* screening tool was released in 2013. Produced jointly with Medscape, a leading provider of online continuing medical education, the course helps train healthcare professionals to conduct rapid, evidence-based alcohol SBI with youth. More than 37,700 healthcare providers received continuing medical education credit for completing the course. Although the course is no longer available for credit from Medscape, the content is still available at <https://login.medscape.com/login/sso/getlogin?urlCache=aHR0cHM6Ly93d3cubWVkc2NhcGUub3JnL3ZpZXdhcnRpY2xlLzgwNjU1Ng==&ac=401>.

College Drinking Prevention Initiative: A longstanding priority for NIAAA, this initiative began more than two decades ago and continues to support and stimulate studies 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 support a sizable portfolio of projects that target college-age youth.

- *College Alcohol Intervention Matrix (CollegeAIM):* (<https://www.collegedrinkingprevention.gov/CollegeAIM>). NIAAA developed a tool for college administrators that summarizes several decades of college drinking intervention research in a simple matrix to help college administrators and staff choose wisely among the many interventions available for addressing alcohol misuse on college campuses.
 - Launched in print and online in September 2015, CollegeAIM 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 in an interactive, easy-to-use format that shows 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.
 - Since its launch, the CollegeAIM website has had almost 60,000 visitors, nearly 16,000 print copies of the CollegeAIM booklet have been distributed, and the booklet has been downloaded more than 12,000 times.
 - NIAAA’s overarching goal with CollegeAIM is the provision of 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. The first update will be issued in 2019.

Intervening at Individual and Environmental Levels: NIAAA supports the development, evaluation, and implementation of individual-, family-, school-, community-, and policy-level interventions to prevent and reduce underage drinking. NIAAA-supported research in this area includes projects examining:

- *Behavioral alcohol interventions (brief and extended in duration):* In FY 2018, NIAAA reissued a series of funding opportunities to support screening and brief alcohol interventions to prevent and/or reduce alcohol use and alcohol-related harms among underage and young adult populations (PA-18-193, PA-18-199, and PA-18-200).
- *Alcohol interventions for youth with co-occurring conditions:* In FY 2018, NIAAA continued to support a series of alcohol intervention studies for youth with co-occurring conditions, such as hospitalization for a suicide plan or attempt, or having depression/anxiety disorders.
- *Culturally appropriate interventions:* NIAAA funds research in this area such as:
 - A family-based underage drinking prevention program for Latino emerging adults (18-20) that promotes supportive family processes (e.g., involvement, cohesion, and communication) and helps them decide on a life path/reconcile different roles/expectations within Latino and U.S. cultural contexts.

- A community-based and -led preventive intervention for reducing alcohol use and suicidal ideation in 12- to 18-year-old Yup'ik Alaska Natives.
- Combined individual- and community-level interventions (e.g., community mobilization and awareness activities, restricting alcohol sales to minors) to reduce underage drinking by American Indian youth living on rural California Indian reservations.
- *Health services interventions:* NIAAA's health services program includes several active studies that are testing strategies to implement alcohol SBI protocols in pediatric trauma centers and emergency departments, including strategies that engage parents and medical support staff. These projects will provide a roadmap for national scale-up of these practices.
- *Underage drinking treatment development:* NIAAA's behavioral treatment program includes several studies that are conducting randomized controlled trials to test the efficacy of integrated behavioral treatments for young adults with alcohol use disorder and co-occurring mental illness, including ADHD, major depression, and suicidality. Separate studies are examining the mechanisms that underlie the effects of these therapies – specifically, this research seeks to understand neurobiological processes that mediate the direct link between specific “active ingredients” of psychosocial interventions and alcohol treatment outcomes.
- *The impact of alcohol policy on alcohol-related behaviors and outcomes:* NIAAA funds research about the public policy effects on alcohol-, marijuana-, and other substance-related behaviors and outcomes across the lifespan in a series of funding opportunities that were reissued in 2017 (PA-17-135, PA-17-132, and PA-17-134).

Analyzing Nationally Representative Data:

- *NEXT Generation Health Study:* (<https://www.nichd.nih.gov/about/org/diphr/officebranch/sbsb/next>). NIAAA staff have collaborated with NICHD's NEXT Generation Health Study, a seven-year longitudinal assessment of a representative sample of U.S. adolescent and young adults starting at grade 10. A number of articles on underage drinking have been published based on the study's data and are available on the study website and include studies on a wide range of alcohol-related topics including physician advice to teens about drinking, impaired driving among adolescents and young adults and alcohol induced blackouts among emerging adults.
- NIAAA also supports secondary analyses using underage drinking data from NIDA's *Monitoring the Future (MTF)*; (<http://www.monitoringthefuture.org>) and CDC's *Youth Risk Behavior Surveillance System (YRBSS)*; (<https://www.cdc.gov/healthyyouth/data/yrbs/index.htm>) datasets.

Key NIAAA Publications on Underage Drinking: NIAAA disseminates information about prevention of underage drinking for a range of audiences through a variety of publications.

- *Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide* (described above).

- NIAAA’s topical factsheets (e.g., on underage drinking [<https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/underage-drinking>], college drinking, and parental roles in preventing childhood alcohol use), as well as seasonal factsheets focusing on underage drinking issues surrounding high school graduation and the first weeks of college.
- NIAAA’s booklet *Make a Difference—Talk to Your Child About Alcohol* (English and Spanish) has been updated and expanded (https://pubs.niaaa.nih.gov/publications/MakeADiff_HTML/MakeAdiff.pdf).
- A 2018 issue of *Alcohol Research: Current Reviews*, NIAAA’s journal, featured several articles about adolescent binge drinking. Topics included effects of binge drinking on the developing brain, epidemiology of binge drinking among adolescent and college-age individuals, and opportunities for prevention. (<https://arcr.niaaa.nih.gov/binge-drinking-predictors-patterns-and-consequences>).

NIAAA Websites:

- The main NIAAA website (<https://www.niaaa.nih.gov>) provides information and resources on the science and prevention of underage drinking.
- *College Drinking Prevention Website*: NIAAA’s website addressing alcohol use among college students (<https://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. Of note, CollegeAIM (see under “College Drinking Prevention Initiative”) is a component of this website.

Activities Related to Underage Drinking

Alcohol Policy Information System (APIS):

- APIS (<https://alcoholpolicy.niaaa.nih.gov>) is an electronic resource that provides authoritative, detailed information on alcohol-related policies in the U.S. 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 the recreational use of cannabis.

The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC):

- NIAAA sponsored, designed, and conducted NESARC III, which captured information on Alcohol Use Disorder (AUD) and other related mental health conditions from a large, nationally representative sample of the U.S. population.
- DNA samples were also collected, have been analyzed and data are being prepared for uploading to data repositories.

- 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.

HHS/NIH/National Institute on Drug Abuse (NIDA)

Activities Related to Underage Drinking

Research on the brain development and child health: NIDA and other NIH Institutes are supporting a landmark study on brain development and child health. Children will be interviewed and studied with brain imaging from the age of 9 to at least age 19. The study will increase understanding of the environmental, social, genetic and other biological factors that affect brain and cognitive development and can enhance or disrupt a young person’s life trajectory. In addition, the study will determine how exposure to substances (e.g., alcohol, marijuana, nicotine, caffeine) and new ways of taking them (e.g., vaping, dabbing) affect developmental outcomes and vice versa. Enrollment has been completed with total enrollment at 11,875. The goal is to retain 10,000 into early adulthood. *Website:*

<https://www.drugabuse.gov/related-topics/adolescent-brain/longitudinal-study-adolescent-brain-cognitive-development-abcd-study>.

Select research findings and publications:

- *Is Alcohol and Other Substance Use Reduced When College Students Attend Alcohol-Free Programs? Evidence from a Measurement Burst Design Before and After Legal Drinking Age:* Building on prior research by Patrick et al., 2010, Layland, Calhoun, Russell, & Maggs (2018) assessed effects of a campus-led alcohol-free program, LateNight Penn State (LNPS). Layland and colleagues (2019) found that over seven semesters, college students who participated in the LNPS alcohol-free activities provided on week nights and weekends used alcohol and illegal substances less in general and less on days they participated. Levels of use were lowest for students under age 21.
- *An Online Drug Abuse Prevention Program for Adolescent Girls: Posttest and 1-Year Outcomes:* Schwinn et al., 2019 tested the RealTeen, a nine-session web-based prevention intervention aimed to reduce girls’ drug use and associated risk factors. At one-year follow-up, compared with girls in the control condition, girls who received the intervention reported less binge drinking and cigarette smoking. In addition, girls assigned to the intervention condition had higher alcohol, cigarette, and marijuana refusal skills, coping skills, and media literacy and lower rates of peer drug use.

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) tests CTC in 7 states with 12 matched pairs of communities randomized to receive the CTC system or serve as controls. A panel of 4,407 5th graders was recruited and followed to assess impact of the CTC system on substance use and related outcomes.

Select findings: CTC has demonstrated significant effects on substance use outcomes and delinquency from grades 5 through 12, 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).
- 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).

- *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 trial of PROSPER was conducted in 28 school districts in rural and semi-urban communities in Iowa and Pennsylvania 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.

Select findings:

- Analyses at 4.5 years past baseline showed that youth in the PROSPER condition reported 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).

- *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>.
- *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.
- *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>.
- *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 2019 NDAFW was held in January 2019. Information on NDAFW can be found at <https://teens.drugabuse.gov/national-drug-alcohol-facts-week>.
- *2019 National Drug & Alcohol IQ Challenge*: As part of the 2019 National Drug and Alcohol Facts Week, NIDA supported a challenge that allowed participants to test their knowledge by taking an interactive drug and alcohol IQ challenge quiz. The quiz included questions on drugs and alcohol and their effects and consequences. It also provided answers,

facts, and resources for each question. *Website:* <https://teens.drugabuse.gov/quiz/national-drug-alcohol-facts-week/take-iq-challenge/2019>.

HHS/Office of the Assistant Secretary for Health (OASH)–Office of Population Affairs (OPA)

Activities Related to Underage Drinking

OPA Website: The OPA website provides resources for parents and adolescents who are struggling with alcohol use. *Website:* <https://opa.hhs.gov/adolescent-health/substance-use-adolescence>.

- Information on adolescent development is available. *Website:* <https://opa.hhs.gov/adolescent-health/adolescent-development-explained>.

Adolescent Health: Think, Act, Grow® (TAG): The Office of Adolescent Health (now merged into the Office of Population Affairs) worked with 80 youth-related organizations to develop this national call to action to raise awareness about and promote adolescent health. *Website:* <https://www.hhs.gov/ash/oah/tag>.

- 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 Talks” video series featuring adolescent health experts, webinars, and a series of one-page handouts.
- Resources address substance use, including alcohol use, among adolescents.

HHS/OASH/Office of the Surgeon General (OSG)

Activities Related to Underage Drinking

Facing Addiction in America: The Surgeon General’s Report on Alcohol, Drugs, and Health: The OSG published this report in 2016 (HHS, 2016). It includes information on underage drinking prevention, as well as alcohol and other substance use in other populations, treatment, and recovery. This report was followed in 2018 by **Facing Addiction in America: The Surgeon General’s Spotlight on Opioids** (HHS, 2018), produced jointly with SAMHSA, focuses primarily on opioid use but also includes information on alcohol use disorders and their treatment.

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

Activities Specific to Underage Drinking

“Talk. They Hear You.”® (TTHY) National Media Campaign: SAMHSA’s Center for Substance Abuse Prevention (CSAP) supports 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. TTHY is discussed in more detail in Chapter 5. *Website:* <https://www.samhsa.gov/underage-drinking>.

- 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.

- Has distributed PSAs in all 50 states and more than 300 cities, including in major airports, public transportation, billboards, broadcast and cable TV networks, radio stations, newspapers, and select magazines that reach parents.
- Has more than 300 local, state, and national partners, including CADCA and the National Parent Teacher Association.
- Has developed a TTHY mobile app, which was analyzed in a peer-reviewed journal (Stellefson et al., 2019).

Underage Drinking Prevention Education Initiatives: This SAMHSA/CSAP effort provides ongoing support for the ICCPUD web portal and the nationwide Communities Talk: Town Hall Meetings to Prevent Underage Drinking initiative, and provides other resources, message development, public outreach and education, and partnership development for preventing underage alcohol use among youth up to age 21. *Website:* <https://www.stopalcoholabuse.gov>.

- The ICCPUD web portal includes comprehensive research and resources developed by the federal agencies of ICCPUD, including the annual *Report to Congress, State Performance and Best Practices Report*, and the *State Reports*.
- Town Hall Meetings are held approximately every two years (including in 2019), hosted by community or state organizations and supported by SAMHSA to educate youth, families, and communities about the potentially harmful consequences of underage and problem drinking among individuals 12 to 25 years old.

Strategic Prevention Framework Partnerships for Success (SPF PFS) Program: The purpose of this grant program is to address underage drinking among persons aged 9 to 20 and may also be used to target up to two additional, data-driven substance abuse prevention priorities.

- Awards grants to states and AI/AN tribes or tribal organizations.
- Is designed to ensure that prevention strategies and messages reach the populations most impacted by substance abuse.
- \$38 million in funding was available for FY 2019.

