



Report to Congress

on the Prevention and Reduction of Underage Drinking

2020



SAMHSA
Substance Abuse and Mental Health
Services Administration

REPORT TO CONGRESS ON THE PREVENTION AND REDUCTION OF UNDERAGE DRINKING

2020

This *Report to Congress on the Prevention and Reduction of Underage Drinking* (RTC) 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 1–4) 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 the Prevention of Underage Drinking (ICCPUD), which is chaired by the Assistant Secretary for Mental Health and Substance Use, U.S. Department of Health and Human Services.

Time period covered by the 2020 RTC: The 2020 RTC primarily includes data from calendar year 2019. Epidemiological data in Chapters 1, 2, and 3 draw primarily from the 2018 National Survey on Drug Use and Health, the 2018 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 2019.

Chapter 5, the *Report to Congress on the National Media Campaign to Prevent Underage Drinking*, describes 2019 activities conducted by the campaign.

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Foreword

As the first U.S. Department of Health and Human Services Assistant Secretary for Mental Health and Substance Use and Chair of the Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD), I am pleased to present the ICCPUD's 2020 *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 12th 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 19 percent of 12- to 20-year-olds report having used alcohol in the previous month (National Survey on Drug Use and Health; Center for Behavioral Health Statistics and Quality [CBHSQ], 2019a). 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 (i.e., four drinks in a row for a female or five for a male) exacerbates underage drinking's harmful consequences and increases with age, as 24.1 percent of young people ages 18–20 report binge drinking at least once in the past month (CBHSQ, 2019a).

There has been improvement over the past several years: Since 2004, past-month alcohol use among underage individuals who drink has declined by 34.5 percent (CBHSQ, 2020). Between 2015 and 2018, past-month binge drinking decreased by 14.9 percent (CBHSQ, 2020).

However, persistent patterns of underage alcohol use, particularly among older underage individuals who drink alcohol, 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.

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

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

Executive Summary

EXECUTIVE SUMMARY

Introduction

Alcohol use is responsible for approximately 4,300 deaths annually among youth under age 21 in the United States, shortening their lives by an average of 60 years (Stahre et al., 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 individuals who drink alcohol), suicide, interpersonal violence (e.g., homicides and sexual and other assaults), unintentional injuries (e.g., burns, falls, and drownings), cognitive impairment, alcohol use disorder (AUD),¹ risky sexual activity, poor school performance, and alcohol and drug overdoses.

Underage alcohol use occurs in a context of significantly problematic adult use nationwide. Approximately 88,000 individuals of all ages in the United States 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 United States was estimated to be \$249 billion in 2010, and three-quarters of those costs are from binge drinking³ (Sacks et al., 2015). Over the past two decades, alcohol use, binge drinking,⁴ and AUD have all increased in the adult population, especially among women, older adults, racial/ethnic minorities, and the socioeconomically disadvantaged (Han et al., 2017; Grucza et al., 2018). Alcohol also plays a role in many drug overdoses. In 2017, alcohol was involved in 14.7 percent of all opioid overdose deaths, a 5.5 fold increase from 1999 (Tori et al., 2020).

This report—the *2020 Report to Congress on the Prevention and Reduction of Underage Drinking* (2020 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 1–4). 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 of Columbia, including state-specific population and underage alcohol use data. The *State Reports – Underage Drinking Prevention and Enforcement*, available on

¹ *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition ([DSM-5] American Psychiatric Association [APA], 2013) integrates the two DSM, fourth edition (DSM-IV) disorders, alcohol abuse and alcohol dependence, into a single disorder called alcohol use disorder. DSM-5 does not specifically address adolescents. National Survey on Drug Use and Health (NSDUH) assesses substance use disorders based on DSM-IV criteria.

² “Excessive drinking” as defined by CDC, includes binge drinking, heavy drinking, and any drinking by pregnant women or people younger than age 21.

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

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

<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 & Best Practices for the Prevention and Reduction of Underage Drinking Report (SPBP Report)*, also available at <https://www.stopalcoholabuse.gov>, summarizes and compares the states' performance in implementing the same 26 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 United States 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 one 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 one drink of alcohol on at least 1 day during their life
Binge Use of Alcohol	NSDUH	Females: ⁵ Reported drinking four or more drinks . . . Males: Reported drinking five 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

⁵ Reflects 2015 definition change for female binge drinking from five drinks to four drinks.

Measure	Survey Source	Definition
	MTF	Reported five or more drinks in a row over the past 2 weeks
	YRBS	Females: ⁶ Reported four or more drinks of alcohol in a row . . . Males: Reported 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
Heavy Use of Alcohol	NSDUH	Females: ⁷ Reported drinking four 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 five or more drinks on the same occasion on each of 5 or more days in the past 30 days People with heavy alcohol use are also, by definition, engaging in binge drinking.
Extreme Binge (Also Referred to as High Intensity)	MTF	Ten-plus: Reported drinking ten or more drinks in a row over the past 2 weeks 15-plus: Reported drinking 15 or more drinks in a row over the past two weeks
Largest Number of Alcoholic Drinks in a Row Was Ten or More (Similar Measure to Extreme Binge)	YRBS	Ten-plus: Reported ten 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 United States, with a higher proportion of young people using alcohol than marijuana, tobacco, or other drugs.

According to the 2018 NSDUH:

- 18.8 percent of individuals ages 12–20 reported alcohol use in the past 30 days.
- 13.4 percent reported illicit drug use in the past 30 days.
- 10.1 percent reported tobacco product use in the same period (CBHSQ, 2020).

⁶ Reflects 2017 definition change for female binge drinking from five drinks to four drinks.

⁷ Reflects 2015 definition change for female binge drinking from five drinks to four drinks.

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 et al., 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 7–11, and 15.5 percent of high school students reported on the 2017 YRBS⁸ that they used alcohol before age 13 (Kann et al., 2018).

Approximately 2,125 young people ages 12–14 initiated alcohol use each day in 2018, based on NSDUH data (CBHSQ, 2020).

Binge Drinking

Approximately 4.3 million (11.4 percent) of 12- to 20-year-olds reported past-month binge⁹ alcohol use in 2018 (CBHSQ, 2019a). An analysis of 2015 YRBS data indicated that more than half (57.8 percent) of high school students who had past-month alcohol use also reported binge drinking¹⁰ within the past month. The same analysis showed that more than two in five individuals who binge drink consumed eight or more drinks in a row (Esser et al., 2017).

Binge drinking substantially increases the risk of alcohol-related harms, such as motor vehicle crashes, injuries, unsafe sexual practices, and experiencing sexual assault 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).

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 (CBHSQ, 2020; Miech et al., 2019).*
- *Motor vehicle crashes are the greatest mortality risk for underage people who drink. In 2018, of the 1,719 drivers ages 15–20 who were killed in motor vehicle traffic crashes, 404 (24 percent) had a blood alcohol concentration (BAC) of 0.01 or higher (National Highway Traffic Safety Administration [NHTSA], Fatality Analysis Reporting System [FARS]).*
- *Alcohol use contributes to cognitive impairment, sexual assault, and suicide and is associated with academic problems (Abbey et al., 2004; Brown & Tapert, 2004; White & Hingson, 2013).*
- *Early initiation of drinking is associated with development of AUD later in life (Grant & Dawson, 1997; Hingson & Zha, 2009).*

Underage Binge Drinking

- *Approximately 4.3 million (11.4 percent) of 12- to 20-year-olds reported past-month binge alcohol use in 2018 (NSDUH data; CBHSQ, 2019a).*
- *Approximately 0.9 million underage youth engage in heavy drinking (i.e., binge drinking on 5 or more days within a 30-day period; NSDUH data; CBHSQ, 2019a).*
- *Almost 5 percent of 12th graders meet the definition of high-intensity or extreme binge drinking (MTF data; Miech et al., 2019).*

⁸ YRBS data are collected every 2 years; the latest available data are for 2017.

⁹ Binge 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.

¹⁰ Binge 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.

Approximately 2.3 percent of 12- to 20-year-olds (0.9 million) engage in heavy drinking (defined by SAMHSA as binge drinking on each of 5 or more days in the past 30 days; CBHSQ, 2019a). Although underage individuals who drink generally consume alcohol less frequently than adults who drink, they are more likely to binge drink when they do. A significant proportion of underage people who drink consume substantially more than the four- or five-drink binge criterion. For example, based on data from the 2017 and 2018 NSDUH, 7 percent of underage individuals who drink had nine or more drinks during their last drinking occasion (CBHSQ, 2020).

A troubling subset of binge drinking is high-intensity or extreme binge drinking, which is the consumption of ten or more, or 15 or more, drinks in a row on one or more occasions in the previous 2-week period. (MTF uses both ten-plus and 15-plus measures in this category.) High intensity or extreme binging represents an even higher level of a consumption pattern (binge drinking) that is already known to be dangerous. According to an analysis of MTF¹¹ data for 2018, 4.6 percent of 12th graders reported consuming ten or more drinks in a row, and 2.5 percent reported consuming 15 or more drinks in a row within the previous 2 weeks. Although these percentages have been shifting downward over time, almost 5 percent of underage people who drink still meet the definition of high-intensity or extreme binge drinking (Miech et al., 2019).

Alcohol use rates, including binge and heavy alcohol use¹², increase rapidly with age (Exhibit E.2). However, it is important to note that, because of their smaller size, very young adolescents (ages 12–15), although less likely to drink than older adolescents and young adults, may reach higher BAC 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.

Prevalence of AUD (Abuse or Dependence) Among Youth Is High

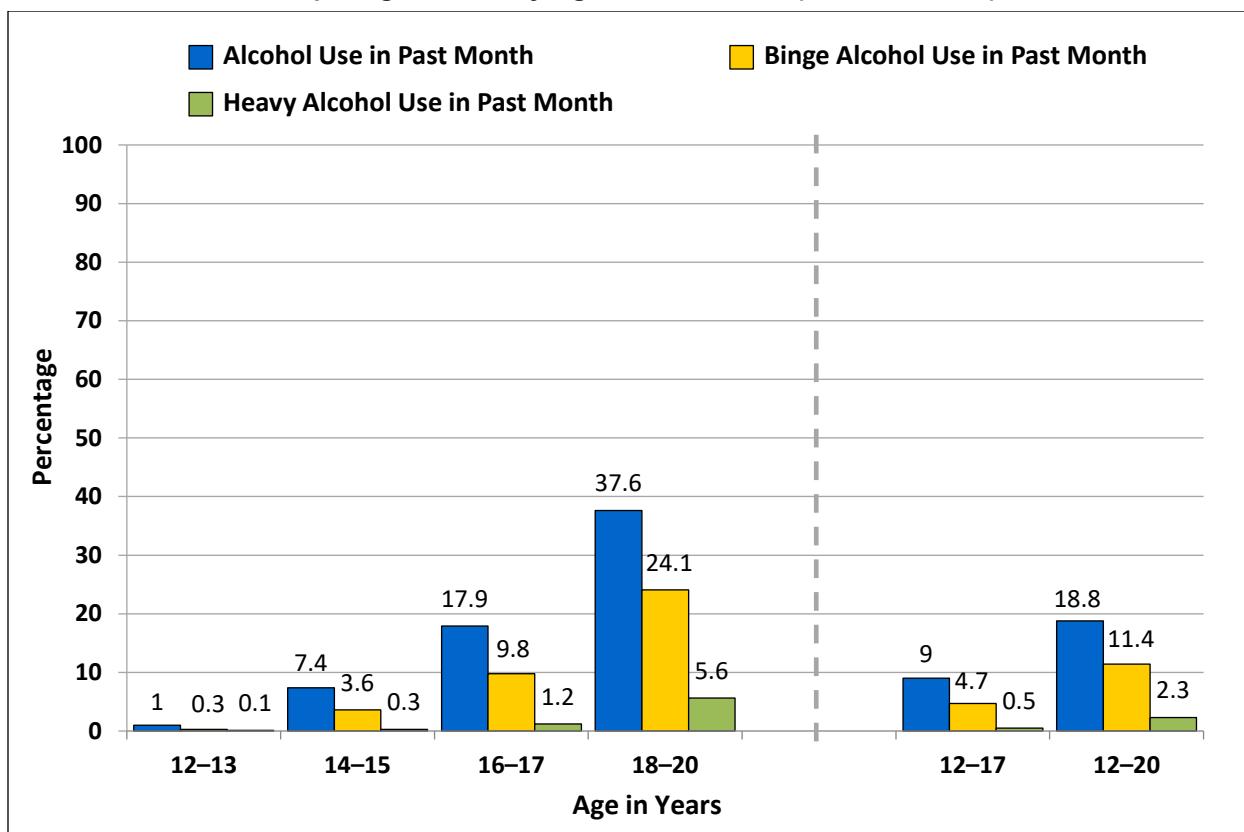
The prevalence of AUD among underage people who drink, based on DSM-IV-TR (APA, 2000) criteria¹³ is quite high, although most underage people who binge drink do not meet the criteria. According to combined 2017–18 NSDUH data, the prevalence for DSM-IV-TR alcohol abuse or dependence for 18- to 20-year-olds (7.7 percent) is significantly lower than for 21- to 24-year-olds (11.7 percent) and 25- to 29-year-olds (9.4 percent) but not significantly different than for 30- to 34-year-olds (8.2 percent). In addition, 0.4 percent of 12- to 14-year-olds and 2.9 percent of 15- to 17-year-olds met criteria for DSM-IV-TR alcohol abuse or dependence. The prevalence of alcohol abuse or dependence as defined by DSM-IV-TR is highest among those ages 21–29 (CBHSQ, 2020).