Sober Truth on Preventing Underage Drinking (STOP) Act Grant Program: SAMHSA's Center for Substance Abuse Prevention (CSAP) provides up to \$50,000 per year for four years to current or previously funded Drug-Free Communities Program (DFC) grant recipients to enhance implementation of evidence-based practices that are effective in preventing underage drinking. This grant program:

- Currently funds 98 community coalitions in 31 states and the District of Columbia.
- Strengthens collaboration among community sectors, the federal government, and state, local, and tribal governments that demonstrate a long-term commitment to reducing alcohol use among youth.
- Uses SAMHSA's SPF 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.

Activities Related to Underage Drinking

Substance Abuse Prevention and Treatment Block Grant (SABG): Mandated by Congress, the SABG program 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.
- A large majority of SABG grantees have identified underage drinking as a prevention priority.

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. *Website:* <https://www.samhsa.gov/find-help/national-helpline>.

- The Helpline is a confidential, free, 24-hour-a-day, 365-days-a-year information service available in English and Spanish.
- In addition to calling the toll-free number, help is also available by visiting the online treatment locator at <https://www.samhsa.gov/find-help/treatment>.

Enhancement and Expansion of Treatment and Recovery Services for Adolescents, Transitional Aged Youth, and their Families Grant Program (Youth and Family TREE): Administered by the Center for Substance Abuse Treatment (CSAT), this program seeks to enhance and expand comprehensive treatment, early intervention, and recovery support services for adolescents (ages 12-18), transitional aged youth (ages 16-25), and their families/primary caregivers with substance use disorders (SUD) and/or co-occurring substance use and mental disorders.

- More than \$14 million was available for an anticipated 27 grants in FY 2018.
- Eligible entities are states, tribes, universities, nonprofit healthcare systems, and community and faith-based organizations.
- Recipients are expected to provide a coordinated, multi-system, family-centered approach that will enhance and expand comprehensive evidence-based treatment, including early intervention, and recovery support services.

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 and 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. *Website:* <https://www.samhsa.gov/sbirt>.

- SBIRT grants are administered by SAMHSA's CSAT.
- In FY 2018, SAMHSA funded new grants of up to \$950,000 per year for 5 years to nonprofit HMOs and PPOs as well as Federally Qualified Health Care systems and hospital systems.
- Several SBIRT grantees have developed programs that are available to individuals under age 21, and new grants will also encourage the provision of services to adolescents and emerging youth.

Offender Reentry Program (ORP): The purpose of this CSAT program is to expand substance use disorder treatment and related recovery and reentry services to sentenced offenders/ex-offenders who have a substance use disorder and/or co-occurring substance use and mental disorders, who are returning to their families and community from incarceration in state and local facilities including prisons, jails, or detention centers.

- Supports services for people age 18 and above.
- Provides services grants to stakeholder partnerships.
- Seeks to actively support offender reentry stakeholder partnerships so that clinical needs are met and clients are treated using evidence-based practices.

Grants to Expand Substance Abuse Treatment Capacity in Family, Juvenile, and Adult Treatment Drug Courts: These programs support courts that use the treatment drug court model in order to provide substance use disorder treatment (including recovery support services, screening, assessment, case management, and program coordination) to defendants/offenders or parents who are at risk of having dependency petitions filed against them.

- More than \$10 million was available in 2019 under these grant programs.
- Grants to family courts address the needs of the family as a whole and include direct service provision to children and youth age 18 and under.

Addiction Technology Transfer Center (ATTC) Network: The ATTCs support national and regional activities focused on preparing tools needed by practitioners to improve the quality of service delivery and to providing intensive technical assistance to provider organizations to improve their processes and practices in the delivery of effective SUD treatment and recovery services. *Website:* <https://www.attcnetwork.org/>.

- A regional ATTC is located in each of the ten HHS designated regions.
- There are two national ATTCs: the National American Indian and Alaskan Native ATTC and the National Hispanic and Latino ATTC.

Prevention Technology Transfer Centers: In 2018, SAMHSA used cooperative agreements to create and support a network of Prevention Technology Transfer Centers (PTTC) that improve implementation and delivery of effective substance abuse prevention interventions, and provide training and technical assistance services to the substance abuse prevention field. *Website:* <https://pttcnetwork.org/>.

- The PTTCs develop and disseminate tools and strategies needed to improve the quality of substance abuse prevention efforts and provide intensive technical assistance and learning resources to prevention professionals.
- Similar to the ATTCs, a regional PTTC is located in each of the ten HHS designated regions, and there are two national PTTCs: the National American Indian and Alaskan Native PTTC and the National Hispanic and Latino PTTC.

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. *Website:* <https://www.samhsa.gov/tribal-ttac>.

- Is culturally relevant, evidence-based, and holistic, using the Strategic Culture Framework.

- 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. *Website:*

<https://www.samhsa.gov/tloa/about>.

- The office provides staffing for the Indian Alcohol and Substance Abuse (IASA) Interagency Coordinating Committee, which coordinates 60 federal agencies responsible for addressing alcohol and substance use issues.
- The IASA Interagency Coordinating Committee includes 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.

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. *Website:*

<https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health>.

- Is the primary national source of both national and state information on use of illicit drugs, alcohol, and tobacco.
- Also provides estimates of substance use disorders, substance use disorder treatment, mental health measures, mental health service use, and co-occurring substance use disorders.
- Is conducted each year through confidential interviews during 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, and offers information on treatment facilities with special programs for adolescents as well as demographic and substance use characteristics of adolescent treatment admissions. It has five interrelated components:

- *Inventory of Behavioral Health Services (I-BHS)*, 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)*, an annual survey of all substance use disorder treatment facilities in the I-BHS.
- *National Mental Health Services Survey (N-MHSS)*, an annual survey of all mental health treatment facilities.
- *Treatment Episode Data Set (TEDS)*, 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.
- *Mental Health-Treatment Episode Data Set (MH-TEDS)* and *Mental Health-Client Level Data (MH-CLD)*, collections of mental health client level data from state-funded mental health treatment service facilities.

Drug Abuse Warning Network (DAWN): SAMHSA is re-establishing DAWN, a nationwide public health surveillance system that will improve emergency department (ED) monitoring of

substance use crises, including those related to opioids. *Website:*
<https://www.samhsa.gov/data/data-we-collect/dawn-drug-abuse-warning-network>.

- Will function as a smaller-scale sentinel surveillance system, or an ‘early warning’ system, in comparison to legacy DAWN, which produced nationwide estimates through 2011.
- Now includes include improved timeliness of data, data available at more frequent intervals, and data for a wider range of geographic area types, including urban, suburban, and rural areas.
- Hospital participation will continue to be voluntary, and data abstraction will begin in mid-2019 with a group of 25 hospitals.

Drug Free Communities Support Program (DFC): The DFC Program, created by the Drug-Free Communities Act of 1997, is a program of the Office of National Drug Control Policy (ONDCP) that was administered by SAMHSA during 2019 under an interagency agreement. (See ONDCP section for additional information). The program:

- Provides grants to community coalitions to strengthen the infrastructure among local partners to create and sustain a reduction in local youth substance use.
- Has two goals: (1) to establish and strengthen collaboration among communities, public and private non-profit agencies, as well as federal, state, local, and tribal governments; and (2) to reduce substance abuse among youth by addressing the risk and protective factors at the community level.
- Grants are for \$125,000 for up to five years.

U.S. Department of Defense (DoD)/Office of the Assistant Secretary of Defense

Activities Specific to Underage Drinking

Youth Program: DoD Youth Programs continue to build upon healthy life skills by increasing young people’s capacity to engage in positive behaviors. They provide social, cognitive, educational, physical, and recreational activities and services appropriate to needs, interests, and abilities by providing physically and emotionally safe environments for youth to spend their out-of-school-time. Through affiliation, programs such as the Boys & Girls Clubs of America and 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: DoDEA implements a structured health education program to provide students with learning experiences designed to increase the acquisition of basic health concepts and functional health knowledge to make quality decisions. The program includes curriculum and instruction that addresses a variety of concepts to include information about the risks associated with alcohol consumption and the impact on the individual, their friends, family, and community.

Red Ribbon Week: Sponsored by the National Family Partnership, DoDEA observes Red Ribbon Week by providing specialized programming to educate students of the dangers of drug and alcohol abuse and the benefits of living a healthy and drug-free lifestyle.

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 issues related to the supply of illegal substances and prescription medications, responsible use and demand reduction of addictive disorders, promotion of healthy behaviors—including alcohol use—and the identification, prevention, and treatment of other substance use disorders. ASMAC also provides subject matter expert (SME) advice to other interagency or advisory functions.

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.

“That Guy” Counter-Marketing Campaign: “That Guy” was launched in 2006 as an integrated marketing campaign to reduce alcohol misuse among enlisted Service members ages 18 to 24 across all Service branches. The campaign uses research-based peer-to-peer approach to raise awareness of the negative short-term social consequences of excessive drinking. *Website:* <https://www.military.com/benefits/veterans-health-care/that-guy-who-drinks-too-much.html>.

- Features a series of print materials with tips and resources on drinking responsibly.
- Launched a web-enabled, self-paced online alcohol assessment in September 2018 to help Service members identify if they need to take steps to develop responsible drinking habits or seek treatment for alcohol misuse.
- Engages with more 72,861 fans on social media platforms, including Facebook and Instagram and disseminated more than 5.6 million branded materials across to all Services to date.
- Credited with contributing to reductions in binge drinking and is actively deployed around the world. The 2016 Status of Forces Survey (the most recent release that measured awareness of the campaign) reveals the campaign achieved a 60 percent awareness rate among DoD Active Duty members E1-E4.

- The campaign is currently being refreshed for a 2019 relaunch.

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, the USMC Marine and Family Programs, and the USMC Health Services have a Memorandum of Understanding (MOU) that defines the continuum of psychological health and problematic substance use services offered on Marine Corps installations and establishes communication among all entities to ensure a coordinated comprehensive system of care.
- *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 required to undergo accreditation/certification not less than once every four years using standards developed by a national accrediting body and to 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 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 was 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 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 SME 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 alcohol abuse prevention program supports Fleet readiness with plans, policies, and resources to prevent consequences of substance misuse. NADAP program includes education and training, early intervention, substance abuse rehabilitation, and accountability. NADAP efforts comprise:

- *Aware Program:* 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. This program is in the process of a curriculum update, which will include a change from IMPACT to Prime for Life. Prime for Life is an evidence-based substance misuse educational and early intervention curriculum, emphasizing risk reduction and preventing future problems with alcohol and other drugs.
- *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.
- *Resilient Workforce (RW) Summits:* RW Summits are conducted throughout the year in fleet-concentrated areas. An RW Summit may also offer some or all of the following topics: sexual assault prevention and response (SAPR), domestic violence prevention, equal opportunity, substance abuse prevention, 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.

Navy Campaigns and Education:

- *Keep What You've Earned:* A comprehensive social marketing campaign that encourages responsible drinking among sailors by celebrating the achievements in their Navy careers. The campaign leverages social marketing to reach sailors in their life spaces and promote more responsible drinking behaviors using a variety of tactics.
- *"Pier Pressure":* A mobile app that sailors have accessed more than 40,000 times. It combines serious games with real-life tools, like access to Uber and Lyft, to help users find a safe ride home, an anonymous self-check to gauge drinking behavior, a calorie counter, and other resources.
- *Video PSAs with Sailor-on-the-Street Interviews:* Delivers relatable messages at the right times via the right mediums to remind sailors to drink responsibly and "keep what they've earned" as dedicated professionals and defenders of the nation. Credited as a significant motivator behind a remarkable decline in alcohol-related incidents, it provides action-oriented information to encourage sailors to drink responsibly.
- *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 seatbelts.
- *The Hope Dealer*: The Hope Dealer takes audiences on a journey through his life to demonstrate how “H-bombs” (hope, humor, head, and heart) are at the core of the choices we make, especially those involving underage drinking and drunk driving. Arming audience members with the same “H’s” that saved his life, everyone will want to join the ranks of the Hope Dealers!

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 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 as recognized by its inclusion within the SAMHSA National Registry of Evidence-based Programs and Practices (NREPP). 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 more than 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.

U.S. Department of Education (ED)/Office of Safe and Healthy Students (OSHS)

Activities Related to Underage Drinking

ED's School Climate Transformation Grant–Local Educational Agency Grants Program:

This program provides competitive grants to state educational agencies (SEAs) to develop, enhance, or expand systems of support for, and technical assistance to, local educational agencies and schools implementing an evidence-based, multi-tiered behavioral framework for improving behavioral outcomes and learning conditions for all students. *Websites:*

<https://www2.ed.gov/programs/schoolclimatesea/index.html>.

- 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. *Website:*

https://www2.ed.gov/about/offices/list/oese/oshs/news.html#PreventED_Listserv_Enrollment.

- The bulletin also highlights other federal funding opportunities related to these topics (including underage drinking prevention).
- It also provides a timely information outlet for the OSHS.
- The listserv content may include information about the OSHS program units (Well-Rounded Educational Opportunities, Safe and Healthy Students, Education Technology, Homeless, Neglected and Delinquent Youth, and Emergency Management and School Preparedness), legislation, and federal grant opportunities.

Growing up Drug-Free: A Parent’s Guide to Prevention: Update of this publication in April 2017 that was last revised in 2012. *Website:*

<https://www.dea.gov/documents/2017/04/27/growing-drug-free-parents-guide-prevention-2017>.

- This 40-page booklet offers information to help parents and other caregivers raise drug-free children.
- The guide includes an overview of substance use among youth; descriptions of substances young people may use; a look at risk factors that may make kids more vulnerable to trying and using drugs, and protective factors to offset those risks; suggestions for how to talk to children about drugs, regardless of their age; and tips on what to do if you suspect your child is using alcohol, tobacco, or other drugs.
- The ED partnered with the Drug Enforcement Administration to update this publication.

U.S. Department of Homeland Security/U.S. Coast Guard (USCG)

Activities Related to Underage Drinking

The USCG has restructured its policies to reflect the establishment in 2014 of age 21 as the minimum drinking age, regardless of the Service member’s duty location. Prevention- and treatment-seeking behaviors are being strengthened and encouraged.

- The USCG’s new COMDTINST M6320.5, Coast Guard Substance Abuse Prevention and Treatment Manual policy was officially promulgated on September 6, 2018.
- 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).

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

Activities Specific to Underage Drinking

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

NHTSA monitors state compliance with congressionally mandated programs to encourage states to enact minimum drinking age and zero tolerance laws, both of which have been enacted by all 50 states and the District of Columbia. *Website:* <https://www.nhtsa.gov/laws-regulations/impaired-driving>.

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): NOYS, in partnership with NHTSA, formed the Global Youth Traffic Safety Month, an annual campaign highlighting organizations, resources and youth who champion road safety, including the prevention of drinking and driving. *Website:* <https://noys.org/programs/substance-abuse-prevention/impaired-driving>.

Students Against Destructive Decisions (SADD): NHTSA partners with SADD in its efforts to promote safe driving practices among youth, including the prevention of impaired driving. *Website:* <https://www.sadd.org/about>.

State Highway Safety Funding: NHTSA provides federal funding to states and local communities which may be used for activities related to underage drinking and driving prevention through State Highway Safety Offices (SHSOs). *Website:* <https://www.nhtsa.gov/highway-safety-grants-program/state-highway-safety-plans-and-annual-reports>.

Youth Traffic Safety Media: NHTSA provides resources to support teen driver safety, including the prevention of drinking and driving.

- **Teen Driving:** Provides overviews, recommendations, and facts about teen driver safety for parents. *Website:* <https://www.nhtsa.gov/road-safety/teen-driving>.
- **Teen Safety:** Provides campaign materials and marketing techniques for parents, caregivers, teachers, and safety advocates to support safe teen driving. *Website:* <https://www.trafficsafetymarketing.gov/get-materials/teen-safety>.
- “Underage Drinking and Driving: The Ultimate Party Foul”: NHTSA joined with the Ad Council to launch this media campaign targeting new drivers.

Federal Trade Commission (FTC)

Activities Specific to Underage Drinking

Consumer Education: In 2018, FTC continued its “We Don’t Serve Teens” (WDST) program, promoting compliance with the legal drinking age of 21. *Website:* <https://www.consumer.ftc.gov/features/feature-0028-we-dont-serve-teens>.

- 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.

Office of National Drug Control Policy (ONDCP)

Drug-Free Communities (DFC) Support Program: The Drug-Free Communities (DFC) Support Program, created by the Drug-Free Communities Act of 1997, is the nation’s leading effort to mobilize communities to prevent youth substance use. Directed by the White House Office of National Drug Control Policy (ONDCP), in partnership with the Substance Abuse and Mental Health Services Administration (SAMHSA) (note that partnership was transferred to

CDC in 2020), the DFC Program provides grants to community coalitions to strengthen the infrastructure among local partners to create and sustain a reduction in local youth substance use.

Recognizing that local problems need local solutions, DFC-funded coalitions engage multiple sectors of the community and employ a variety of environmental strategies to address local substance use problems. DFCs involve local communities in finding solutions and also helps youth at risk for substance use recognize the majority of our nation's youth choose not to use substances. *Website:* <https://www.whitehouse.gov/ondcp/>.

DFC Coalitions are made up of community leaders representing twelve sectors that organize to meet the local prevention needs of the youth and families in their communities. These twelve sectors are:

1. Youth (18 or younger)
2. Parents
3. Businesses
4. Media
5. Schools
6. Youth-serving organizations
7. Law enforcement
8. Religious/Fraternal organizations
9. Civic/Volunteer groups
10. Healthcare professionals
11. State, local, or tribal government agencies with expertise in the field of substance abuse
12. Other organizations involved in reducing substance abuse

The DFC Program is effective - within communities with a DFC coalition, most middle school and high school youth reported not using each of the four core measure substances (alcohol, tobacco, marijuana, [non-misuse] prescription drugs) and over time prevalence of past 30-day use decreased significantly for all substances.

Exhibit 4.1: 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 | FY 2018 actual |
|---------------------|---|--------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| CDC | \$1,200,000 | \$1,041,730 | \$1,081,200 | \$986,587 | \$949,894 | \$1,100,000 | \$900,000 | \$900,000 | \$900,000 |
| ED | \$40,580,995 | \$8,782,000 ^a | — ^b | — ^b | — ^b | 0 | 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 | \$56,000,000 |
| 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 | \$100,445,393 |
| OJJDP ^f | \$25,000,000 | \$20,708,500 | \$4,862,895 | \$5,000,000 | \$2,500,000 | 0 | 0 | 0 | 0 |
| NHTSA | \$625,000 | \$600,000 | \$645,000 | \$600,000 | \$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 | \$157,945,393 |

^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 NCSSE. 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 5

Evaluation of the National Media Campaign: “Talk. They Hear You.”[®]

CHAPTER 5—EVALUATION OF THE NATIONAL MEDIA CAMPAIGN: “TALK. THEY HEAR YOU.”®

Summary of Chapter

Chapter 5 provides the report to Congress on the national media campaign, “Talk. They Hear You.”® (TTHY), as required by the Sober Truth on Preventing Underage Drinking (STOP) Act. The chapter begins by providing background and an overview of the TTHY campaign, and then describes the campaign’s target audience and components. The chapter presents a detailed description of the campaign’s evaluation and subsequent refinement.

Background

TTHY is the parent-focused national media campaign of the Substance Abuse and Mental Health Services Administration’s (SAMHSA) Center for Substance Abuse Prevention (CSAP). Launched in 2013, the campaign’s original goal was to provide parents and caregivers with the resources they need to address the issue of alcohol with their children.

However, in 2017—amid the nation’s opioid crisis and changes in laws regarding marijuana in a growing number of states across the country—the trademarked campaign received separate funding to expand content to include information on alcohol and other substances (see Exhibit 5.1). Recognizing the dynamic national context, SAMHSA expanded TTHY to prepare parents and caregivers to talk to their children about alcohol and other drugs, including prescription pain medications and marijuana.

Historically, TTHY has focused on reaching parents and caregivers of children ages 9 to 15 for early intervention. In 2018, the campaign expanded this age-range, and now includes resources for parents and caregivers of children under the age of 21. The campaign is currently in its sixth year, and has evolved into an ongoing communications initiative and also a well-recognized brand.

Underage drinking and substance use are national public health issues with serious implications, especially among adolescents. SAMHSA is responsible for leading public health efforts to reduce the impact of substance misuse and mental health disorders on American communities. TTHY has become an important part of these efforts. It was developed in response to directives set forth in Section 2(d) of the STOP Act, requiring the Secretary of the U.S. Department of Health and Human Services (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 the campaign is to reduce underage drinking and substance use by providing parents and caregivers of children under age 21 with information and resources to discuss the issue of alcohol and other drugs with their children.

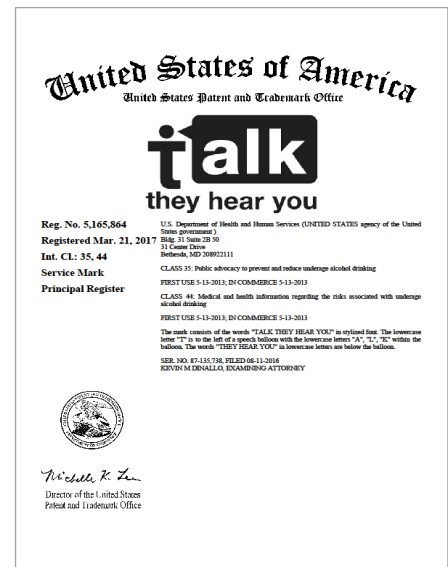


Exhibit 5.1: The “Talk. They Hear You.”® Service Mark Certificate

The literature on prevention suggests that parental interaction with youth regarding underage drinking and substance use may provide a unique opportunity for prevention and early intervention. TTHY was designed to capitalize on this theory and add to the current knowledge base about underage drinking and substance use 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.

Objectives of the TTHY campaign (see Exhibits 5.2 and 5.3) include⁴⁷ the following:

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



Exhibit 5.2: TTHY advertisement

Exhibit 5.3: Return on Investment of the “Talk. They Hear You.” ® National Media Campaign

The TTHY earned media campaign⁴⁸ has yielded more than a \$9 to \$1 return on investment for every dollar invested. Key strategies of the earned media campaign were to: 1) secure prominent campaign coverage in several major media outlets, and 2) leverage regional relationships in communities through town hall meetings and public health observances (e.g., National Prevention Week) to further educate parents and caregivers of children under 21 about why and how they should talk about the dangers of underage drinking and substance use. The campaign also hosts four community engagement meetings each year to interact with local groups who use the campaign and to learn specifics about their prevention efforts.

Since the campaign’s inception, initial investment costs for development and implementation have been less than \$1,000,000 per year, totaling \$9,108,324 over a 10-year period. Earned media outreach efforts have generated an estimated \$94 million in earned media placements on major networks and affiliates—with television, print, and radio public service announcements (PSAs) having collectively garnered 8.4 billion impressions in all 50 states and in more than 300 cities. Distribution is augmented by community engagement with groups such as the Community Anti-Drug Coalitions of America and the National Prevention Network, which have direct access to parents and caregivers. With partner engagement and outreach included, the campaign has earned more than 20,760 in donated labor hours from community partners, which equates to approximately 10 full-time employees and \$443,000 in estimated salary.

⁴⁷Note that while TTHY campaign objectives have been expanded to include a broader target youth age range and substances beyond alcohol, evaluation funding remains limited to the original mandate: parents of children ages 9–15 and alcohol-related indicators only.

⁴⁸“Definition of earned media: Earned media, also referred to as media relations, word-of-mouth, PR, or publicity, is an unpaid brand mention or recognition such as a news article, published interview, or online review by a third party. In addition, earned media can also refer to a byline or article written by someone associated with the brand that is published by a third party.” (Top Rank Marketing, n.d.).

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. Alcohol continues to be the most widely misused substance among America's youth, with an estimated 7.4 million people younger than the age of 21 drinking alcohol in the past month. Additionally, approximately 3,300 youth as young as 12 years of age try marijuana for the first time each day,⁴⁹ and an annual average of 10.7 million people ages 12 or older misused prescription pain relievers in the past year.⁵⁰

As noted, SAMHSA's TTHY campaign focuses on encouraging parents to begin conversations about alcohol and other drugs with children at an early age, when the likelihood of influencing children's decisions about drinking and drug use 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 their children's decisions to experiment with alcohol and other drugs. 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). Further, research also suggests that one of the most influential factors in child development is a strong, open relationship with a parent (National Scientific Council on the Developing Child, 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 (National Research Council [NRC] & Institute of Medicine [IOM], 2004).

Parents who are informed about underage drinking and drug use can take action to protect their children from many of the attendant high-risk behaviors. When parents create supportive and nurturing environments, children make better decisions. Though it may not always seem like it, children really do hear their parents' concerns, illustrating the importance of conversations between parents and children on the risks of using alcohol and other drugs.

To help parents/caregivers of different backgrounds see themselves and relate to the campaign, SAMHSA has, since TTHY's inception, focused on producing campaign products that feature parents and youth of diverse backgrounds. These products are described in more detail in the following section.

Campaign Components

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

⁴⁹Substance Abuse and Mental Health Services Administration. (2018d). *Key substance use and mental health indicators in the United States: Results from the 2017 National Survey on Drug Use and Health* (HHS Publication No. SMA 18-5068, NSDUH Series H-53). Rockville, MD: Center for Behavioral Health Statistics and Quality, SAMHSA.

⁵⁰Lipari, R. N., & Hughes, A. (2017). *The CBHSQ Report: How people obtain the prescription pain relievers they misuse*. Rockville, MD: Center for Behavioral Health Statistics and Quality, SAMHSA.

- Emphasize the importance of parents talking to their kids about underage drinking and substance use before they reach the age range when alcohol and drug use typically begins (before age 15).
- Offer advice to parents about preparing children to deal with peer pressure issues that may lead to alcohol and drug use.
- Highlight underage drinking and substance use statistics that are likely to catch parents' attention.
- Focus on helping parents address the issue of underage drinking and substance use 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 and other drugs with their children.

Public Service Announcements

TTHY PSAs show parents using everyday opportunities to talk with their children about alcohol and other drugs and reinforce the importance of starting these conversations at an early age and continuing the conversations through adulthood (see Exhibit 5.4). PSAs direct viewers/listeners to the campaign website (<https://www.samhsa.gov/underage-drinking>) for additional information and tools, as well as downloadable versions of video, radio, and print PSAs.



Exhibit 5.4: Typical parent/child opportunity for conversation

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 2018, the TTHY campaign released a set of PSAs that included one creative execution for a military audience and another for a general audience. Both focused on substances other than alcohol. A third PSA featuring television actress Torrey DeVitto and her musician father Liberatori “Liberty” DeVitto highlighted the positive outcomes of talking to children about alcohol and other drugs.