¹¹ For comparability with data from the 2018 NSDUH and the YRBS, the latest MTF data included in this report are also from 2018. The 2019 MTF data, available in December 2019, will be included in the next report.

¹² Heavy alcohol use is assessed in the NSDUH as binge drinking on 5 or more days in the past 30 days.

¹³ DSM-5 (APA, 2013) integrates the two DSM-IV disorders, alcohol abuse and alcohol dependence, into a single disorder called alcohol use disorder. DSM-5 does not specifically address adolescents. NSDUH assesses substance use disorders based on DSM-IV criteria.

Exhibit E.2: Any Alcohol Consumption, Binge, and Heavy Alcohol Use in Past 30 Days Among People Ages 12–20 by Age: NSDUH, 2018 (CBHSQ, 2019a)



College Drinking

Drinking and binging rates are higher for 18- to 20-year-olds compared with youth ages 12–17 years (CBHSQ, 2019a; see Exhibit E.2), and rates are higher for college students¹⁴ than for same-age peers not attending college (Schulenberg et al., 2019). Of college students, 59.9 percent report past-month drinking, compared with 50.2 percent of those of the same age but not in college (Schulenberg, et al., 2019). 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 RTC, the *SPBP Report* at <https://www.stopalcoholabuse.gov>). Despite the broad restrictions of the age 21 minimum legal drinking age (MLDA), underage youth find it

¹⁴ College students are defined as MTF panel participants who are full-time students enrolled in a 2- or 4-year college 1–4 years after high school in March during the year of the MTF survey (Schulenberg et al., 2019). Same-age peers are defined as individuals 1–4 years post-high school graduation who are not enrolled in either a 2- or 4-year college at the time of survey completion.

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 people who drink (ages 12–14) are more likely to get alcohol from their own house than from another source, according to NSDUH data. Older underage people who drink (ages 15–20) are more likely to give money to an adult to buy it for them or to receive alcohol from an unrelated adult or another underage person (CBHSQ, 2019a).

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 Force, 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.

The ICCPUD includes the following officials, as specified in the STOP Act:

- Secretary of HHS
- 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 CDC
- Director of the National Institute on Alcohol Abuse and Alcoholism (NIAAA)
- Director of NIDA
- Director of the Office of National Drug Control Policy
- Administrator of NHTSA
- Administrator of the Office of Juvenile Justice and Delinquency Prevention
- Chairman of the Federal Trade Commission

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 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).

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 AUD.
- 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), in addition to the age 21 MLDA, include:

- 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 *SPBP 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:** 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. Although the United States Prevention Services Task Force concluded there is not sufficient evidence to recommend SBIRT for youth age 17 and younger, these interventions are effective in populations age 18 and older, which includes older underage individuals who drink. 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.

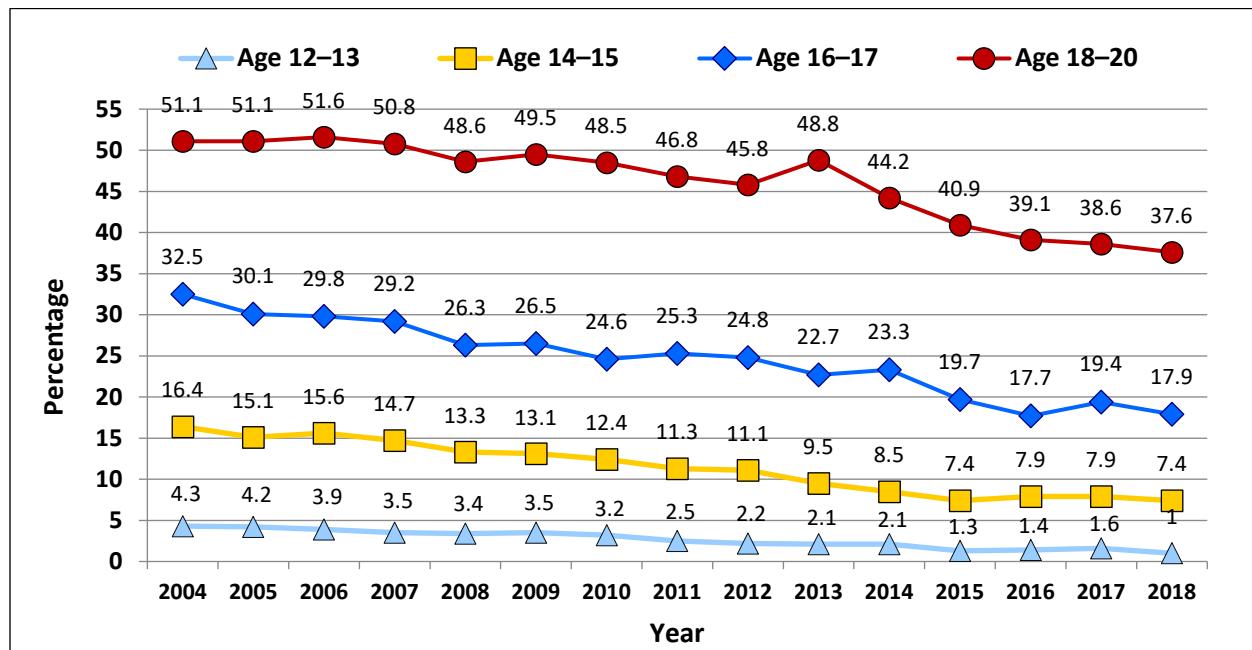
National Media Campaign

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 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 10.8 billion media impressions (number of times people have seen the ads or messages). The annual RTC 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 (Exhibit E.3; CBHSQ, 2020), there has been a 34.5 percent relative decline in the prevalence of past-month drinking among 12- to 20-year-olds since 2004. Past-month alcohol use remains high among people ages 18–20 in 2018 (37.6 percent). In addition, alcohol-related traffic deaths among drivers ages 15–20 have declined 84 percent since 1982, shortly before passage of the NMDA Act (National Center for Analysis and Statistics, 2019).

Exhibit E.3: Trends in Past-Month Alcohol Use for 12- to 20-Year-Olds by Age Group: NSDUH, 2004–18 (CBHSQ, 2020)

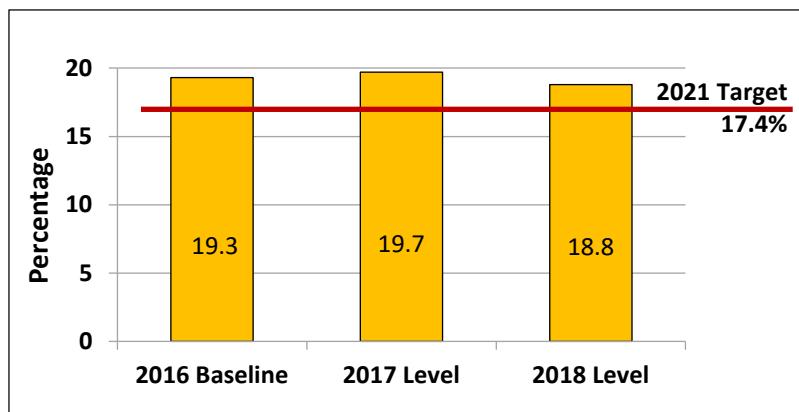


Progress on Achieving Comprehensive Plan Targets

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 in Exhibits E.4–E.6 show current progress toward meeting them.

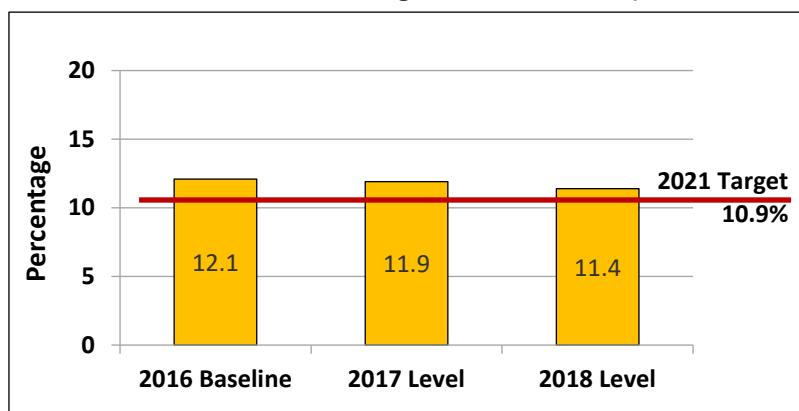
2021 Target 1: By 2021, **reduce** the prevalence of past-month alcohol use by 12-to 20-year-olds to 17.4 percent compared with the 2016 baseline of 19.3 percent (a reduction of 10 percent).

Exhibit E.4: 2018 Prevalence of Past-Month Alcohol Use Compared With 2016 Baseline and 2021 Target: NSDUH, 2018 (CBHSQ, 2019a)



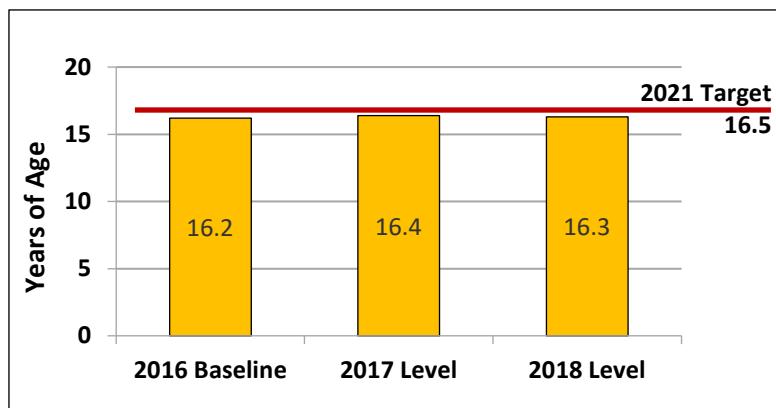
2021 Target 2: By 2021, **reduce** the prevalence of 12-to 20-year-olds reporting binge alcohol use in the past 30 days to 10.9 percent compared with the 2016 baseline of 12.1 percent (a reduction of 10 percent).