In 2019, the TTHY campaign will release a collection of three PSAs focused on underage drinking and substance use prevention, along with separately funded PSAs specifically focused on vaping and marijuana. Each of these new creative executions addresses underage drinking prevention, as well as other substances that are often used in combination with alcohol.

As discussed in Exhibit 5.3, since the campaign launched in 2013, TTHY television, radio, and print PSAs have collectively garnered more than 8.4 billion impressions. Distribution has generated an estimated \$94 million in free air time and ad space.

Partner Engagement

The TTHY campaign works with more than 300 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 code for promoting the campaign on partner websites. These materials were created and provided to partners for display and distribution to parents/caregivers and community members (see Exhibit 5.5), along with talking points, factsheets, infographics, draft social media messages, and email templates to ensure consistent outreach to parents and community members.

The TTHY campaign and its promotional materials are popular among all types of communities and organizations. For example, after learning about TTHY at SAMHSA’s Annual Prevention Day in February 2017, the Knox County Health Department in Mount Vernon, Ohio began implementing the campaign throughout the community.

Collective prevention efforts in Knox County included using campaign PSAs and messaging in conjunction with Hidden in Plain Sight parental education programs at schools; sharing campaign toolkits during trainings with school staff and administrators on community prevention efforts; and distributing e-newsletters about the campaign to parents and caregivers via school listservs.

Additionally, Knox County ran Facebook ads and radio PSAs and sponsored a billboard with TTHY campaign messaging encouraging parents to #BuildTheBond with their children by having conversations about alcohol and other drugs.



Exhibit 5-5: “Talk. They Hear You.”® Postcards Distributed by Knox County Health Department to Parents and Caregivers

Website

The TTHY website (Exhibit 5.6; SAMHSA, n.d.) provides a centralized resource for all campaign information and products. Materials and information are organized by audience category: parent/caregiver, partner, or media. Educational and informational documents provide facts and statistics on the problems and consequences of underage drinking and substance use, risk factors, and warning signs. They also suggest actions that parents and educators can take to help protect children and strengthen their decision-making skills. A Spanish version of the

TTHY website, launched in March 2016, can be accessed at <https://www.samhsa.gov/hable-ellos-escuchan>.

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

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

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



Exhibit 5-6: “Talk. They Hear You.”® materials are available on the SAMHSA website (<https://www.samhsa.gov/underage-drinking>).

Collective promotional activities from January 1, 2018, through December 31, 2018, helped drive 48,733 visits to the TTHY website.

Mobile Application

Available to parents since July 2015, the TTHY mobile application (Exhibit 5.7; SAMHSA 2015) is available through Google Play™, the Windows® Store, and the App Store.®

The app 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 11,473 times as of October 2018—with more than 1,000 of those downloads taking place in January 2018.

In 2018, SAMHSA posted social media messages promoting the TTHY mobile application. These social media posts garnered 214 engagements (reactions, comments, shares, and replies) and contributed to 3,770 visits and 4,843 page views to the <https://www.samhsa.gov/underage-drinking/mobile-application>.

A recent review in the peer-reviewed *Health Promotion Practice* journal described the app in detail and concluded that it “shows broad dissemination potential that is likely to translate into

healthier, more productive in-person conversations with underage drinkers” (Stellefson et al., 2019).

In previous years, the campaign has used 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 (available at <https://www.stopalcoholabuse.gov>).



Exhibit 5.7: The “Talk. They Hear You.”® Mobile App

Campaign Evaluation and Refinement

Best practices for implementing health communications campaigns 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 evaluation is critical because it alerts campaign planners to audience preferences and motivators early in the planning process. Applying these findings to campaign materials ensures their relevance and appeal to the campaign’s target audiences.

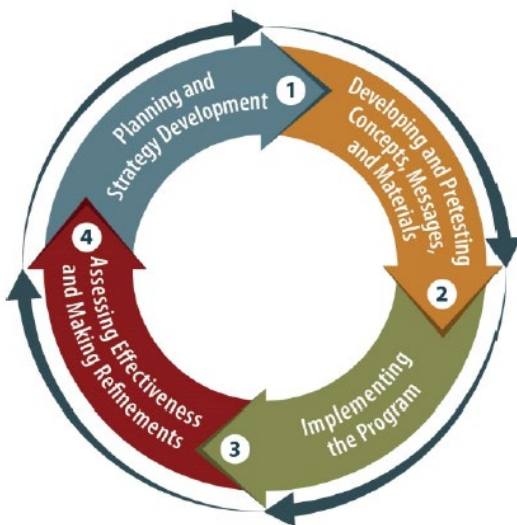


Exhibit 5.8: The NCI Health Communications Model

During campaign development, parents, youths, 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 the feedback from parents and caregivers is integrated into the campaign. Feedback received during these formative market testing efforts are incorporated into final campaign materials prior to launch. Thus, following the National Cancer Institute (NCI) model (Exhibit 5.8; NCI, n.d.), SAMHSA pretests messages, materials, and concepts during their development.

Equally important to the evaluation methods applied during the campaign development and implementation stages are the process and summative stages of campaign evaluation. During summative evaluation, short-, intermediate-, and long-term campaign outcomes are carefully measured to help SAMHSA answer the question of how well the campaign is achieving its stated goals for change. Findings from this phase are leveraged to determine best practices, and where appropriate, forge new directions for the communications initiative.

While summative evaluation happens at the end of the evaluation cycle, it should not be viewed as an endpoint. Throughout the life of the campaign, SAMHSA continues to invigorate TTHY by incorporating findings from ongoing process evaluation efforts. These evaluative “check points” track the evolving needs of target audiences so that messages and materials retain their relevance and appeal among intended campaign targets.

TTHY Campaign Evaluation: A Brief History of Formative and Summative Activities

Before launch of the TTHY campaign in 2013, SAMHSA conducted an initial national pilot project in 2012 to evaluate and refine the campaign’s creative materials and objectives. Feedback received from this effort was incorporated into materials before the official campaign launch. Additionally, the pilot project confirmed that TTHY did have an impact on parent knowledge, attitudes, and behaviors (KABs) regarding underage drinking.

Extensive details of the pilot project are presented in the 2014 report, *The Development and Implementation of a National Media Campaign to Address Underage Drinking*, and a topline summary of the effort is included in the 2015–2016 versions of the Report to Congress, available on the <https://www.stopalcoholabuse.gov> website. Following this effort, a national parent/caregiver survey pilot project was launched in January of 2016 to further inform evaluation planning and execution for the TTHY campaign.⁵¹ Findings from this project indicated that a national survey/questionnaire effort would be feasible for ongoing TTHY tracking efforts.

SAMHSA then conducted focus groups for additional TTHY campaign development (September through November, 2016). Five focus groups were conducted to test key TTHY PSAs. Based on focus group results, additional edits were made to both the creative campaign elements and the survey instrument. Specific recommendations from these focus groups are provided in the 2017 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*. A topline report of evaluation findings and recommendations for further refining both the survey instrument and the TTHY campaign materials is also detailed in the Campaign Evaluation Strategy section of the 2018 Report to Congress (see <https://www.stopalcoholabuse.gov>).

Subsequent to these efforts, additional refinements were made to the survey instrument (for eventual use in both the Case Study and Parent Questionnaire described later in this report) via an iterative process of review among subject matter experts (SMEs) in the survey design space,

⁵¹The intent of the ongoing, iterative survey instrument development efforts was to create a valid instrument for use in both the Case Study and Parent Questionnaire efforts described in more detail in this chapter.

as well as a rigorous cognitive testing procedure. As described more fully in the *2018 Report to Congress on the Prevention and Reduction of Underage Drinking (2018 RTC)*, cognitive testing of the survey instrument was conducted from August through September, 2017, among a small sample (N=8) of respondents falling within the campaign target audience. Small-scale cognitive testing activities, such as those conducted for this effort, are the gold standard for ensuring valid evaluation instrumentation, and are well-accepted among behavioral scientists and evaluators for helping to eliminate “unwarranted suppositions, awkward wordings, or missing response categories” (Presser et al, 2004, pg. 109).⁵²

Based on the feedback from these efforts, final edits were made to the survey instrument before its eventual use in the fall 2017/spring 2018 Case Study project (described below). A full report of case study procedures and recommendations is included in the archived *2017 Cognitive Testing Report* (<https://www.stopalcoholabuse.gov>). The final survey was then time-tested in September 2017 to confirm that burden estimates were within the limits suggested in the OMB package submitted for this project, a full accounting of which can be found in the archived Time Testing Report⁵³, also available at <https://www.stopalcoholabuse.gov>.

In summary, the 2012 initial pilot project, the 2016 pilot survey feasibility project, subsequent focus groups in 2016 and 2017, and iterative SME reviews of the survey instrument and cognitive testing of the revised survey in 2017 were all employed to further develop TTHY campaign elements, as well as refine evaluation designs, data collection procedures, and survey/questionnaire instrumentation for subsequent TTHY campaign evaluation efforts.

Recent Past, Present, and Future TTHY Summative Evaluation Overview

Significant outcome evaluation efforts are underway to assess campaign efficacy and further the development and implementation of the TTHY campaign. Since publication of the *2018 Report to Congress*, a number of additional evaluation-related activities have been executed, and several more are planned, beginning with a final data optimization exercise⁵⁴ for the survey instrument used in the Case Study and Parent Questionnaire projects detailed below.

As described earlier in this chapter, 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 KABs to affect the prevention of underage drinking. In accordance with the STOP Act mandate, and with the goal of tracking the effectiveness of the TTHY campaign, SAMHSA has designed several evaluation activities that are in various stages of implementation. The first is a quasi-experimental design Case Study project, which launched in

⁵²Note: In addition to cognitive testing of the evaluation instrument, SMEs in evaluation 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 before, during, and after the cognitive interview testing period.

⁵³A topline report of evaluation findings of these efforts can also be found in the *2018 Report to Congress*. (See <https://www.stopalcoholabuse.gov>).

⁵⁴This process involves the counsel of a trained psychometrician who is well-versed in analytics. Specifically, the survey data optimization process ensures that stem questions and response options used in the final version of the survey are appropriate to the specifics of each case study design, and that the data collected will allow for the greatest flexibility during analysis, thus yielding the greatest amount of information relevant to the evaluation questions.

fall 2017 and was completed in spring 2018. SAMHSA is now planning for a modified replication of that case study, for which an OMB package was submitted in fall 2018.

The second evaluation effort is an annual Parent Questionnaire (an OMB package was submitted in spring 2018 and is pending final approval). This questionnaire is tentatively slated for launch in 2019.

The Case Study (and its replication), the Parent Questionnaire, and Trends Analysis project either have been, or are being, launched to track the short-, intermediate-, and long-term outcomes of the TTHY campaign. Each activity is being directed and implemented by external evaluation entities. These evaluation activities (and any subsequent findings gleaned to date) are described in more detail below. All are designed to inform campaign outcomes, goals, and program theory, as fully outlined in the official TTHY campaign logic model upon which the TTHY campaign is based (available upon request).

Case Study Project

To further supplement findings from the Parent Questionnaire and Trends Analysis described below, SAMHSA recently completed a quasi-experimental design Case Study evaluation (for which replication efforts are currently being planned). To begin addressing the question of campaign efficacy, this evaluation was fielded from October 2017 to June 2018.

While the Parent Questionnaire data will gather information that can be used to improve current TTHY materials and provide guidance for future development, and the Trends Analysis will track whether or not there has been an effect on underage drinking incidence since the launch of TTHY, the Case Study explored details of *if* and *how* exposure to the TTHY campaign affects parent/caregiver and student attitudes and behaviors.

The Case Study used a pre- and post-intervention with a comparison group design of middle school-aged students and their parents/caregivers in two U.S. middle schools. The evaluation team used a forced campaign exposure within the intervention school setting. Using a difference-in-differences analytic model, findings from this site were compared to the comparison site, which did not receive the intervention. Sites were matched 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 allowed SAMHSA to further identify correlations between changes in parent and youth attitudes and behaviors to determine second order effects.

One-on-one in-depth interviews among parents/caregivers at the intervention site were also conducted to account for *how* the campaign may have impacted KABs among parents and caregivers, as well as to identify details on specific campaign content and its usefulness for discussing underage drinking and substance use with children. Finally, as an additional data triangulation effort, monthly environmental scan interviews were conducted during the intervention period with key stakeholders at both sites with the intent of tracking potential influences on campaign outcomes outside of TTHY exposures.

Combined, these sources of information allowed us to estimate the overall impact of the campaign, as well as inform further development of TTHY campaign materials and the campaign

dissemination approach. For a full accounting of the Case Study evaluation effort, see the following documents on the <https://www.stopalcoholabuse.gov> website: (1) *Case Study Findings: A Quantitative Analysis, Comprehensive Report* and related appendices, and Paired Data Analysis Addendum; and (2) *Case Study Findings: A Qualitative Probe, Comprehensive Report*.

Quantitative Findings

Parent data

A total of 784 parents at both sites responded to the pre-intervention survey and 574 to the post-intervention survey. Five key conceptual measures in the survey instrument were designed to capture parental attitudes about underage drinking: (1) overall concern about underage drinking; (2) general agreement on the importance of discussing underage drinking with their child; (3) confidence in affecting their child's decisions about alcohol; (4) their relative prioritization of an underage drinking discussion with their child; and (5) their intentions to have a discussion about underage drinking with their child in the near future.