Exhibit E.5: 2018 Prevalence of Past-Month Binge Alcohol Use Compared With 2016 Baseline and 2021 Target: NSDUH, 2018 (CBHSQ, 2019a)



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 compared with the 2016 baseline of 16.2 years of age (an increase of 2 percent).

Exhibit E.6: 2018 Average Age of First Alcohol Use Among Those Who Begin Drinking Before Age 21 Compared With 2016 Baseline and 2021 Target: NSDUH, 2018 (CBHSQ, 2020)



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 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 underage and adult 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 individual who drinks and social costs. The national effort to address underage drinking from 1992 to the present is described, followed by a discussion of policies and practices addressing underage drinking prevention, treatment, intervention, enforcement, and research. 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, shortening their lives by an average of 60 years (Stahre et al., 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 people who drink), suicide, interpersonal violence (e.g., homicides and sexual and other assaults), unintentional injuries (e.g., burns, falls, and drownings), cognitive impairment, alcohol use disorder (AUD);¹⁵ risky sexual activity, poor school performance, and alcohol and drug overdoses.

Underage alcohol use occurs in a context of significantly problematic adult use nationwide. Approximately 88,000 individuals of all ages in the United States die from alcohol-attributable causes each year (Stahre et al., 2014), making excessive alcohol use¹⁶ a leading preventable cause of death in the United States. The economic burden of excessive alcohol use (as defined by the Centers for Disease Control and Prevention [CDC]) in the United States was estimated to be \$249 billion in 2010; three-quarters of those costs were from binge drinking¹⁷ (Sacks et al., 2015).

Over the past 2 decades, alcohol use, binge drinking¹⁸, and AUD have all increased in the adult population, especially among women, older adults, racial/ethnic minorities, and the socioeconomically disadvantaged (Han et al., 2017; Grucza et al., 2018). Recent data show a significant decrease in life expectancy after 2014–17 in the United States, reversing the trend of increasing life expectancy since 1959. This decrease is predominantly due to an increase since 2014 in all-causes mortality in young and middle-aged adults. A significant contributor to declining life expectancy is increases in midlife and young adult (ages 25–34) mortality rates for

¹⁵ *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition ([DSM-5] American Psychiatric Association [APA], 2013) integrates the two DSM, fourth edition (DSM-IV) disorders, alcohol abuse and alcohol dependence, into a single disorder called alcohol use disorder. DSM-5 does not specifically address adolescents. The National Survey on Drug Use and Health (NSDUH) assesses substance use disorders based on DSM-IV criteria.

¹⁶ “Excessive drinking” as defined by CDC includes binge drinking, heavy drinking, and any drinking by pregnant women or people younger than age 21.

¹⁷ Binge drinking was defined as four or more drinks on a single occasion for women and five or more drinks for men.

¹⁸ Binge drinking definitions varied according to the survey data reviewed. See Exhibit E.1 for more detail regarding definitions of binge drinking and related terms.

alcohol-related liver disease; rates for chronic liver disease and cirrhosis increased from 0.6 deaths/100 000 to 1.7 deaths/100 000 in the years from 1999 to 2017 (Woolf & Schoonmaker, 2019). A recent analysis of death certificate data found that alcohol-related mortality increased from 1999–2017 for all age groups except 16–20 years and 75 years and older. Males ages 45–74 years had the highest mortality. Although chronic alcohol use accounted for the majority of deaths overall, nine out of ten alcohol-related deaths among youth ages 16–20 years involved acute alcohol consumption, likely due to the number of years it takes for chronic conditions to develop. There was not a significant change in the overall rate of acute alcohol-related deaths in this younger age group, but there was a significant increase in the rate for females. This narrowing gender gap in alcohol-related deaths is consistent with a narrowing gender gap in alcohol use among young people.

Another major contributor to the mortality increases in young and middle-aged adults is drug overdoses; alcohol plays a role in many drug overdoses. From 2002–03 and 2014–15, alcohol involvement in prescription opioid deaths increased from 8.5 percent to 13.7 percent (Kandel et al., 2017), and more than half of the 4.2 million people who misused prescription opioids from 2012–14 binged on alcohol (Esser, 2019).

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 12–20 has dropped from 28.7 percent to 18.8 percent, a 34.5 percent decline, since 2004 (Center for Behavioral Health Statistics and Quality [CBHSQ], 2019a). 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 60.5 percent of individuals ages 12–20 who reported drinking in the past month on the NSDUH survey also reported binge drinking (CBHSQ, 2019a).

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 AUD 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; National Institute on Alcohol Abuse and Alcoholism [NIAAA], n.d.a). Studies of the effects of legalization on underage use to date are mixed (e.g., Cerdá et al. 2017; Dilley et al., 2018; Anderson et al., 2019). As with underage alcohol use, marijuana use by youth is associated with the use of other substances, including alcohol, tobacco, and other drugs (Dupont et al., 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, formalized 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 Prevention and Reduction of Underage Drinking* (RTC) 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 person who drinks 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 (CDC, 2020a).

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 and passengers and interpersonal violence (National Research Council [NRC] & Institute of Medicine [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 et al., 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 AUD (NRC, 2004).

Direct Consequences to Underage Drinking

Mortality and Injury From Traffic Crashes

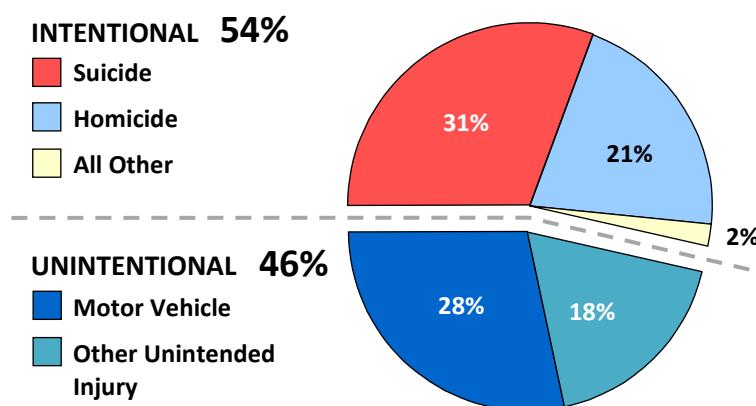
The greatest unintentional mortality risk for underage people who drink continues to be from motor vehicle crashes. In 2018, of the 1,719 drivers ages 15–20 who were killed in motor vehicle traffic crashes:

- 404 (24 percent) had a blood alcohol concentration (BAC) of 0.01 percent or higher. Of those,
 - 331 (19 percent) had a BAC of 0.08 percent or higher.
 - 73 (4 percent) had a BAC of 0.01 to 0.07 percent.¹⁹

Suicide, Homicide, and Other Causes of Injury-Related Death

In addition to contributing to motor vehicle crashes, underage drinking contributes to all major causes of fatal and nonfatal injuries experienced by young people ages 12–20 years, including suicide, homicide, and other unintentional injuries (CDC, 2020b; see Exhibit 1.1).

¹⁹ Special data analysis provided by the National Highway Traffic Safety Administration (NHTSA) for this report; National Center for Statistics and Analysis, 2019).

Exhibit 1.1: Injury-Related Fatalities for Youth Ages 12–20: 2018 (CDC, 2020b)

In 2018, an estimated 2,095 youth ages 12–20 died from unintentional injuries caused by events other than motor vehicle crashes, such as poisoning (which includes alcohol and drug overdoses), drowning, falls, and fires/burns (CDC, 2020b). A 1999 meta-analysis of alcohol involvement in unintentional injury deaths (other than those due to motor vehicle crashes) among persons age 15 years and older reported an overall alcohol-attributable fraction of 31 percent, although rates varied widely across studies and injury type (Smith et al., 1999).

Suicide was the second leading cause of injury-related death for individuals ages 12–20 in 2018. Suicide rates have been rising steadily over the past several years, and suicide rates for teens (ages 15–19) and young adults (ages 20–24) in 2017 were at the highest level since 2000. Recent increases were noted, especially in males and in ages 15–19 years (Miron, et al., 2019). The largest relative increase in suicide rates occurred among children ages 5–14 years (from 0.6 deaths/100,000 to 1.3 deaths/100,000; Woolf & Schumaker, 2019).

Alcohol involvement is consistently implicated in adolescent as well as adult suicide attempts and completions, although the direction and temporal aspects of the relationship between alcohol use and suicide ideation and attempts is not fully understood (Bagge and Sher, 2008). A recent meta-analysis concluded that any acute alcohol use is associated with increased likelihood of a suicide attempt, particularly at high doses (Borges et al., 2017). Among a sample of adults admitted to the hospital for attempted suicide, the stated motivation for drinking before the suicide attempt affected the association between acute alcohol use and proximal suicide premeditation/intent. Those who drank to facilitate the suicide attempt had a greater intent to commit suicide than those who did not (Bagge et al., 2015).

Smith and colleagues (1999) 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 almost one-quarter (22.7 percent) of suicides as well as nearly one-third (31.5 percent) of homicides (which is now the third-leading cause of death for 12- to 20-year-olds). Further, data from 17 states show that among youth ages 10–19 years who died by suicide and were tested for alcohol, 12 percent had BACs >0.08 percent (Crosby et al., 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 et al., 2006).

Suicidal behavior in adolescents and in adults has multiple causes, evidencing biochemical, genetic, and psychological correlates (Sher & Salsman, 2005). The comorbidity between mental illness and substance use has been found to be up to 73%, with consistent positive correlations between adolescent drinking, depression, and suicidality (Ganz & Sher, 2009). A recent meta-analysis concluded that, globally, and across all age groups, the odds of suicidal behavior is about three times higher among individuals with AUD compared with those without AUD (Connor & Bagge, 2019).

There is consistent evidence that the enactment of the minimum legal drinking age (MLDA) within the United States contributed to a reduction in youth suicide. This effect is particularly evident for males (Xuan et al., 2016).

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 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. 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.

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. Because 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 (Jones et al., 1973; Stratton et al., 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 human immunodeficiency virus, the virus that causes acquired immunodeficiency syndrome (Cooper & Orcutt, 1997). A recent meta-analysis of substance use and risky sexual behavior in adolescents (ages 12–17 primarily) concluded that although there is a positive relationship between alcohol use and risky sexual behavior, the relationship is complex. Individual, contextual, and environmental factors significantly impact the co-occurrence of these risk behaviors, with the association more clearly seen in females and moderated by ethnicity. The association is also found with multiple drugs, not just alcohol (Ritchwood et. al, 2015). Similarly, a review of studies involving college students concluded that the association between alcohol use and risky sexual behavior is moderated by a number of factors, including gender, existing relationship with a partner, and level of drinking (Brown et al. 2016).

Impaired Academic Performance

In general, studies of underage drinking and academic performance indicate that drinking is associated with decreased school performance. A 2013 literature review reported that most of the 44 studies reviewed that included alcohol use as a variable reported statistically significant inverse relationships between health-risk behaviors (which includes alcohol use) and academic achievement. This was true for both cross-sectional and longitudinal studies (Bradley & Greene, 2013). In general, cross-sectional studies have found that students who do poorly in school drink more than students whose school performance is better (Bryant et al., 2003). Similarly, a more recent cross-sectional study utilizing Youth Risk Behavior Surveillance System data found that students use of substances (which included alcohol), sexual risk, violence-related behaviors, and suicide-related behaviors were associated with lower self-reported grades (mostly Ds and Fs; Rasberry et al., 2017).

Cross-sectional studies do not address the direction of the relationship between underage alcohol use and academic performance. The available longitudinal data are somewhat mixed, and in some cases, data suggest that academic failure leads to increased drinking rather than the reverse. For example, a 1-year longitudinal analysis of middle school and high school students using the National Longitudinal Study of Adolescent to Adult Health found that, independent of consumption levels, students who drank experienced modest declines (one-tenth of a letter grade) in academic achievement (Crosnoe et al., 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). Conversely, 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 MLDAs increased the probability of people graduating by age 19 by 5.3 percentage points. In contrast to the above study findings, using data from the Youth Development Study, Mortimer (2003; 2015); Owens et al. (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 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). A 2017 longitudinal study found that moderate-high alcohol use in individuals who also engaged in low or no marijuana use (approximately 40 percent of the sample) had lower grade point averages (GPAs) compared with peers with no or low substance use at the onset of college. However, those who used both marijuana and alcohol moderately to heavily had even lower GPAs that declined over time (Meda et al., 2017).