Findings suggest that TTHY had a positive effect on parental attitudes and behaviors around underage drinking at the intervention site. Specifically, the campaign had a significant positive effect on parental *confidence* in making a difference in their child's decision about alcohol. It also had a positive directional effect on three other attitudinal categories: *concern*, *importance*, and *intention to discuss underage drinking*. The campaign did not find a significant effect on *prioritization*. TTHY also had a positive directional effect on parental behavior, including a key outcome: increasing the proportion of parents who had a conversation with their child about underage drinking. Key data findings of the TTHY campaign impact on parents are summarized in Exhibit 5.9.

Our difference-in-differences estimation also found that males and older parents were systematically less likely to be affected by TTHY messaging across most measures.

Student data

In parallel to parent data collection efforts, SAMHSA collected data regarding student attitudes and behaviors; 1,954 student responses were collected pre-intervention and 1,780 student responses were collected post-intervention.

Student attitudes about underage drinking were marginally affected by the TTHY campaign. Post-intervention, perceptions of binge drinking as being a health risk significantly increased at the intervention site, and disapproval of binge drinking was also affected in a positive direction among students.

The TTHY campaign also mitigated underage drinking behaviors among students. On three behavioral measures (recently tried alcohol, ever tried alcohol, and number of students getting drunk), the TTHY campaign mitigated increases at the intervention site.⁵⁵ Key data findings of the impact of the TTHY campaign on students are reflected in Exhibit 5.10.

⁵⁵Note that "ever tried alcohol" increased at both sites, but comparatively less so at the intervention site.

Exhibit 5.9: TTHY Effects on Parental Attitudes and Behaviors

| Domain Area | Variable | Estimated TTHY Effect (%) | P-Value |
|-------------------|--|---------------------------|---------|
| Confidence | <i>Increase in perceived effectiveness of talking to their child about underage drinking</i> | +11 | 0.05 |
| | <i>Directional increase in confidence in influencing their child's underage drinking behaviors</i> | +4 | NS |
| Concern | <i>Increase in parental concern about underage drinking</i> | +6 | 0.10 |
| | <i>Increase in perceived importance of talking to their child about underage drinking</i> | +5 | 0.10 |
| | <i>Increase in parental intentions to talk to their child about underage drinking</i> | +10 | 0.10 |
| Behaviors | <i>Increase in ever having had a conversation with their child about underage drinking</i> | +5 | 0.10 |
| | <i>Directional increase in having had a conversation with their child about underage drinking within the last 3 months</i> | +3 | NS |

NS= Not statistically significant, but directionally in the desired direction.

Exhibit 5.10: Student Attitudes and Behaviors and TTHY Effects: % (n)

| Domain Area | Variable | Estimated TTHY Effect (%) | P-Value |
|--|--|---------------------------|---------|
| Attitudes About underage Drinking | <i>Increase in perception of binge drinking (5+ drinks every weekend) being a "great risk" for harming oneself</i> | +11 | 0.05 |
| | <i>Increase in strong disapproval of having one or two drinks daily</i> | +6 | 0.10 |
| | <i>Increase in strong disapproval of binge drinking</i> | +9 | 0.10 |
| Underage Drinking Behaviors | <i>Mitigated increase in the percentage of students at intervention site reporting ever having tried alcohol</i> | -4 | 0.10 |
| | <i>Mitigated increase in the number of times students had more than "just a few sips" of alcohol in the last 12 months</i> | -7 | NS |
| | <i>Mitigated increase in the number of times students had been drunk from drinking alcohol in the last 12 months</i> | -15 | 0.05 |

NS= Not statistically significant, but directionally in the desired direction.

Campaign recall

Parents had a difficult time recalling the specifics of those creative advertising executions that were rolled out during the intervention period using more traditional mass media formats such as posters, postcards, and radio and televised PSAs. Parents were much more likely to remember aspects of the campaign that were communicated directly through school administrators, including newsletters from principals and other email communications.

Case Study limitations

The Case Study survey data presented here indicate many positive findings despite the limited size and scope of the effort. However, there are limitations that should be addressed, and where possible, remedied, in future evaluation efforts of the TTHY campaign.

For instance, the statistical power of the measures was limited by relatively small parent populations. With a larger sample, those results found to be “directional” in the current case study would have likely achieved statistical significance. Adding to the challenge of a small sample size was the error detected in fielding procedures at T1, which significantly compromised a portion of the parent data in that wave.⁵⁶ Fortunately, this data error affected the comparison site much more than the intervention site, since the survey was first launched there. Further, because student surveys were administered on paper by a proctor at both sites, there was no errant quota effect or other programming limitation affecting the student data. Additionally, the ability to perform subgroup analyses was limited by the small sample sizes among minority groups.

Qualitative Findings

The qualitative evaluation probe presented in this section was conducted as a companion effort to the survey work to further contextualize the quantitative data presented above. Results from this in-depth, qualitative evaluation effort corroborate the key survey findings that the TTHY campaign exposure was impactful. Specifically, respondents reported that key campaign messages served as an important cue to action that increased both: (1) the frequency with which parents discussed underage drinking with their child, and (2) their intention to do so in the near future. Thus, insights from this evaluation reveal that, at its core, few parents question the underlying TTHY campaign promise: talking to your kids about underage drinking can make a difference.

More specifically, the campaign appeared to increase the following markers among parents:

- Perceived importance of discussing underage drinking.
- Confidence parents have in continuing to discuss underage drinking with their child and the outcome expectancies of this behavior.
- Rate of conversations parents are having with their child about underage drinking.
- Intention to continue having conversations about underage drinking with their children in the near future.

⁵⁶When the parent survey at T1 (pre-intervention survey wave) was programmed into the Qualtrics data collection platform, a quota was set to limit the number of parents who had not heard of the TTHY campaign to 105. This limit was quickly reached, as the campaign exposure for the case study had not yet taken place and many parents were not previously aware of the campaign. As such, many interviews were terminated after parents responded in the negative to this question.

Even participants who asserted confidence in their ability to influence their kids' KABs about underage drinking and reported little to no concern regarding underage drinking, overwhelmingly agreed that the campaign was effective as a "cue to action" that increases both the plans for and actions of talking to their kids about underage drinking. Finally, there is evidence to suggest there is power in having TTHY messages come from a government-backed initiative (i.e., SAMHSA). This "vetting" appears to further increase parents' conviction to have the underage drinking conversation with their children and increase their confidence in the efficacy of this action (i.e., discussion is likely to make a difference in the decisions their child makes about underage drinking).

Limitations

Evaluation findings presented in this subsection of the report are qualitative in nature, and thus dependent on a convenience sample that is not representative of the entire U.S. population. This evaluation effort was further limited to only those parents within the Rundlett Middle School environment who claimed some awareness of the TTHY campaign; case study participants from this in-depth inquiry may be different in KABs and proclivity to be persuaded by campaign materials compared to the general population of parents for whom the campaign was not memorable.

Overarching Case Study Conclusions and Recommendations

Considering the relatively modest financial resources upon which the Case Study evaluation was executed (including the development and dissemination of the advertising collateral), both the quantitative and qualitative evaluation results reported above are heartening. Both the difference-in-differences survey data analysis and in-depth qualitative probe evaluation indicate that along with many attitudinal and behavioral measures of interest, the TTHY campaign had a modest but productive effect on parents and students in curbing underage drinking and its precursors (i.e., open to having parent/child discussions around underage drinking).

In the quantitative effort, this effect was in the correct substantive direction on most key measures and was at least marginally statistically significant in many of them, suggesting that the campaign has promise as a vehicle for reducing underage drinking among middle school students nationwide.

Another key finding that clearly emerged both in the survey results and the companion qualitative evaluation probe was that many middle school parents choose the 9-15 age maturity window to discuss underage drinking with their children. However, the few parents who chose not to discuss underage drinking with their children (and even those who did) cited a sure knowledge that their child is not drinking. In fact, "age-inappropriateness" was the biggest factor keeping parents from initiating the underage drinking discussion with their children.

While the overarching Case Study effort presented here was meant to determine TTHY campaign efficacy, these findings have limited generalizability in that findings are limited to only two school sites. Case study replication is indicated. Thus, findings from this case study also provide us an opportunity to reexamine evaluation procedures and instruments for future case study replication, as well as inform ongoing tracking and evaluation efforts. As a secondary outcome, they also provide campaign developers with additional consumer insights and course corrections to potentially enhance the efficacy of future TTHY campaign development.

While a broader discussion of implications and recommendations is presented in the comprehensive reports for each case study (see document titles referenced above), the following is a list of topline recommendations for both honing future evaluation efforts and advancing the development of TTHY campaign materials.

Recommendations for replicating TTHY Case Study evaluation efforts:

- Increase case study sample size; use more than one intervention/comparison school pairing.
- Over-recruit on subgroups of interest to provide clear direction for future TTHY advertising among critical populations.
- Use a more heterogeneous sample of schools.
- Use a randomized site selection and/or case study treatment strategy that improves school pair matching of key underlying demographics.
- Delete from the parent survey the “concern” measure (Q5 of the questionnaire) and keep current replacement that better captures the importance parents place on discussing underage drinking with their kids (e.g., “How much do you agree with the statement ‘Underage drinking is an important issue to discuss with my child?’”).
- Alter the current parental underage drinking behavior question: “Within the last 3 months, how often have you talked to your [age]-year-old about underage drinking?” to fit the entire 6-month intervention timeframe.
- Include additional survey items to track increases in parental knowledge around risks of underage drinking.
- Disseminate the bulk of TTHY campaign materials via school administrators at the case study site (including electronic and U.S. postal service mailings directly to family residences). Disseminate creative executions electronically via school administration.
 - Consider mailing key TTHY creative materials (e.g., postcards, etc.) directly to family residences, thus bypassing the need for (unreliable) student handoff to parents.
- Expand campaign dissemination to include other communication vectors, including coaches, mental health counselors, nurses, and other adult educators who work with children within the middle school environment.
 - Directly address these additional targets with TTHY-specific messaging.
- Include a “tobacco products” item (and its subcategories) to Q4 of the “top concerns” survey question to identify tobacco products of most concern.
- Soften the phrase “sense of urgency” within the interview guide.
- Test among the campaign’s secondary target audience (students) those motivating factors that parents (as resident experts) have identified as being salient to their children, including losing one’s autonomy (i.e., “being controlled” by a substance); losing privileges (driving, participating in sports teams, suspension from school); and losing cognitive function and increased susceptibility of addiction.

Recommendations for TTHY campaign development:

- Reinforce for parents the message that middle school (and earlier) is an appropriate time to initiate the underage drinking conversation, and support these claims with specific underage drinking and communication prevention statistics.

- Provide, and/or feature more prominently, detailed information regarding underage drinking statistics, including prevention communication,⁵⁷ addiction data, and the developmental risks associated with underage drinking.⁵⁸
- Develop additional TTHY materials for adults beyond parents, including guidance counselors, nurses, coaches, teachers, school administrators, and others who have the potential to influence children.
 - Use an appropriate marketing mix and dissemination plan to reach expanded targets.
- Develop creative materials that feature parents socializing with other adults with children present to raise awareness about the following:
 - Importance of modeling appropriate adult alcohol use.
 - Inadvertent alcohol access among children via open containers.
- Develop creative materials that provide information about, and examples of, how to broach the topic of underage drinking with other parents in their children’s social networks.
- Develop creative materials that demonstrate the power of parents modeling positive underage drinking behaviors.
- Dial-up campaign sponsorship: A relatively small number of participants realized that TTHY is a government-sponsored initiative funded by SAMHSA specifically (which, when made aware, appears to lend messaging more credibility).
 - Optimize SAMHSA logos on creative materials and be self-referential within educational materials.

Case Study Replication Project

As discussed in the previous section, the primary intent of the combined qualitative and quantitative Case Study evaluation was to demonstrate the utility of the TTHY campaign, which case study analyses bear out. However, as the nature of small-scale pilot case studies necessitates that findings be replicable, a secondary outcome of the initial Case Study project was to inform the design of the follow-up case study/studies required to validate initial findings. SAMHSA is currently planning for a modified replication of this case study and a request for approval under the “Generic Clearance for the Collection of Routine Customer Feedback” was submitted in fall 2018 (OMB Control Number: 0990-0459). This is one of two case studies in the evaluation triangulation pipeline. The second is the Parent Questionnaire evaluation described in the next section.

The replication case study will employ the same evaluation design, data collection, and data analyses plans as the original Case Study detailed above, but with several key modifications as detailed in the “Recommendations for Replicating TTHY Case Study Evaluation Efforts” section above. Specifically, the Case Study will be augmented to include four middle school sites—two sites will serve as the intervention sites and two sites will serve as the comparison sites. As before, intervention sites will be exposed to TTHY campaign materials using standard campaign

⁵⁷Even while only explicitly raised by a few respondents, it is likely that other parents fear discussing underage drinking with their children for fear of making the behavior “top of mind,” and thus increasing their child’s susceptibility to it. Future messaging should specifically address this issue, and provide hard facts and evidence to the contrary (e.g., “Research shows having discussion about underage drinking with children as young as 9 has a protective effect against underage drinking...”).