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 et al., 2008; Hingson et al., 2006; Hingson & Zha, 2009; Pitkänen et al., 2005; York et al., 2004). Although 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.²⁰

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 et al., 2008; Hingson et al., 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 et al., 2014).

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

Increased Risks From Concurrent and Simultaneous Substance Use

For people under age 21, marijuana is the second most commonly consumed illicit substance after alcohol.²¹ In the 2018 Monitoring the Future (MTF) survey, 14.6 percent of 8th, 10th and 12th graders combined reported past-month use of marijuana (Miech et al., 2019). An analysis of multi-substance use patterns among youth ages 12–17 in NSDUH data (2002–14) 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 et al., 2017). A recent analysis of MTF trends revealed that marijuana is

²⁰ Note that the criteria for alcohol-related disorders in DSM-5 (APA, 2013) do not specifically address adolescents.

²¹ Marijuana 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 18–20 in about half of the states.

increasingly the first substance in the sequence of adolescent drug use (Keyes, Rutherford, et al., 2019).

NSDUH data indicate that 20.2 percent of underage individuals ages 12–20 who drink report combined alcohol and marijuana use compared with only 6.9 percent of those age 21 and older (CBHSQ, 2019a).

An analysis of data collected by the MTF survey indicates that high school seniors who consume ten-plus drinks in a row and marijuana users consuming or one or more marijuana joints per day are more likely to report use of both substances simultaneously (Patrick et al., 2017). Similarly, more than 25 percent of 12th graders who reported extreme binge drinking (15-plus drinks in a row) also reported non-medical use of prescription medication, such as opioids, sedatives/anxiolytics, and stimulants (McCabe, Veliz, & Patrick, 2017). An analysis of data from the MTF survey by McCabe, West, Schepis, and Teter (2015) indicated that more than six in every ten high school seniors who used non-medical stimulants in the past year also reported co-use of prescription stimulants, alcohol, and other drugs.

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 16–20 reported driving under the simultaneous influence of alcohol and illicit drugs in 2014. Although the trend in impaired driving has decreased since 2002, it remains a concern (Lipari et al., 2013).

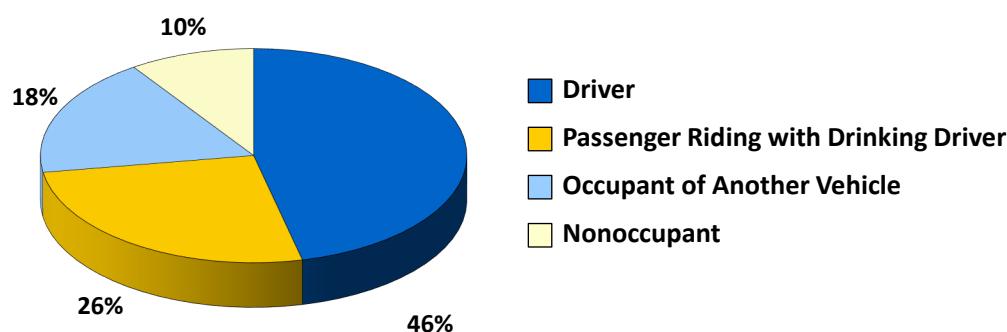
Another concern is the potential combined effect of alcohol with opioids. A recent study found that respiratory depression caused by opioids—which can be fatal—is exacerbated by the effects of alcohol in young adults (Schrier et al., 2017). NSDUH data in 2017 indicated that 3.4 percent of underage individuals who currently drink reported use of opioids (CBHSQ, 2018). A recent study by Esser and colleagues (2019), using combined NSDUH data from 2012–14, found that prescription opioid misuse was most common among people 12- to 17-years-old who binge drink (8.1 percent compared with 3.5 percent for all people who binge drink).

Social Costs

Mortality and Injury

Individuals other than those underage who drink also experience the consequences of underage alcohol use, through destruction of property, unintentional injury, violence, and even death. In 2018, 872 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 2018 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; NHTSA, Fatality Analysis Reporting System [FARS]).

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 2018: NHTSA, FARS 2018 Annual Report File (ARF)



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 reports of assault 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 the person experiencing the assault and the assailant increases the risk of physical and sexual assault (Abbey, 2011; Nolen-Hoeksema, 2004).

Social Costs on College Campuses

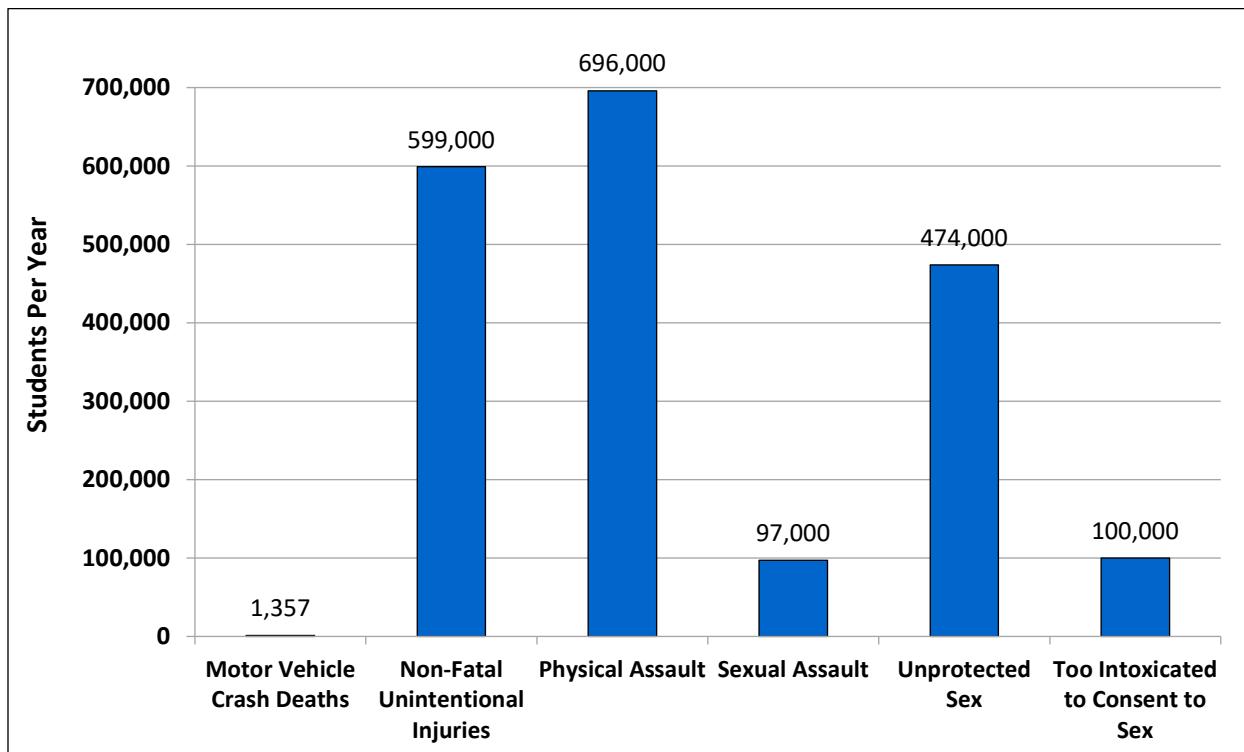
The problems associated with college student drinking include sexual assault and other violent crime on college campuses (White & Hingson, 2013). A study of roughly 5,500 college women on two campuses revealed that nearly 20 percent experienced some form of sexual assault while at college (Krebs et al., 2009). One estimate based on a national survey of college students is that 97,000 students may experience alcohol-related sexual assault in a given year (Hingson et al., 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, the person experiencing the crime, 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 person experiencing the assault and the perpetrator had consumed alcohol. Estimates of perpetrators' intoxication during the incident ranged from 30 percent to 75 percent.

Many other adverse social consequences are linked with college student alcohol consumption. Hingson et al. (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 18–24 have had unprotected sex while under the influence of alcohol. Further, each year more than 100,000 students ages 18–24 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).

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



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).

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

- HHS/Administration for Children and Families
- HHS/CDC

- HHS/Indian Health Service
- HHS/NIH/NIAAA
- HHS/NIH/National Institute on Drug Abuse (NIDA)
- HHS/Office of the Assistant Secretary for Health (OASH)—Office of Disease Prevention and Health Promotion (ODPHP), Office of Population Affairs
- HHS/Office of the Assistant Secretary for Planning and Evaluation
- HHS/OASH/Office of the Surgeon General (OSG)
- HHS/Substance Abuse and Mental Health Services Administration (SAMHSA)
- Department of Defense
- Department of Education/Office of Safe and Healthy Students
- Department of Homeland Security/U.S. Coast Guard
- U.S. Department of Justice (DoJ)/Office of Juvenile Justice and Delinquency Prevention (OJJDP)
- Department of Transportation/NHTSA
- Department of the Treasury/Alcohol and Tobacco Tax and Trade Bureau (TTB)
- 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 Community Preventive Services Task Force's (CPSTF) *Guide to Community Preventive Services: Preventing Excessive Alcohol Consumption* (CPSTF, 2016); the 2003 NRC and 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 College Alcohol Intervention Matrix ([CollegeAIM] 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 – Underage Drinking Prevention and Enforcement [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 MLDA

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 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 MLDAs 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 (Cucchiaro et al., 1974; Douglass et al., 1974; Wagenaar, 1983, 1993; Whitehead, 1977; Whitehead et al., 1975; Williams et al., 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).

Although enforcement varies across states, the evidence is clear that the MLDA of 21 years of age saves lives and improves health (DeJong & Blanchette, 2014; McCartt et al., 2010). The law has led to significant reductions in traffic crashes among youth (NHTSA, 2014; Wagenaar & Toomey, 2002). Subsequent research has supported the finding that reducing access to alcohol has a significant effect on mortality rates, particularly for young adults (Carpenter & Dobkin, 2011), and that it reduces the rate of non-fatal injuries (alcohol overdoses, accidental injuries, and injuries inflicted by others) in youth under 21 as well (Carpenter & Dobkin, 2016). There is also consistent evidence that the enactment of the MLDA within the United States contributed to a reduction in youth suicide (Xuan, et al 2016).

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

The ICCPUD includes the following officials, as specified in the STOP Act:

- *Secretary of HHS*
- *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 CDC*
- *Director of NIAAA*
- *Director of NIDA*
- *Director of the ONDCP*
- *Administrator of the NHTSA*
- *Administrator of the OJJDP*
- *Chairman of the FTC*

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 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.

ICCPUD

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* (the *Comprehensive Plan*) 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.
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 2007 Surgeon General’s Call to Action to Prevent and Reduce Underage Drinking (the 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 *Call to Action* (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 2016 Surgeon General's Report on Alcohol, Drugs, and Health

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 who 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 take away the driver's licenses of people under age 21 caught driving after drinking.
- Laws that hold social hosts criminally liable for hosting underage drinking parties.
- Laws that allow social hosts to be sued for hosting underage drinking parties.
- Proposals to reduce underage 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
- 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

CPSTF

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, non-federal 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 underage drinking prevention:

- 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 people not currently drinking 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 (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.

Revised and updated in 2019, 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.