⁵⁸Further, it is known from social norms theory in the alcohol prevention space that children tend to overestimate how many of their peers engage in underage drinking, thus making it appear more pervasive, and thus more “normative” and appealing. Presenting parents with actual underage drinking prevalence data, and effective communication techniques, can help in this regard.

materials and dissemination strategies, which will be coordinated through local partner organizations. Comparison sites will not be intentionally exposed to TTHY campaign materials.

Case Study efforts will include baseline surveys of both parents/caregivers and students, followed by exposure to campaign materials, and post-exposure surveys of both parents and students. Additionally, SAMHSA will conduct interviews with parents/caregivers following post-exposure surveys to obtain more detailed information about the impact of the campaign.

As with the initial Case Study project, the intent of this evaluation is twofold:

1. To identify evidence regarding the relationship between campaign exposure and changes in parents' attitudes and behavior regarding underage drinking and substance use in the selected sites.
2. To collect information on whether changes in parent/caregiver attitudes and/or behaviors identified align with measurable changes in youth attitudes and/or behaviors on underage drinking and substance use during the same period.

Parent Questionnaire

In addition to replicating the 2017–2018 Case Study project described above, SAMHSA plans to conduct a Parent Questionnaire in 2019 of parents/caregivers of children ages 9 to 20.⁵⁹ This is the second effort in the evaluation triangulation pipeline.

Where the Case Study explored details of *if* and *how* exposure to the TTHY campaign affects parent and student attitudes and behaviors, and the Trends Analysis will track *whether or not there has been an impact on underage drinking* incidence since the launch of TTHY, the Parent Questionnaire data will gather information that can be used to improve current TTHY materials and provide guidance for future development.

The key outcome of the Parent Questionnaire effort is to help confirm the effectiveness of evolving and final TTHY materials, as well as enable better understanding of the types of messaging that may be most impactful among specific subgroups of the parent population.

More specifically, this evaluation effort will gather parent and caregiver feedback on the following issues:

1. appeal of the “Talk. They Hear You.” products;
2. whether parents report learning anything new from the campaign materials;
3. whether parents believe that “Talk. They Hear You.” encourages parents to discuss underage drinking and other substance use with their children;
4. parents' intent to act; and
5. how the “Talk. They Hear You.” messaging and materials can be improved.

⁵⁹ Note that the Parent Questionnaire evaluation was originally planned for launch in spring/summer 2018. It was submitted for OMB review in fall 2017 with the expectation of a nine-month review process. OMB provided feedback on the proposal in August 2018, and the TTHY team worked through feedback with OMB guidance during fall 2018. The TTHY team and OMB members were still in discussions regarding an evolved draft of the proposal in winter 2018, when the federal government had a partial shutdown. OMB members who were key to the approval of the revised package were furloughed during that time period. On January 28, 2019, the federal government reopened and the process of working through final evaluation design recommendations was restarted.

The design of the Parent Questionnaire uses a repeat cross-sectional data collection effort of underage drinking and TTHY-related KABs among parents/caregivers of middle school-aged children, with the potential for an embedded longitudinal cohort subsample.

Trends Analysis Project

As part of the evaluation triangulation efforts, SAMHSA recently commenced work on the Trends Analysis project. This analysis is currently underway.

Again, the Parent Questionnaire and Case Study projects track short- and intermediate-outcomes of the TTHY campaign, while the Trends Analysis tracks the *long-term outcomes* of whether or not there has been an impact on underage drinking since the launch of TTHY in 2013.

The Trends Analysis uses a quasi-experimental evaluation design that employs a controlled interrupted time series analysis of existing data from several national sources.⁶⁰ SAMHSA is currently in the process of combing existing data to amass a primary dataset for final trends analysis.

The strength of this analysis is that it will investigate difference-in-differences in long-term trends before and after implementation of the TTHY program using interrupted time series analysis and repeated measures designs, while controlling for various environmental and exogenous factors. In this way, the evaluation design can evaluate the impact of the TTHY campaign while controlling for ongoing trends and potential future influences during the time gap between campaign exposure and initiation of drinking. SAMHSA expects to complete this analysis and to have identified action-oriented findings by summer/fall 2020.

Conclusions

Supporting the development and justification of the TTHY campaign involves a complex interplay of formative, process, and outcomes evaluation efforts. Early evaluation findings suggest that SAMHSA has met many markers for early success, including strongly resonating with intended TTHY audiences and evaluating these targets via a variety of venues. Further, in creating the ties that connect campaign objectives with outcomes, SAMHSA has embarked upon an aggressive evaluation plan that has begun establishing these links in quantifiable ways.

From the recently completed Case Study, SAMHSA has determined that key campaign messages serve as an important cue to action that increases both the plans and actions of parents to talk to their kids about underage drinking. There is further evidence to suggest that TTHY increases parents' confidence not only in talking to their kids about underage drinking, but also in the behavioral efficacy of that action.

In continuing to meet the requirements of the STOP Act, SAMHSA will continue to garner support for program efficacy over the next three years. Armed with data from the Trends Analysis currently underway and the Parent Questionnaire and Case Study replication projects in the evaluation pipeline, SAMHSA will persist in its work to estimate overall campaign reach and

⁶⁰Secondary underage drinking-related datasets used in this analysis include Monitoring the Future (NIDA), Youth Risk Behavioral Survey (CDC), National Survey on Drug Use and Health (SAMHSA), and other data.

impact, as well as ensure that the “Talk. They Hear You.”[®] campaign evolves in ways that continue to resonate with its primary target audiences and meets the needs of the U.S. population at large.

APPENDIX A: 2019 ICCPUD Members

Jerome Adams, M.D., M.P.H.

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

Alex M. Azar, II

Secretary
U.S. Department of Health and Human Services

William Barr

Attorney General
U.S. Department of Justice

James W. Carroll, Jr.

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 Prevention
U.S. Department of Justice

Lynn Johnson

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

George Koob

Director
National Institute on Alcohol Abuse and Alcoholism

National Institutes of Health
U.S. Department of Health and Human Services

**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

Christopher C. Miller

Acting Secretary
U.S. Department of Defense

Steven Terner Mnuchin

Secretary
U.S. Department of the Treasury

James Owens

Deputy Administrator
National Highway Traffic Safety Administration

Robert R. Redfield, M.D.

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

Joseph J. 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 age 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 2017 survey, 68,032 interviews were completed, for a weighted response rate of 67.1 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. The logic for determining respondents' eligibility to be asked questions about alcohol use disorder was updated in 2017. Only respondents who estimated the number of days that they drank alcohol in the past 30 days to be on more than 5 days in the past 30 days (instead of on more than 2 days in that period) were considered eligible.

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 2017, completed questionnaires were obtained from 87 percent of all sampled students in 8th grade (n=16,010), 85 percent in 10th grade (n=14,171), and 79 percent in 12th grade (n=13,522).

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) in 1990 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 source population composed of 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 2017, the latest year for which data are available, 14,765 students provided usable questionnaires for the national YRBS for an overall response rate of 60 percent.

Additional Surveys

Three additional federally supported surveys have collected 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)*** was 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 2018 Health-Related Behaviors Survey is in process. 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.
- The ***National Health Interview Survey*** (NHIS) is an annual, multistage probability sample survey of households conducted since 1957 by U.S. Census Bureau interviewers for the CDC National Center for Health Statistics (Pleis & Lethbridge-Cejku, 2007).

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. For example, 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.

Data from the MTF provide another example. In the 2017 MTF, alcohol use by the end of 6th grade was reported by 9.8 percent of 8th graders but by only 3.6 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, so 12th-grade drinkers may have been less likely to be present to participate in the survey. 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>
<https://www.samhsa.gov/data/data-we-collect/nsduh-national-survey-drug-use-and-health>
- *Information from the YRBS:*
<https://www.cdc.gov/HealthyYouth/data/yrbs>
- *Information from NHTSA on underage drinking and on drinking and driving:*
<https://www.nhtsa.gov/risky-driving/drunk-driving>
<https://www.trafficsafetymarketing.gov/get-materials/drunk-driving>
<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 | DoD |
| Army National Guard | ARNG |
| Education Activity | DoDEA |
| U.S. Air Force | USAF |
| U.S. Army Reserve | USAR |
| U.S. Coast Guard | USCG |
| U.S. Marine Corps | USMC |
| U.S. Navy | USN |
| Department of Education | ED |
| Office of Safe and Healthy Students | OSHS |
| Office of Elementary and Secondary Education | OESE |
| Department of Health and Human Services | HHS |
| Administration for Children and Families | ACF |
| Family and Youth Services Bureau | FYSB |
| Agency for Healthcare Research and Quality | AHRQ |
| Centers for Disease Control and Prevention | CDC |
| Centers for Medicare & Medicaid Services | CMS |
| Division of Behavioral Health | DBH |
| Food and Drug Administration | FDA |
| Health Resources and Services Administration | HRSA |
| Indian Health Service | IHS |
| National Institutes of Health | NIH |
| <i>Eunice Kennedy Shriver</i> National Institute of Child Health and Human Development | NICHD |
| National Cancer Institute | NCI |
| National Institute on Alcohol Abuse and Alcoholism | NIAAA |
| National Institute on Drug Abuse | NIDA |
| Office of Adolescent Health | OAH |
| Office of Disease Prevention and Health Promotion | ODPHP |
| Office of the Assistant Secretary for Health | OASH |
| Office of the Assistant Secretary for Planning and Evaluation | ASPE |
| Office of the Surgeon General | OSG |
| Substance Abuse and Mental Health Services Administration | SAMHSA |
| Center for Mental Health Services | CMHS |
| Center for Substance Abuse Prevention | CSAP |
| Center for Substance Abuse Treatment | CSAT |
| Office of Applied Studies | OAS |
| Department of Justice | DoJ |
| Drug Enforcement Administration | DEA |
| Office of Juvenile Justice and Delinquency Prevention | OJJDP |

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|--|-------|
| 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

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|---|------------|
| 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 |

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| 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 and 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 |
| 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 |

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| 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 |

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| 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 concentration | 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 |

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| 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, and behaviors | KABs |
| 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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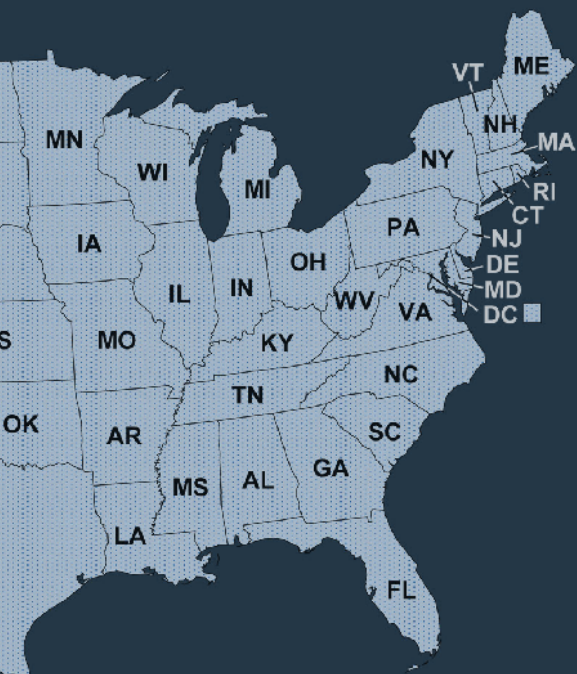
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Appendix E: 2018 Comprehensive Plan

Preventing & Reducing UNDERAGE DRINKING

2018 COMPREHENSIVE PLAN



Developed by the Interagency
Coordinating Committee on the
Prevention of Underage Drinking

Approved by ICCPUD Principals on November 7, 2018



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Substance Abuse and Mental Health Services Administration
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Message from the Assistant Secretary

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 for the Prevention of Underage Drinking (ICCPUD), I am pleased to present “Preventing and Reducing Underage Drinking,” the ICCPUD’s 2018 Comprehensive Plan. The ICCPUD was formally created by the 2006 Sober Truth on Preventing Underage Drinking (STOP) Act, and reauthorized as part of the 21st Century Cures Act in 2016.

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.¹

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 in the increased risk of developing an alcohol use disorder later in life. Binge drinking² 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.

Importantly, there are evidence-based strategies for preventing or reducing underage alcohol use and for providing treatment and recovery services. 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 21 for alcohol use and provide brief intervention and referral to treatment as appropriate.

Evidence suggests that current implementation of these strategies may be having a positive effect. Since 2004, past-month alcohol use by underage drinkers has declined by 33 percent.³ Past-month binge drinking decreased by 30 percent between 2004 and 2014, according to 2015 data.⁴

The most effective way to sustain and continue these gains will be ongoing coordinated efforts at all levels of government and in our universities, schools, communities, and families to implement strategies that have proven to be effective. The ICCPUD’s 2018 Comprehensive Plan represents an ongoing commitment to provide national leadership in these efforts.

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Preventing and Reducing Underage Drinking

2018 Comprehensive Plan

Developed by the Interagency Coordinating Committee on the Prevention of Underage Drinking

Vision

The vision of the Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) is to provide national leadership in federal policy and programming to support state and community activities that prevent and reduce underage drinking.

Mission

The ICCPUD's mission is twofold:

1. To facilitate collaboration among the 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.

Principles

Members of the ICCPUD and other federal partners commit to:

- Speak with a common voice on the prevalence, risks, and consequences of underage drinking;
- Increase public awareness about underage drinking and its consequences; and
- Reinforce effective, evidence-based practices as part of a federally coordinated approach to prevent and reduce underage drinking.