Identification of Evidence-Based Best Practices

The STOP Act requires the ICCPUD to include in the *RTC* evidence-based practices to prevent and reduce underage drinking and evidence-based treatment services for youth who need them. Accordingly, the ICCPUD has identified 26 legal policies for which there is mixed, promising, or strong evidence of effectiveness (see Exhibit 1.6) and has tracked state adoption of these policies in the *State Performance & Best Practices for the Prevention and Reduction of Underage Drinking Report (SPBP 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 NRC and 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 policies as identified by one or more of the five sources listed above as well as those identified 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 *SPBP 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 CollegeAIM Individual-Level Strategies (NIAAA, 2019)

INDIVIDUAL-LEVEL STRATEGIES:Estimated Relative Effectiveness, Costs, and Barriers; Public Health Reach; Research Amount; and Primary Modality¹

EFFECTIVENESS: Success in achieving targeted outcomes	COSTS: Combined program and staff costs for adoption/implementation and maintenance		
	Lower costs \$	Mid-range costs \$\$	Higher costs \$\$\$
Higher effectiveness ★★★	<p>IND-3 Normative re-education: Electronic/mailed personalized normative feedback (PNF)—Generic/other² [##, B, ●●●, online/offsite]</p> <p>IND-10 Skills training, alcohol focus: Self-monitoring/self-assessment alone³ [#, F, ●●, online/offsite]</p> <p>IND-21 Personalized feedback intervention (PFI): eCHECK UP TO GO (formerly, e-CHUG)² [#, B, ●●●, online]</p>	<p>IND-9 Skills training, alcohol focus: Goal/intention-setting alone³ [##, F, ●●●, IP]</p> <p>IND-12 Skills training, alcohol plus general life skills: Alcohol Skills Training Program (ASTP)² [#, F, ●●●, IPG]</p> <p>IND-16 Brief motivational intervention (BMI): In-person—Individual (e.g., BASICS) [##, F, ●●●●, IP]</p> <p>IND-22 Personalized feedback intervention (PFI): Generic/other² [##, B, ●●●●, online]</p>	<p>IND-17 Multi-component education-focused program (MCEFP): AlcoholEdu[®] for College¹ [#, B, ●●, online]</p>
Moderate effectiveness ★★			<p>Interventions Delivered by Health Care Professionals</p> <p>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:</p> <p>IND-23 Screening and behavioral treatments</p> <p>IND-24 Medications for alcohol use disorder</p> <p>These approaches can reduce harmful drinking, according to studies conducted mainly in general adult populations (ages 18–65).</p> <p><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></p>
Lower effectiveness ★	<p>IND-2 Normative re-education: Electronic/mailed personalized normative feedback (PNF) Event-specific prevention (21st birthday cards) [#, B, ●●, online/offsite]</p>	<p>IND-4 Normative re-education: In-person norms clarification alone¹ [#, F, ●●, IPG]</p>	<p>Effectiveness rating, based on percentage of studies reporting any positive effect:</p> <ul style="list-style-type: none"> ★★★ = 75% or more ★★ = 50% to 74% ★ = 25% to 49% X = Less than 25%
Not effective X	<p>IND-7 Skills training, alcohol focus: Expectancy challenge intervention (ECI)—By proxy/didactic/discussion alone³ [#, F, ●●, IPG]</p>	<p>IND-1 Information/knowledge/education alone³ [#, B, ●●●●, IPG]</p> <p>IND-5 Values clarification alone³ [#, F, ●●, IPG]</p>	<p>Research amount:</p> <ul style="list-style-type: none"> ●●●● = 11+ studies ●●● = 7 to 10 studies ●● = 4 to 6 studies ● = 3 or fewer studies
Too few studies to rate effectiveness ?	<p>IND-11 Skills training, alcohol plus general life skills: Alcohol 101 Plus™² [#, B, ●, online]</p> <p>IND-19 Personalized feedback intervention (PFI): CheckYourDrinking (beta 1.0 version)² [#, B, ●, online]</p> <p>IND-20 Personalized feedback intervention (PFI): College Drinker's Check-up² [#, B, ●, online]</p>	<p>IND-6 Skills training, alcohol focus: Blood alcohol concentration feedback alone³ [#, F, ●, IP]</p> <p>IND-18 Multi-component education-focused programs (MCEFP): Miscellaneous² [#, B, ●, online]</p>	<p>Barriers:</p> <ul style="list-style-type: none"> ## = Higher ## = Moderate # = Lower <p>Primary modality:</p> <ul style="list-style-type: none"> IP = In-person individual IPG = In-person group Online Offsite

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

¹Effectiveness 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).

²Strategies 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.

³Although 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 CollegeAIM Environmental-Level Strategies (NIAAA, 2019)**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]

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.

Legend

Barriers:	Research amount/quality:
### = Higher	*** = 5 or more longitudinal studies
# = Moderate	** = 5 or more cross-sectional studies or 1 to 4 longitudinal studies
# = Lower	* = 2 to 4 studies but no longitudinal studies
C = Barriers at college level	= 1 study that is not longitudinal
S/L = Barriers at the state/local level	0 = No studies
Public health reach:	
B = Broad	
F = Focused	

Exhibit 1.6: Underage Drinking Prevention Policies—Best Practices

Source Identifying Policy as a Potential Best Practice						
Underage Drinking Prevention Policies	ICCPUD Determination Based on Input From Stakeholders and Literature Review	CPSTF	Surgeon General's Call to Action	NRC & IOM Report, Reducing Underage Drinking: A Collective Responsibility	CollegeAIM (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 identification 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 licenses	X		X	X		
Policies targeting alcohol suppliers						
Furnishing or sale to a minor	X		X	X	X	
Compliance checks	X	X	X	X	X	X
Penalty guidelines for violations of furnishing laws by retailers	X					
Mandatory/voluntary server-seller training (responsible beverage service programs)	X		X	X	X	
Minimum age for off-sale server	X					
Minimum age for on-sale server	X					
Outlet siting near schools	X					
Dram-shop liability	X	X		X	X	X
Social-host liability	X			X	X	X

Source Identifying Policy as a Potential Best Practice						
Underage Drinking Prevention Policies	ICCPUD Determination Based on Input From Stakeholders and Literature Review	CPSTF	Surgeon General's Call to Action	NRC & IOM Report, Reducing Underage Drinking: A Collective Responsibility	CollegeAIM (NIAAA)	Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health
Hosting underage drinking parties	X		X	X	X	X
Retailer interstate shipment	X					
Direct sales/shipment from producer	X					
Keg registration	X		X	X	X	
Home delivery	X			X		
High-proof grain alcoholic beverages	X					
Policies affecting alcohol pricing						
Increasing alcohol tax rates	X	X		X	X	X
Restrictions on drink specials	X		X	X	X	
Wholesaler pricing provisions, including limits on price and extension of credit	X					

Screening, Brief Intervention, and Referral to Treatment (SBIRT)

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

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

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 et al., 2014; Tanner-Smith & Lipsey, 2015). However, the U.S. Preventive Services Task Force 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 12–17 years. These interventions are recommended in populations age 18 and older, which includes older underage individuals who drink. Adaptation of the

interventions for younger age groups may increase effectiveness (Curry et al., 2018), 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. People who reported frequent drinking, binge drinking, or 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 people who frequently smoke, 27 percent of those who frequently use marijuana, and 42 percent of those who frequently use other drug were advised to reduce or quit those behaviors (Hingson, Zha, Iannotti, & Simons-Morton, 2013).

A recent study examined the effectiveness of two interventions delivered singly or in combination in the Cherokee Nation in Oklahoma: Screening and brief intervention delivered in schools for youth (CONNECT) and an intervention focused on community efforts to target alcohol access (Communities Mobilizing for Change on Alcohol [CMCA]; 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. CMCA was found to reduce alcohol use among high school students by 25 percent and alcohol-related consequences by 22 percent; CONNECT reduced alcohol use by 22 percent. More such research could help to identify successful interventions for preventing alcohol use among racial and ethnic minorities.

Government Response to Emerging Issues in Underage Drinking

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 change 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 substances (e.g., prescription opioids).

Previous Federal and State Actions: Caffeinated Alcoholic Beverages (CABs)

Two products that have previously generated governmental response at the federal and/or state levels are caffeinated alcoholic beverages and powdered alcohol.

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 people who drink.

Due to federal and state actions, premixed 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 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.²²
- 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.²³

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 (4-day bursts of daily surveys) over four consecutive semesters, starting in their freshman year. Of the sample, 30.5 percent reported combined use at least once, and

²² 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).

²³ 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).

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 (Patrick & Maggs, 2014).

Adolescents also combine caffeinated beverages with alcohol. Underage people from 13–20 who drink and self-mixed alcoholic beverages with energy drinks, energy shots, or caffeine pills were more likely to engage in heavier drinking, including binge drinking, and were also at increased risk for adverse alcohol-related outcomes compared with traditional mixing (combining alcohol with soda, coffee, or tea) and people who do not drink CABs (Kponee et al. 2014).

Research suggests that continued attention to this issue is needed among policymakers and educators.

Previous Federal and State Actions: Powdered Alcohol

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

Public health professionals and state government officials raised concerns that because powdered alcohol is easy to conceal and transport, it would appeal to underage people who drink (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 individuals who drink would consume powdered alcohol if they had access to it (Stogner et al., 2015; Vail-Smith et al., 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 December 2019, 36 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.

Emerging Issues

Products containing alcohol, which are attractive to youth, continue to come to market. Examples of recently introduced products included canned cocktails; alcohol-infused edibles, including “gummi” candies, cakes, whipped cream, popcorn and ice cream; alcohol Jell-O shooters; high-alcohol-content grain alcohol; and cannabis-infused alcohol.

“Hard seltzers” have recently surged in popularity; sales increased 283 percent from 2018 to mid-2019. Although these drinks are marketed as a healthier alternative to other alcoholic

beverages and have a lower alcohol content, they tend to be consumed in greater quantities (Bakker, 2019).

The emergence of Coronavirus Disease 2019 resulted in rapid changes in state alcohol policies in early 2020, increasing online sales and direct-to-consumer home delivery and shipping of alcoholic beverages. There have also been policy changes in some states to allow restaurants and bars to sell alcohol for curbside pick-up and/or carryout. Off-premise alcohol sales in March of 2020 increased substantially compared with the same time period in 2019. Wine sales increased by 27.6 percent, spirits increased 26.4 percent, and beer/flavored malt beverages/cider sales increased 14 percent (Pellechia, 2020). The impact of these changes overall and specifically on underage drinking will be carefully monitored in 2020.

CHAPTER 2

The Nature And Extent Of Underage Drinking In The United States

CHAPTER 2: THE NATURE AND EXTENT OF UNDERAGE DRINKING IN THE UNITED STATES

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.

Sober Truth on Preventing (STOP) Underage Drinking Act Requirements for the Report to Congress on the Prevention and Reduction of Underage Drinking

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 & Johnson, 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.

Exhibit 2.1: Summary of Major Federal Surveys Assessing Underage Drinking²⁴

Survey/ Sponsoring Agency	Purpose	Target Population	Administration Schedule	Data Collection Method
NSDUH—Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Behavioral Health Statistics and Quality (CBHSQ)	Measurement of substance use, misuse, and related problems for U.S. civilian, noninstitutionalized population age 12 and older	Civilian, noninstitutionalized population age 12 and older in the United States (residents of households and individuals in noninstitutional group quarters)	Annually since 1991	In-person visit to home; audio computer-assisted self-interviews
MTF ²⁵ — National Institute on Drug Abuse (NIDA)	Measurement of alcohol, tobacco, and other drug use by secondary school students	Secondary school students in the coterminous United States 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
YRBS—Centers for Disease Control and Prevention (CDC)	Assessment of a variety of behaviors that affect adolescent health, including alcohol consumption	Public, Catholic, and other private school students in grades 9–12 in the United States and the District of Columbia	Biennially since 1991	School-based, self-administered questionnaire in classroom

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

²⁴ See Chen, Yoon, & Faden (2017) for details on differences in the surveys.

²⁵ For comparability with 2018 NSDUH (the data available as this report was being prepared in 2019), the latest MTF data included in this report are also from 2018. The 2019 MTF data became available in December 2019 and will be included in the next report.

from five drinks on a single occasion in the past 30 days 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 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 four or more drinks of alcohol in a row for females and five 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 five or more drinks on at least one occasion in the 2 weeks prior to the survey for both males and females (Johnston et al., 2019a). Exhibit 2.2 provides a summary of the definitions of alcohol consumption across the various surveys.

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 one 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 one drink of alcohol on at least 1 day during their life
Binge Use of Alcohol	NSDUH	[As of 2015] Females: Reported drinking four or more drinks Males: Reported drinking five 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 five or more drinks in a row over the past 2 weeks
	YRBS	[As of 2017] Females: Reported four or more drinks of alcohol in a row ..

Measure	Survey Source	Definition
		Males: Reported five 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 four 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 five or more drinks on the same occasion on each of 5 or more days in the past 30 days Heavy alcohol use is also, by definition, binge use of alcohol.
Extreme Binge (Also Referred to as High Intensity)	MTF	Ten-plus: Reported drinking ten or more drinks in a row over the past 2 weeks 15-plus: Reported drinking 15 or more drinks in a row over the past 2 weeks
Largest Number of Alcoholic Drinks in a Row Was Ten or More (Similar to Extreme Binge)	YRBS	Ten-plus: Reported ten 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 2 decades, although there was some evidence in 2017 of a potential end of the decline (Johnston et al., 2018). Whereas some measures of alcohol use were static this year, data from the NSDUH survey showed a significant decline in the incidence of past-month alcohol use from 2017–18 for youth ages 12–20. However, there were no significant differences for the prevalence of lifetime, past-year, or past-month binge and heavy alcohol use; and past-year alcohol use disorders from 2017–18 among youth ages 12–17 (CBHSQ, 2019a). Data from the MTF survey reflect a significant decline in reported past-month and lifetime alcohol use by 12th graders but not by 8th or 10th graders.

YRBS measures on alcohol consumption (i.e., lifetime alcohol use, current alcohol use, drinking before age 13, and having ten or more drinks in a row) 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 2018 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.

7.1 million underage youth reported using alcohol in the past month (CBHSQ, 2019a)

Past-Month Alcohol Use: Current NSDUH 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 2018 indicate that approximately 18.8 percent of 12- to 20-year-olds in the United States (or about 7.1 million young people) reported alcohol use in the past month (CBHSQ, 2019a).

Past-month alcohol consumption by underage youth has declined almost 34.5 percent relative to the levels reported in 2004 (CBHSQ, 2020)

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 2018 data, a higher percentage of youth who are 12–20 used alcohol in the past month (18.8 percent) than tobacco (10.1 percent) or illicit drugs (13.4 percent; CBHSQ, 2020; see Exhibit 2.3).

Exhibit 2.3: Past Month Use of Alcohol, Illicit Drugs, and Tobacco by 12- to 20-Year-Olds (CBHSQ, 2020)

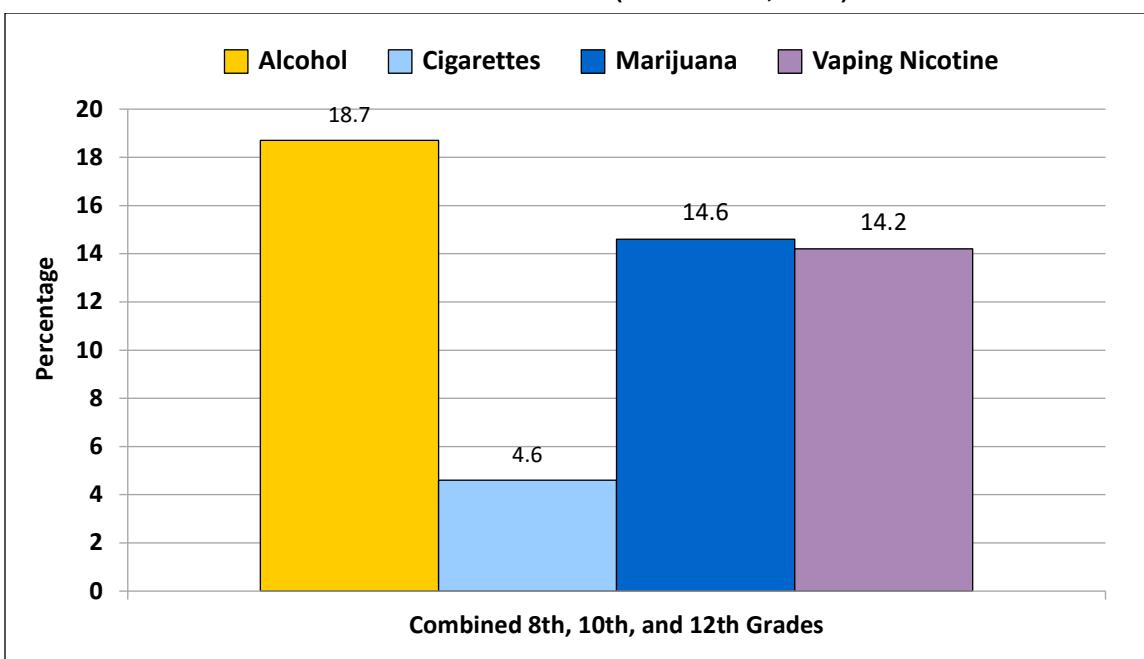
	Weighted Percentage Estimates
Used Alcohol	18.8
Used Illicit Drugs	13.4
Used Tobacco	10.1

Past-Month Alcohol Use: MTF and YRBS Data

Results from the 2018 MTF survey show a significant decline in past-month alcohol use from 2017–18: In 2018, 18.7 percent of students (grades 8, 10, and 12 combined) reported drinking in the 30 days prior to the survey compared with 19.9 in 2017 (Miech et al., 2019). YRBS (2017) records higher rates of drinking: 29.8 percent of students in grades 9–12 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 overall substance use. As shown in Exhibit 2.4, a higher percentage of youth in grades 8, 10, and 12 combined used alcohol (18.7 percent) in the month prior to being surveyed than used marijuana (14.6 percent), used tobacco (4.6 percent report smoking cigarettes), or vaped nicotine (14.2 percent; Miech et al., 2019). There has been a substantial increase in vaping this past year.

Exhibit 2.4: Past-Month Adolescent Alcohol, Cigarette, Marijuana Use, and Vaping—Combined Grades: 2018 MTF Data (Miech et al., 2019)



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 34.5 percent relative decline since 2004²⁶—when the Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) was first convened—through the current time period (Exhibit 2.5; CBHSQ 2020).

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. Whereas 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, 2020).

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 2018 NSDUH data, among underage people who drink, the overall prevalence of past-month alcohol use is reported by 18.5 percent of males (a significant decline from 2017) and 19.5 percent of females ages 12–20 (CBHSQ, 2019a). This differs by age. Prevalence was significantly higher for females than males in 2018 for ages 14–15, but was similar between females and males for the remaining age groups (Exhibit 2.6; CBHSQ, 2020).

²⁶ This decrease is statistically significant at the 0.05 level.

Exhibit 2.5: Past-Month Alcohol Use for 12- to 20-Year-Olds: 2004–18 NSDUH Data (CBHSQ, 2020)

Age	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% Change 2004–18
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%*	1.0%*	-76.7%
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%*	7.4%*	-54.9%
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%*	17.9%*	-44.9%
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%*	37.6%*	-26.4%
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%*	9.0%*	-48.9%
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%*	18.8%*	-34.5%

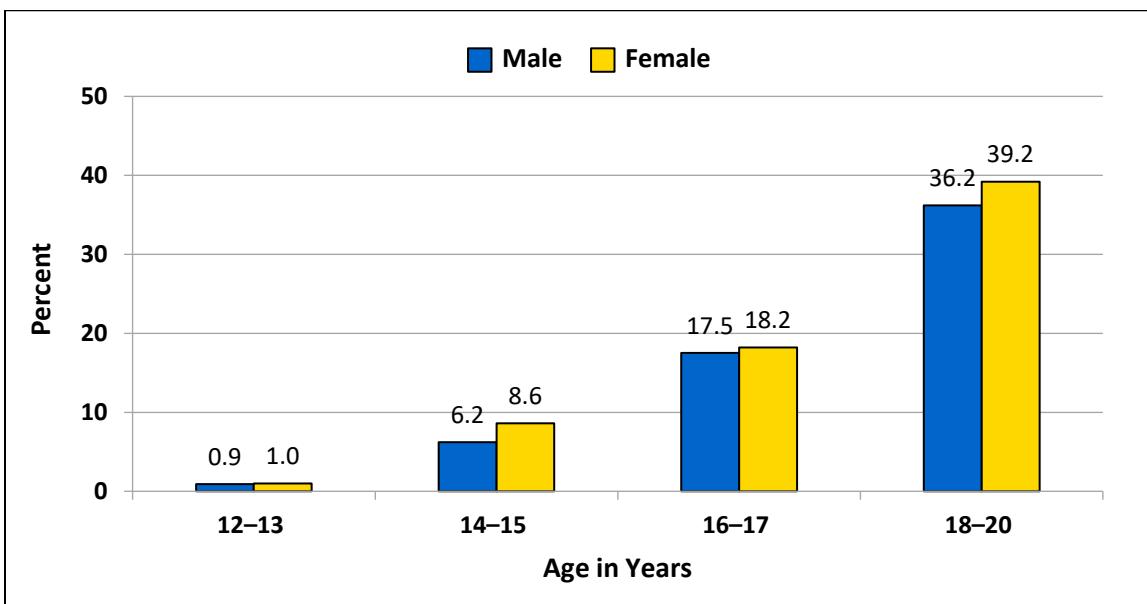
*Difference between 2004 estimate, and this estimate is statistically significant at the 0.05 level.

In the 2018 MTF data, females were more likely to report drinking in the lower grades, with 8th-grade females at 9.1 percent and males at 7.4 percent; 10th-grade females were at 19.1 percent and males at 18.2 percent. In the 12th grade, males (30.4 percent) and females (30.1) report alcohol use in the past 30 days at the same level.

Lifetime Alcohol Use: Current NSDUH Data

Lifetime alcohol use in the NSDUH represents respondents reporting ever having had alcohol (more than a sip) in their lifetime. In 2018, 39.8 percent of underage (ages 12–20) youth reported lifetime alcohol use (CBHSQ, 2019a).

Alcohol has been consumed by 39.8 percent of underage youth at some point in their lives (CBHSQ, 2019a)

Exhibit 2.6: Past-Month Alcohol Use by Age and Gender: 2018 NSDUH Data (CBHSQ, 2020)

Lifetime Use: MTF and YRBS Data

As per the MTF, 41.2 percent of students have had alcohol at some point in their lives (Miech et al., 2019).

As per the YRBS, 60.4 percent of students have had at least one drink of alcohol on at least 1 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 27.5 percent over the period from 2004–18 (CBHSQ, 2019a).