Membership

ICCPUD was created in 2004 when Congress directed the Secretary of the U.S. Department of Health and Human Services (HHS) to establish the ICCPUD to coordinate all federal agency activities related to the problem of underage drinking. The ICCPUD’s role was formalized in the 2006 Sober Truth on Preventing Underage Drinking (STOP) Act, which was reauthorized in 2016 as part of the 21st Century Cures Act. The Substance Abuse and Mental Health Services Administration (SAMHSA) was directed by the HHS Secretary to convene ICCPUD and serve as the lead agency. As specified in the STOP Act, the ICCPUD is composed of 16 federal officials, some of whom have delegated participation to specific agencies and/or staff:

1. Secretary of Health and Human Services
2. Secretary of Education
3. Attorney General
4. Secretary of Transportation
5. Secretary of the Treasury
6. Secretary of Defense
7. Surgeon General
8. Director of the Centers for Disease Control and Prevention
9. Director of the National Institute on Alcohol Abuse and Alcoholism
10. Administrator of the Substance Abuse and Mental Health Services Administration (now the Assistant Secretary for Mental Health and Substance Use, as designated in the 21st Century Cures Act)
11. Director of the National Institute on Drug Abuse
12. Assistant Secretary for Children and Families
13. Director of the Office of National Drug Control Policy
14. Administrator of the National Highway Traffic Safety Administration
15. Administrator of the Office of Juvenile Justice and Delinquency Prevention
16. Chairman of the Federal Trade Commission



Each ICCPUD agency contributes their leadership and vision to developing a national commitment to prevent and reduce underage alcohol use. Every participating agency also has a specific role to play in keeping with its mission and mandate. (For detailed descriptions of the ICCPUD member agencies’ work to prevent and reduce underage drinking, see Appendix A). To illustrate, the National Highway Traffic Safety Administration (NHTSA) and SAMHSA conduct programs to reduce underage demand for alcohol. The Centers for Disease Control and Prevention (CDC), National Institute on Alcohol Abuse and Alcoholism (NIAAA), National Institute on Drug Abuse (NIDA), and SAMHSA conduct research on underage alcohol use, and on the effectiveness of programs designed to prevent and reduce use.

CDC, NHTSA, NIAAA, NIDA, and SAMHSA also gather data on the adverse consequences of underage alcohol use. Staff from these agencies constitute the ICCPUD Data Committee, which provides specialized, expert guidance on facts and statistics on underage drinking, in particular the data cited in the annual *Report to Congress on the Prevention and Reduction of Underage Drinking* produced by the ICCPUD.

Partnerships

ICCPUD consults and collaborates with all appropriate and interested parties, including state and local governments, public health research and interest groups, foundations, community-based organizations and coalitions, and alcohol beverage industry trade associations and companies. Thirty-nine (76 percent) of the states have a state-level interagency committee to coordinate underage drinking prevention activities. State interagency committees typically include state departments of health and human services and alcohol beverage control, state substance abuse agencies, and state police/highway patrol departments. State committees also have strong representation from college and university administrations, community coalitions, and other concerned citizens.

Introduction

Approximately 88,000 Americans die from alcohol-attributed causes each year, making alcohol the third leading preventable cause of death in the U.S.⁵

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).⁶ 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.⁷ Alcohol also plays a role in many drug overdoses; between 2002-2003 and 2014-2015, alcohol involvement in prescription opioid deaths increased by 8.5 percent, second only to benzodiazepines and heroin-involved deaths.⁸

Despite this overall picture, significant progress in reducing underage drinking has been achieved. For example, past-month underage alcohol use has dropped by one-third since 2004.⁹ Nevertheless, underage drinking rates remain unacceptably high.

- 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.¹⁰
- Although underage drinkers generally consume alcohol less frequently, and consume less alcohol overall than adults, they are much more likely to binge drink. Approximately 4.5 million (12.1 percent) of 12- to 20-year-olds reported past-month binge alcohol use in 2016.¹¹
- By age 20, almost one-third of young people report binge drinking at least once in the past month, and 10 percent report binge drinking five or more times in a month.¹²
- Nine percent of youth age 12 to 20 had nine or more drinks during their last drinking occasion.¹³
- The prevalence of alcohol abuse or dependence is about 9.3 percent among 18- to 20-year-olds, almost as high as among 21- to 24-year-olds, who have the highest prevalence of those disorders.¹⁴
- Alcohol is perceived as readily available by most teens. In 2016, 52.7 percent of 8th graders, 71.1 percent of 10th graders, and 85.4 percent of 12th graders said alcohol is "fairly easy" or "very easy" to get.¹⁵

Underage alcohol use has many troubling consequences:

- Almost \$24.3 billion (about 10 percent) of the total \$249 billion economic cost of excessive alcohol consumption is related to underage drinking, much of it due to premature mortality of underage youth.¹⁶
- Motor vehicle crashes are the greatest mortality risk for underage drinkers. In 2016, 24 percent of drivers ages 15–20 who were killed in motor vehicle traffic crashes had a BAC of 0.01 or higher.¹⁷ Impaired youth also die from suicide, homicide, poisoning, drowning, and falls.¹⁸
- Alcohol use is associated with a greater likelihood of using other substances, including marijuana, tobacco, and other drugs.¹⁹
- Young people's use of alcohol with other drugs, as for adults, can be deadly. Hospitalizations of 18- to 24-year-olds for overdoses involving a combination of opioids and

alcohol tripled between 1998 and 2014.²⁰ The effects of alcohol in young adults exacerbate respiratory depression caused by opioids, which can be fatal.²¹

- Alcohol use, especially heavy use, at a young age appears to permanently impair brain function by affecting the actual physical development of the brain structure as well as brain functioning. Negative effects include decreased ability in planning, executive functioning, memory, spatial operations, and attention.²²
- Alcohol use affects academic performance.²³ A study examining data from a federal survey of youth found that binge drinking in the senior year of high school reduced the probability of receiving a high school diploma, affecting earning potential.²⁴ Binge drinking also reduces college academic performance, resulting in lower grade point averages and increased absences.²⁵
- High-intensity binge drinking is associated with higher levels of illegal drug and tobacco use, risky sexual and traffic behaviors, physical fights, suicide, less school-night sleep, and poorer school grades.²⁶
- Early initiation of drinking is associated with developing an alcohol use disorder later in life.²⁷ More than 40 percent of people who started drinking before age 13 met DSM-IV criteria for alcohol dependence at some time in their lives.²⁸

The benefits of reducing underage drinking are substantial, including saving lives and dollars and promoting the health of young people. 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.

Importantly, increased attention to underage drinking may help prevent underage drinking rates from following the patterns of increased excessive alcohol use currently seen among adults, especially women and older adults. There has been a significant increase in the percentage of adults who report drinking twelve to fifteen drinks on a single occasion at least once in the past year.²⁹ Not only are such high levels of alcohol consumption dangerous to the drinker and those around him or her, but underage drinking rates could be affected by this trend. Research shows a correlation between youth drinking behaviors and those of adult relatives and other adults in the community.³⁰

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 2012.³¹ If this trend continues, it may lead to greater youth access to marijuana. As with underage alcohol use, marijuana use by youth is associated with the use of other substances, including alcohol, tobacco, and other drugs.³²

The substantial cost of underage drinking can be reduced by increased implementation of effective prevention policies and programs around the country. The goals, objectives, and action steps below draw upon evidence-based prevention strategies and seek to support communities in adopting comprehensive prevention, treatment, and recovery models with proven results and show cost benefits.

Leadership in Reducing Underage Drinking

Passage of the National Minimum Drinking Age Act in 1984 represented a major step forward in federal efforts to respond to the public health crisis of underage drinking. The minimum legal drinking age (MLDA) of 21—now the law in all states and the District of Columbia—has saved an estimated 31,417 lives since 1975, when states first began adopting such laws.³³

Underage drinking rates peaked in the late 1970s and decreased throughout the 1980s, but then held relatively steady throughout the 1990s.³⁴ Beginning in the 1990s and expanding in the early 2000s, the federal government initiated a multipronged national effort to prevent underage drinking. The U.S. has achieved significant reductions in underage drinking since 2004.

Over the past 14 years, ICCPUD member agencies have provided leadership and increased public knowledge about underage drinking; funded programs and research that increases understanding of the causes and consequences of underage alcohol use; and monitored trends in underage drinking and the effectiveness of efforts designed to reduce demand, availability, and consumption.

Federal and state agency cooperation created an effective response to a product with the potential to harm underage youth: caffeinated alcoholic beverages. These premixed beverages were popular in the 2000s and contained caffeine, a substance that can mask the effects of intoxication. These beverages usually had a higher alcohol content than beer, and were heavily marketed in youth-friendly media with youth-oriented graphics and messaging.³⁵ Several state attorneys general and the Food and Drug Administration (FDA), FTC, and TTB took a coordinated approach to remove these products, which posed health and safety risks. With federal leadership, and resulting state actions, these beverages were removed from the market in 2011.

Another example of effective leadership, this time primarily at the state level, is the national response to powdered alcohol. In 2015, a powdered alcoholic product called “Palcohol” was approved for sale. Public health professionals and state government officials raised concerns that, since powdered alcohol could be easily concealed and easily transported, it would have particular appeal to underage drinkers. By February 2018, 34 states and the District of Columbia had passed legislation to regulate or ban powdered alcohol.³⁶ ICCPUD reported on the approval and possible risks of Palcohol, as well as state responses, in the annual *Report to Congress on the Prevention and Reduction of Underage Drinking*, beginning with the 2015 version. Palcohol is currently not available for sale in the U.S.

Components of the 2018 Comprehensive Plan

This Comprehensive Plan is an update of the original plan produced by the ICCPUD in January 2006. While the current Comprehensive Plan maintains the three general goals established in the 2006 plan, it contains objectives and action steps calibrated to the current landscape of underage drinking. This plan sets ambitious new targets to ensure that the downward trend of underage alcohol use continues.

Effective prevention initiatives require a coordinated effort among a wide array of federal, state, and local organizations and agencies in multiple sectors, including policymakers, law

enforcement, educational institutions, the healthcare community, the mass media, and concerned citizens. A multilevel approach must include strategies such as education, enforcement, media messages, and early intervention in combination to maximize impact on underage drinking. Thus, the ICCPUD's 2018 objectives and action steps focus on community engagement at the state and local level.

The plan draws upon the wealth of information and expertise on underage drinking prevention described in the annual Report to Congress, which is produced by the ICCPUD as directed by Congress and expressed in the STOP Act.

The plan's three goals are:

- Goal 1: Strengthen a national commitment to address the problem of underage drinking.
- Goal 2: Reduce demand for, the availability of, and access to alcohol by persons under the age of 21.
- Goal 3: Use research, evaluation, and scientific surveillance to improve the effectiveness of policies and programs designed to prevent and reduce underage drinking.

Goal 1: Strengthen a National Commitment to Address the Problem of Underage Drinking

Progress to Date

Through public awareness and media activities ranging from the Governors' Spouses Leadership to Keep Children Alcohol-Free Initiative to the current national media campaign "Talk. They Hear You."[®], public attention has been drawn 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.

Goal 1–Objective 1: Increase awareness of underage drinking and its negative consequences, enhance broad-based support for strategies to prevent and reduce underage drinking, and strengthen leadership in all sectors of society aimed at addressing the problem.

How ICCPUD Will Accomplish This Objective:

- Ensure that members of ICCPUD are speaking with a common voice on the issue of underage drinking.
- Increase efforts by ICCPUD agency leadership to highlight in speeches and meetings across the country the need to prevent underage drinking and its negative consequences.

- Convene annual STOP Act Stakeholders meeting to engage key national leaders and develop collaborative strategies. Prioritize community engagement by ICCPUD agency leadership.

Goal 1–Objective 2: Increase cooperation, coordination, and collaboration among private entities and all levels of government; encourage their participation in, and provide support to, programs and projects that address the reduction of underage drinking.

How ICCPUD Will Accomplish This Objective:

- Continue and expand partnerships to support the “Talk. They Hear You.”[®] national media campaign.
- Continue to provide comprehensive and accurate information to Congress and key national stakeholders in the annual Report to Congress.
- Support community stakeholders by providing information from the Report to Congress in formats that are easy to read and disseminate.
- Support additional Town Hall meetings in communities around the country.

Goal 2: Reduce Demand for, the Availability of, and Access to Alcohol by Persons Under the Age of 21

Progress to Date

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.

Substantial research over the past several years has identified a promising approach: 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 and young adult drinking and related problems.³⁷ However, too often, health care providers neither ask young people about their drinking nor advise them to reduce or stop drinking, as shown in a 2013 study of 10th graders. In that study, only about half of students who saw a physician in the past year were asked about their alcohol use, and only 25 percent of those who said they were frequent or binge drinkers, or who reported having been drunk, were advised to reduce or stop.³⁸

Goal 2–Objective 1: Reduce use of alcohol by those under the age of 21 by increasing awareness of the negative consequences of underage drinking, by providing resistance skills training, by reducing the social acceptance of underage drinking, and by increasing community support to reduce risk factors and promote protective factors.

How ICCPUD Will Accomplish This Objective:

- Enhance engagement with states and community grantees to increase use of evidence-based prevention strategies at the individual, school, and environmental levels.
- Continue dissemination and further development of the “Talk. They Hear You.”[®] national media campaign.