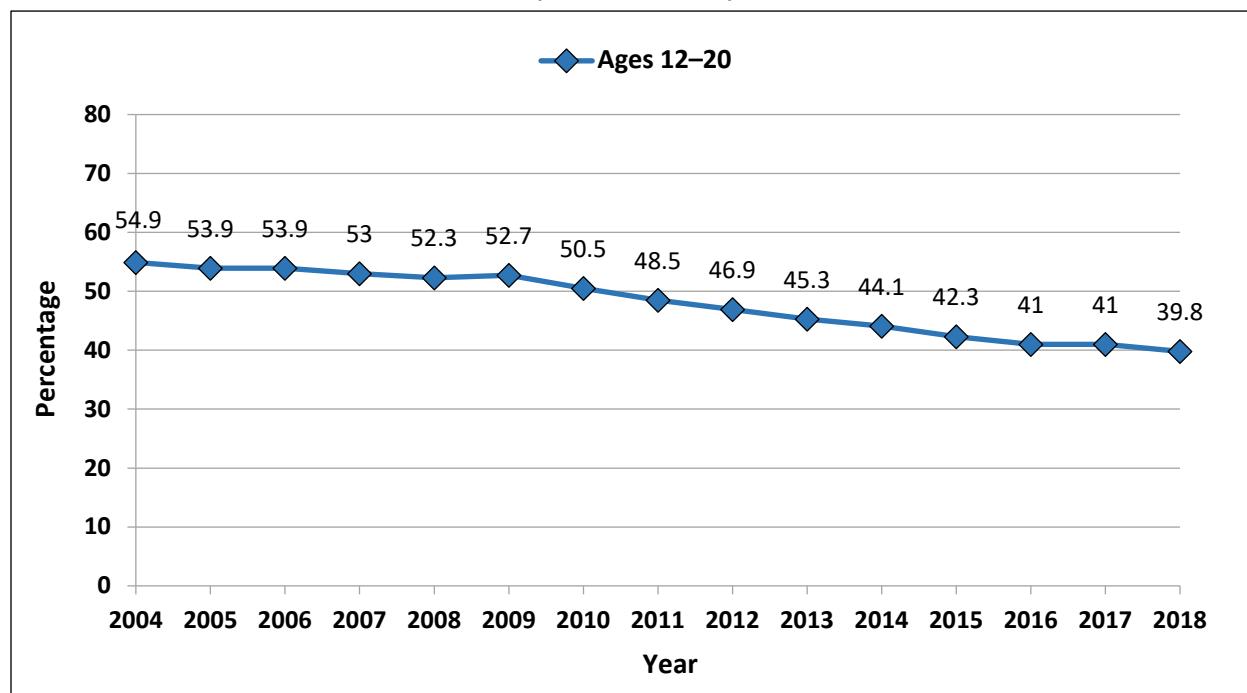
The percentage of underage youth who have used alcohol in their lifetime continues to decline (CBHSQ, 2019a)

Binge Drinking: Current NSDUH Data

Among 12- to 20-year-olds, 11.4 percent engaged in **binge drinking**²⁷ on at least 1 day in the past 30 days, according to NSDUH. This represents 4.3 million underage youth (CBHSQ, 2019a).

4.3 million underage youth reported binge drinking in the past 30 days (CBHSQ, 2019a)

Exhibit 2.7: Trends in Lifetime Use of Alcohol by 12- to 20-Year-Olds: 2018 NSDUH Data (CBHSQ, 2019a)



²⁷ Binge 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). This level of consumption is generally agreed to result in a blood alcohol level of .08% or above for most individuals (Krieger et al., 2018).

Binge Use of Alcohol: Current MTF and YRBS Data

As per the MTF, 8.6 percent of students (8th, 10th, and 12th grades combined) reported consuming five or more drinks in a row in the 2 weeks prior to the survey (Miech et al., 2019).

As per the YRBS, 13.5 percent of students in grades 9–12 reported four (for females) or five (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 12–20 for binge drinking in 2018 compared with 2015²⁸ (CBHSQ, 2020).

Exhibit 2.8: Past-Month Binge Alcohol Use for 12- to 20-Year-Olds: 2015–18 NSDUH Data (CBHSQ, 2019a)

Age	2015	2016	2017	2018	% Change 2015–18
12–20	13.4%	12.1%*	11.9%*	11.4*	-14.9%

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

Binge Drinking Trend Data: MTF and YRBS Data

MTF trend data among students in grades 8, 10, and 12 indicate binge drinking²⁹ 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 et al., 2017). Declines in binge drinking continued through 2016, which marked the lowest levels in all three grades measured by the MTF survey.

Authors of the MTF study also note that although the declines in binge drinking from 1991–2016 were significant—with 8th graders declining by 70 percent, 10th graders by 50 percent, and 12th graders by 30 percent—binge drinking rates rose slightly for all grades surveyed in 2017, signaling a potential leveling off of the rates (Johnston, 2018). However, in 2018, 12th grade rates declined and were at the lowest rate to date; 8th grade rates also declined and were at the second lowest level recorded by the MTF survey. A similar assessment of binge drinking trends based on YRBS data indicates binge drinking increased significantly from 1991–99, and then declined significantly from 1999–2015. Using only people who currently drink in the denominator, it was determined that most high school students who drink are also binge drinking (57.8 percent). Of those who binge drank, 43.8 percent consumed eight or more drinks in a row (Esser et al., 2017).

Binge Drinking: Age and Gender

In 2018, binge drinking increased steadily from age 12–20, peaked at ages 21–25 (41.6 percent), and then decreased beyond young adulthood (data not shown for adults who drink; CBHSQ, 2019a). Exhibit 2.9 provides a summary of trends for past-month binge alcohol use by selected

²⁸ NSDUH 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.

²⁹ Binge drinking in the MTF survey is defined as five or more drinks for both males and females.

age categories (for data from 2015 on). Significant declines in binge drinking from 2015–18 are evident for all age groups except 14- to 15-year-olds (CBHSQ, 2020). Rates of binge drinking in 2018 are similar for males (11.3 percent) and females (11.4 percent (CBHSQ, 2019a).

Exhibit 2.9: Past-Month Binge Alcohol Use for 12- to 20-Year-Olds by Age: 2015–18 (CBHSQ, 2020)

Age	2015	2016	2017	2018	% Change 2015–18
12–13	0.7	0.3	0.6	0.3*	-57.1%
14–15	3.8	3.7	3.8	3.6	-5.3%
16–17	12.6	10.2	10.9*	9.8*	-22.2%
18–20	27.8	26.2	24.9*	24.1*	-13.3%
12–17	5.8	4.9	5.3	4.7*	-19%
12–20	13.4	12.1	11.9*	11.4*	-14.9%

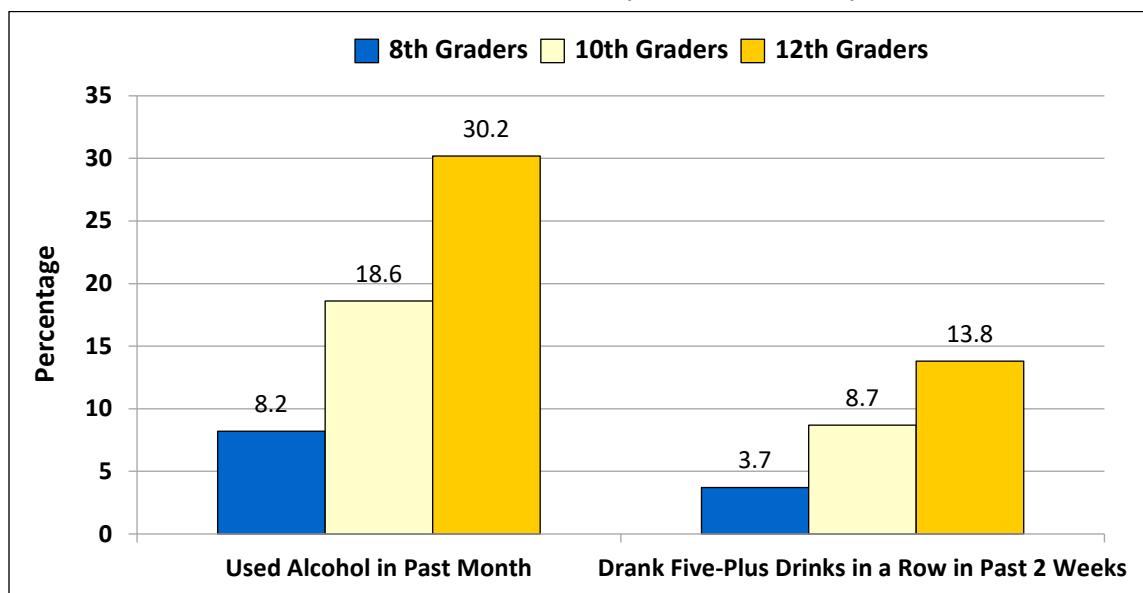
*Difference between 2015 estimate, and this estimate is statistically significant at the 0.05 level.

Binge Use by Age: MTF Data

Data from the MTF survey reveal similar patterns in alcohol consumption and binge drinking by age (Exhibit 2.10; Miech et al., 2019).

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 2018, the difference was only 4 percentage points (Miech et al., 2019).

Exhibit 2.10: Alcohol Use Within the Past-Month and Binge Drinking Among 8th, 10th, and 12th Graders: 2018 MTF Data (Miech et al., 2019)



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 (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 et al., 2009).

It should also be noted that although there is decreasing alcohol consumption, binge and high-intensity drinking among adolescents and young adults, with gender rates converging due to faster decreases in male rates, this pattern does not hold into later adulthood. A review of recent studies concluded that increases in consumption, binge drinking, and alcohol-related harms are driven largely by increases among women in their 30s and 40s. This trend of greater increases in consumption for women compared with men appears to continue into older adult years (age 60 and older; Keyes, Jager, et al., 2019).

Heavy Alcohol Use: Current NSDUH 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 people with heavy alcohol use also engage in binge drinking (CBHSQ, 2018).

Almost 860,000 underage youth reported heavy alcohol use in the past 30 days (CBHSQ, 2019a)

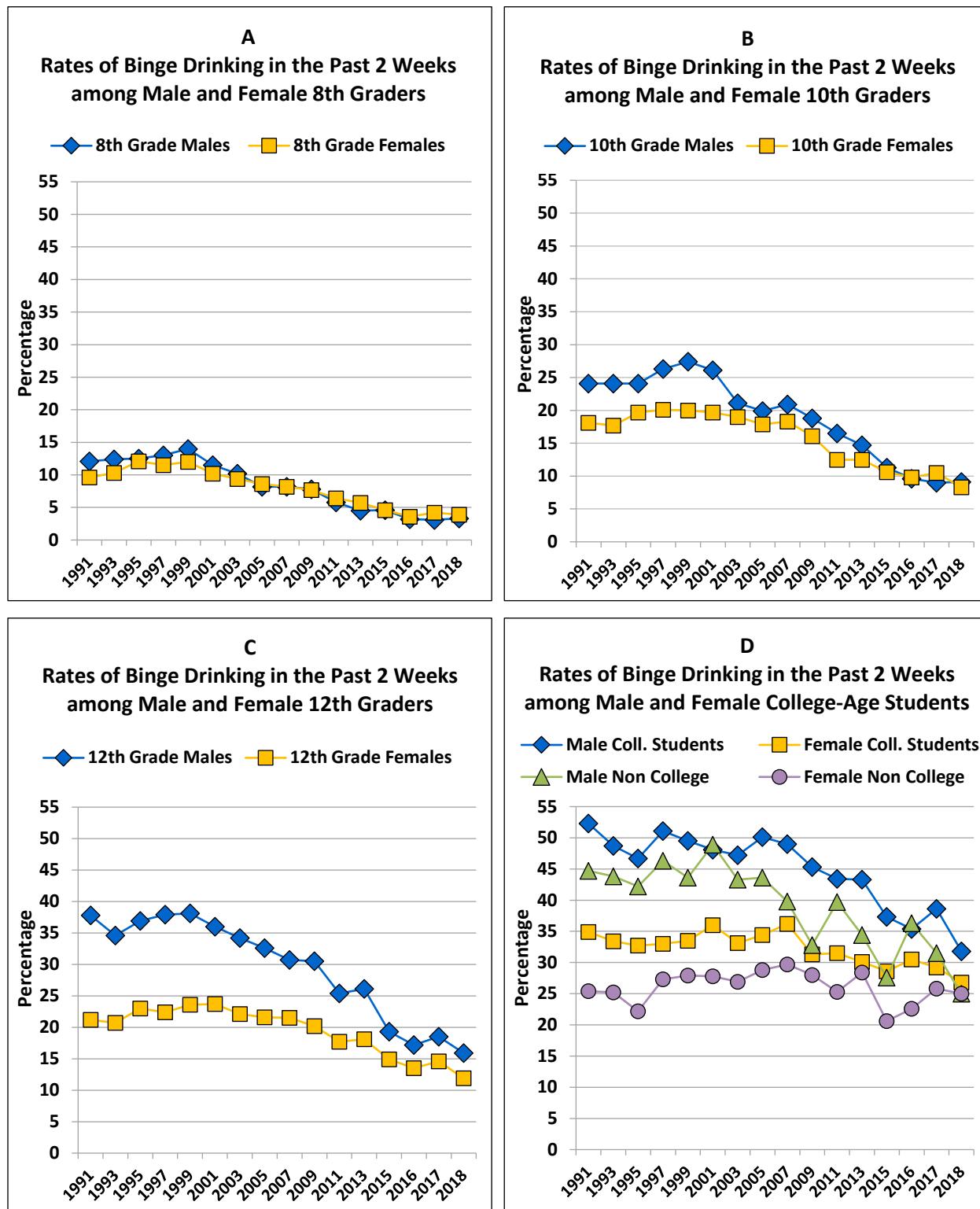
Approximately 2.3 percent of 12- to 20-year-old respondents (slightly under 1 million) are classified as engaging in heavy drinking in the 2018 NSDUH; 2.6 percent of males ages 12–20 report heavy drinking compared with 1.9 percent of females (CBHSQ, 2019a).