Goal 2–Objective 2: Reduce access to alcohol by those under age 21 and strengthen accountability by enforcing underage drinking laws.

How ICCPUD Will Accomplish This Objective:

- Expand dissemination of enforcement data from the STOP Act State Survey to assist states in enhancing enforcement efforts.
- Expand dissemination of information on best practices and evidence-based legal policies contained in Report to Congress.
- Expand dissemination of CollegeAIM information about effective campus-based prevention strategies.
- Continue to monitor state underage drinking laws and policies, as well as state enforcement efforts and resources.

Goal 2–Objective 3: Provide opportunities for screening and early identification of alcohol use disorders and brief interventions or treatment as appropriate.

How ICCPUD Will Accomplish This Objective:

- Provide support to pediatric health care providers to improve the use of screening, brief intervention, and referral to treatment (SBIRT), including training and dissemination of best practices. The 2016 reauthorization of the STOP Act as part of the 21st Century Cures Act added a new section authorizing grants for this purpose (Pub. Law 114-255, Sec. 9016[g]).
- Disseminate information to health care providers on best practices for screening, referral, and treatment in the underage population.
- Provide information and resources about evidence-based treatment for adolescents with alcohol use disorders, similar to NIAAA’s new Alcohol Treatment Navigator for adults but tailored to the specific needs of adolescents.

Goal 3: Utilize Research, Evaluation, and Scientific Surveillance to Improve the Effectiveness of Policies and Programs Designed to Prevent and Reduce Underage Drinking

Progress to Date:

The research base regarding effective prevention of underage drinking has expanded greatly in the past two decades. NIAAA has supported such research through its Underage Drinking Research Initiative, which seeks to better understand the factors that compel youth to begin, continue, and escalate drinking, and for some, progress to an alcohol use disorder. NIAAA has created screening guidelines for children and adolescents to identify alcohol use. NIAAA, NIDA, and other agencies are cosponsors of the Adolescent Brain Cognitive Development study, which is following 10,000 children ages 9 and 10 into early adulthood, using periodic noninvasive neuroimaging and other assessments. NIAAA has developed the CollegeAIM to identify the level of research evidence for various college drinking prevention interventions. NIAAA's Alcohol Policy Information System (APIS) provides information about a wide range of legal policies related to alcohol, including those regulating underage alcohol use. APIS has recently been expanded to include policies on recreational marijuana use.

A wealth of data on underage drinking has been accumulated through three distinct but complementary federally supported surveys of young people in the U.S. Together, these three surveys provide a comprehensive picture of underage drinking patterns and practices, alcohol availability and sources, use of other substances, and perceived risk:

- National Survey on Drug Use and Health (NSDUH), conducted annually by SAMHSA's Center for Behavioral Health Statistics and Quality
- Monitoring the Future, supported annually by NIDA
- Youth Risk Behavior Surveillance System (YRBSS), conducted biannually by CDC

In addition, NHTSA gathers data annually on traffic crash fatalities in which underage alcohol use is a factor.

Federally supported research has identified legal policies that save lives. For example, a recent study funded by NIAAA examined nine legal policies, all of which are tracked in the Report to Congress and which include zero tolerance blood alcohol concentration limits for underage drivers, responsible beverage service training for retail staff, and prohibition of underage possession. The researchers estimate that the nine laws are currently saving approximately 1,135 lives annually, yet only five states have enacted all nine laws. If all states adopted these nine effective MLDA-21 laws, it is estimated that an additional 210 lives could be saved every year.³⁹

Recent research has looked at the effectiveness of prevention strategies in communities of racial minorities, specifically for youth in the Cherokee Nation in Oklahoma.⁴⁰ More such research should be conducted to identify successful interventions for preventing alcohol use among racial and ethnic minorities.

Goal 3–Objective 1: Increase knowledge of effective approaches to prevent and reduce underage drinking and its consequences, including the use of evidence-based programs.

How ICCPUD Will Accomplish This Objective:

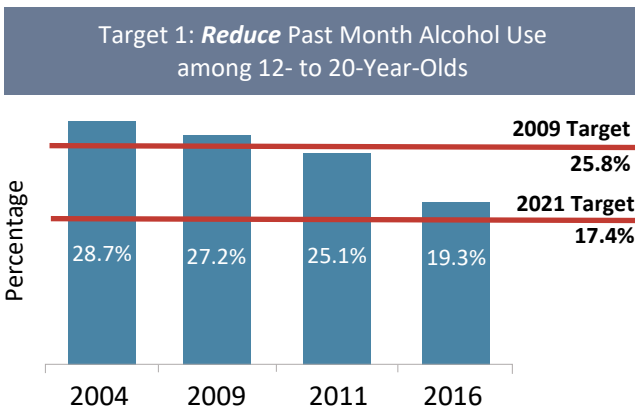
- Continue to support and monitor research evaluating the effectiveness of underage drinking prevention strategies, and summarize research in the annual Report to Congress.
- Continue to support and monitor research on underage use of marijuana, tobacco, and other substances and the ways in which use of these substances affect underage alcohol use.
- Continue to support and monitor research on the effectiveness of underage drinking interventions in racial and ethnic minority groups.
- Increase dissemination of information about evidence-based strategies that have been identified by ICCPUD and are included in the Report to Congress.

Goal 3–Objective 2: Increase scientific surveillance of underage drinking, contributing factors, and consequences.

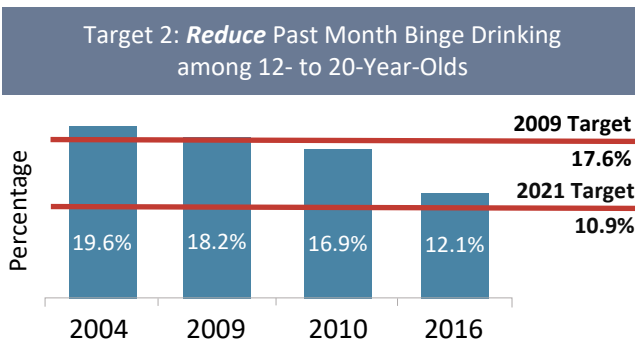
How ICCPUD Will Accomplish This Objective:

- Continue support of key federal surveys that provide essential data about underage drinking.
- Publish and disseminate research findings based on federal survey data to increase knowledge among federal, state, and local officials; community leaders; educators; parents; policy makers; and others.

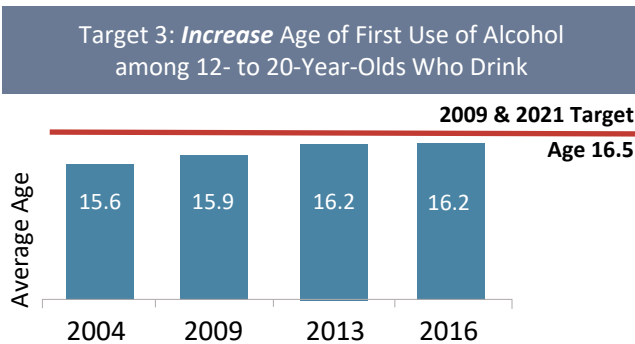
Progress Toward Reaching Targets Identified in 2006 Comprehensive Plan⁴¹



At the time that the 2006 Comprehensive Plan was written, little progress had been made in reducing underage drinking in the previous decade. Although a modest reduction in the past 30-day underage alcohol use rate had been achieved in the previous five years, these rates were not significantly different from 1993, and remained high (28.7 percent of 12- to 20-year-olds).⁴²



Underage binge drinking declined significantly between 1983 and 1992, but began to rise during the 1990s. By 2004, a modest decline had occurred, but the overall rate of past month binge drinking among underage drinkers remained high (19.6 percent of 12- to 20-year-olds). Of those who initiated alcohol use between the ages of 12 and 20, the average age of initiation was 15.6.⁴³



To address these unacceptable rates, the 2006 Comprehensive Plan included three targets:

2009 Target 1: By 2009, reduce the prevalence of past month alcohol use by 12- to 20-year-olds to 25.8 percent as measured against the 2004 baseline of 28.7 percent (a reduction of 10 percent).

Progress toward 2009 Target 1: By 2011, this target goal was surpassed and the prevalence rate was 25.1 percent. The 2016

federal survey data showed that the rate had dropped to 19.3 percent.

2009 Target 2: By 2009, reduce the prevalence of 12- to 20-year-olds reporting binge alcohol use in the past 30 days to 17.6 percent as measured against the 2004 baseline of 19.6 percent (a reduction of 10 percent).

Progress toward 2009 Target 2: By 2010, this target goal was surpassed and the prevalence rate of binge drinking was reduced to 16.9 percent. In 2016, this number was down to 12.1 percent.

2009 Target 3: By 2009, increase the average age of first use among those who initiate before age 21 to 16.5, as compared to the 2004 baseline of 15.6 years (a change of 5.8 percent).

Progress toward 2009 Target 3: By 2013, the average age of first use had increased to 16.2 years of age, but has remained essentially unchanged since then.

New Targets

Significant progress has been made in the reduction of underage drinking since the 2006 Comprehensive Plan was published, although not always at the targeted pace. In particular, the goal of increasing the average age of first use to 16.5 was not achieved. However, the average age of first use has slowly increased above the 2006 level, from age 15.6 to 16.2, and this increase, while small, is statistically significant

Underage drinking rates have been reduced overall since the inception of the ICCPUD. Among the smaller group of youth who still drink alcohol, those who begin drinking before age 21 may be more resistant to interventions in some way. They may also have been influenced by adult drinking patterns: as noted above, alcohol use and binge drinking have increased in the general population over the past two decades, especially among women, racial/ethnic minorities, and the socioeconomically disadvantaged. Further work is needed to understand the risk and protective factors that affect the age of first alcohol use and to identify effective interventions.

The ICCPUD has set new targets to ensure that current trends of reducing alcohol use continue:

2021 Target 1: By 2021, reduce the prevalence of past month alcohol use by 12- to 20-year-olds to 17.4 percent, as compared to the 2016 baseline of 19.3 percent (a reduction of 10 percent).

2021 Target 2: By 2021, reduce the prevalence of 12- to 20-year-olds reporting binge alcohol use in the past 30 days to 10.9 percent, as compared to the 2016 baseline of 12.1 percent (a reduction of 10 percent).⁴⁴

2021 Target 3: By 2021, increase the average age of first use of alcohol among those who begin drinking before age 21 to 16.5 years of age as compared to the 2016 baseline of 16.2 years of age (an increase of 2 percent).

Looking Forward

The ICCPUD agencies are committed to using a comprehensive approach to prevent and reduce underage drinking and the associated costs and consequences that burden both individuals and society. Working as an interagency group, ICCPUD can support effective programs and strategies, eliminate duplication, and address programming gaps.

Strengthening our national commitment to addressing underage drinking continues to be a high priority. Efforts to reduce demand for, access to, and availability of alcohol by those under 21 will be improved by ongoing research and surveillance of youth consumption patterns and trends, and by disseminating and encouraging discussion of the lessons learned and best practices of state and local efforts to prevent underage drinking.

Appendix A

Federal Agencies Involved in Preventing and Reducing Underage Drinking

The STOP Act designates 16 federal officials as members of ICCPUD, some of whom have delegated participation to specific agencies and/or staff. The ICCPUD agencies and their primary roles related to underage drinking are as follows:

1. **U.S. Department of Health and Human Services (HHS):** The mission of HHS is to enhance and protect the health and well-being of all Americans by providing for effective health and human services and fostering advances in medicine, public health, and social services. Several agencies within HHS play specific roles in addressing underage drinking, as described below.
2. **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: <https://www.acf.hhs.gov>.
3. **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: <https://aspe.hhs.gov>.
4. **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: <https://www.cdc.gov>.

5. **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: <https://www.ihs.gov>.
6. **HHS/National Institutes of Health (NIH)/National Institute on Alcohol Abuse and Alcoholism (NIAAA):** The NIAAA 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: <https://www.ihs.gov>.
7. **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: <https://www.ihs.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 have 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: <https://www.healthypeople.gov>; <https://health.gov>; <https://health.gov/dietaryguidelines>.

The Surgeon General, the nation’s chief health educator, provides Americans with the best available scientific information on how to improve their health and reduce their 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 Surgeon General with other duties. Website: <https://www.hhs.gov/surgeongeneral/index.html>.

OAH supports and evaluates the evidence-based Teen Pregnancy Prevention program, implements the Pregnancy Assistance Fund, coordinates HHS efforts related to adolescent health, and communicates adolescent health information to health professionals and groups. OAH is also the convener and catalyst for the development of a national adolescent health agenda. Website: <https://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: <https://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: <https://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: <https://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 on the implementation of programs that used 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. FY14 EUDL funding supported underage drinking prevention activity led by Healing to Wellness Courts in five selected tribes. By FY15, all funding to support EUDL efforts was discontinued. Website: <https://www.ojjdp.gov>.

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: <https://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 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: <https://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: <https://www.whitehouse.gov/ondcp>.

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- ⁴³ It should be noted that this average excluded those who initiated alcohol use at age 11 or younger, estimated to be 6.6 percent of alcohol initiates during 1990–1999.
- ⁴⁴ In 2015, the National Survey on Drug Use and Health (NSDUH) definition of binge drinking was changed from five drinks on a 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. Therefore, the 2014 and 2016 actual percentages are based on different measures. The target for 2021 was calculated on the basis of the 2016 percentage (and therefore, the new measure of binge drinking).