Heavy Alcohol Use: Trends

Trends in heavy alcohol use based on NSDUH survey results indicate that heavy consumption declined significantly in 2018 compared with 2015 (Exhibit 2.12; CBHSQ, 2019a).

Heavy alcohol use in underage people who drink has declined since 2015 (CBHSQ, 2019a)

**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:³⁰ 1991–2018 MTF Data
(Johnston, et al., 2019a; Miech et al., 2019)**



³⁰ MTF Volume 2 defines college students as follow-up respondents (i.e., high school graduates) 1–4 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 1–4 years past high school not enrolled in college. Note that some of these respondents may be age 21 or over.

Exhibit 2.12: Trends in Heavy Alcohol Use for 12- to 20-Year-Olds: 2015–18 NSDUH Data (CBHSQ, 2019a)

Age	2015	2016	2017	2018	% Change 2015–18
12–20	3.3%	2.8%*	2.5%*	2.3%*	-30.3%

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

Extreme Binge Drinking: Current MTF and YRBS 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 ten 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 2018, 4.6 percent of 12th graders reported consuming ten or more drinks in a row, and 2.5 percent reported consuming 15 or more drinks in a row within the previous 2 weeks (Miech et al., 2019).

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

Extreme Binge Drinking: Trends

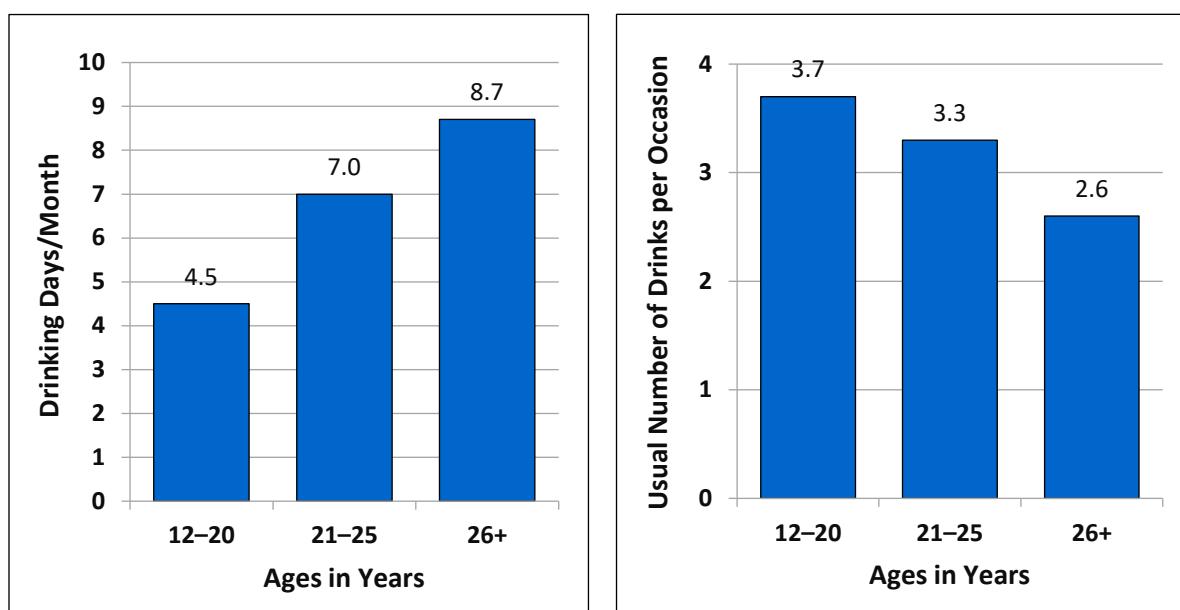
Trends in extreme binge or high-intensity drinking have been tracked for 12th graders by MTF since 2005. During this time period, there has been a decline of 6 percentage points for ten or more drinks in a row and a decline of 3.2 percentage points for 15 or more drinks in a row compared with a decline of 13.3 percentage points for all binge drinking. Rates for 12th graders continued the long-term declines and were at or near the lowest levels recorded (Miech et al., 2019). However, an in-depth analysis of binge and extreme binge drinking at the ten-plus and 15-plus drinks level conducted in 2013 suggests extreme binge drinking at the 15-plus level may be more entrenched in some adolescent subcultures than binge drinking (five-plus drinks; Patrick et al., 2013).³¹

Binge Drinking Patterns

According to NSDUH data, underage people who drink 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 people who drink consumed, on average, about four drinks per occasion, about four and one-half times a month, whereas adults who drink (age 26 and older) averaged approximately two and one-half drinks per occasion, about nine times a month (CBHSQ, 2020; Exhibit 2.13).

³¹ MTF authors note that data estimates for ten-plus and 15-plus 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 five-plus 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): 2018 NSDUH Data (CBHSQ, 2020)



Youth ages 12–15 can, according to a theoretical analysis, reach the same BAC after consuming three to four drinks within 2 hours as people age 18 and older who consume four to five 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 2017 and 2018 surveys, slightly more than half (52 percent) of underage people who drink report consuming three or more drinks on a single occasion.

Twenty-seven percent of underage youth consume five or more drinks, and 7 percent consume nine or more drinks (Exhibit 2.14; CBHSQ, 2020).

According to combined 2018 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 12–20, the number of drinks reported on the last occasion tends to increase with age (CBHSQ, 2020). Using students who drink as the denominator, YRBS data indicates that more than half who drink are binge drinking (Esser et al., 2017).

Exhibit 2.14: Number of Drinks Consumed on a Single Occasion by Underage (Ages 12–20) Youth: 2017, 2018 Combined Data NSDUH (CBHSQ, 2020)

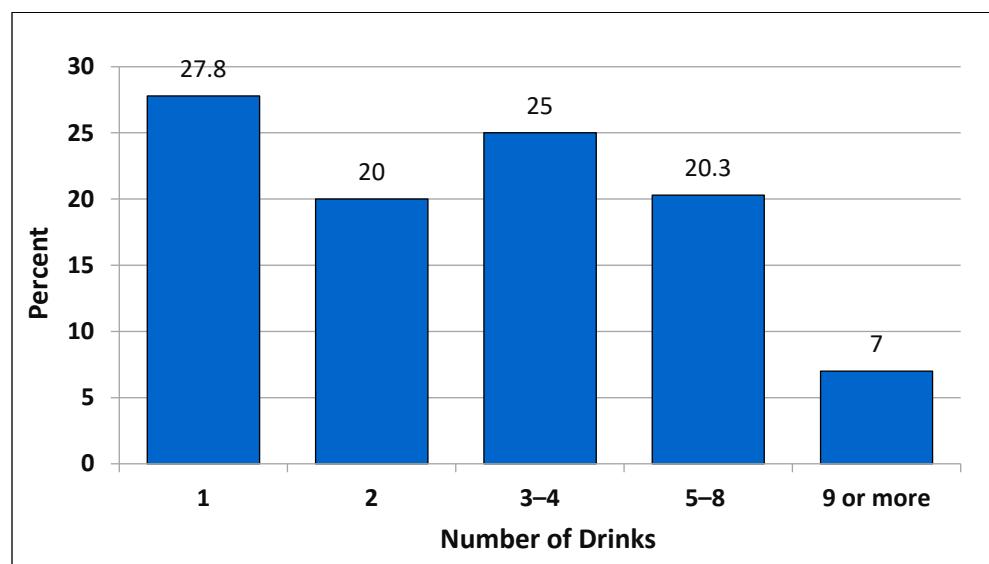
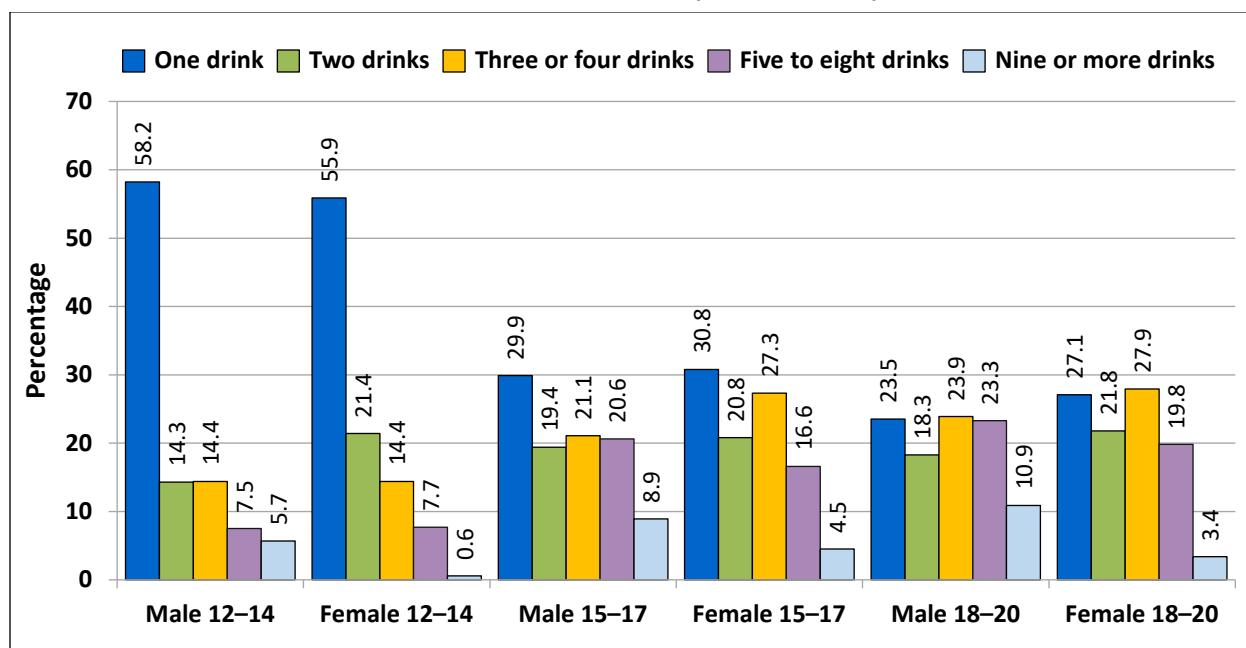


Exhibit 2.15: Number of Drinks Consumed on Last Occasion of Alcohol Use in the Past Month Among People With Past-Month Alcohol Use Ages 12–20, by Gender and Age Group: 2017, 2018 Combined Data NSDUH (CBHSQ, 2020)



Race and Ethnicity

According to combined 2002–18 NSDUH data,³² Whites ages 12–20 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:

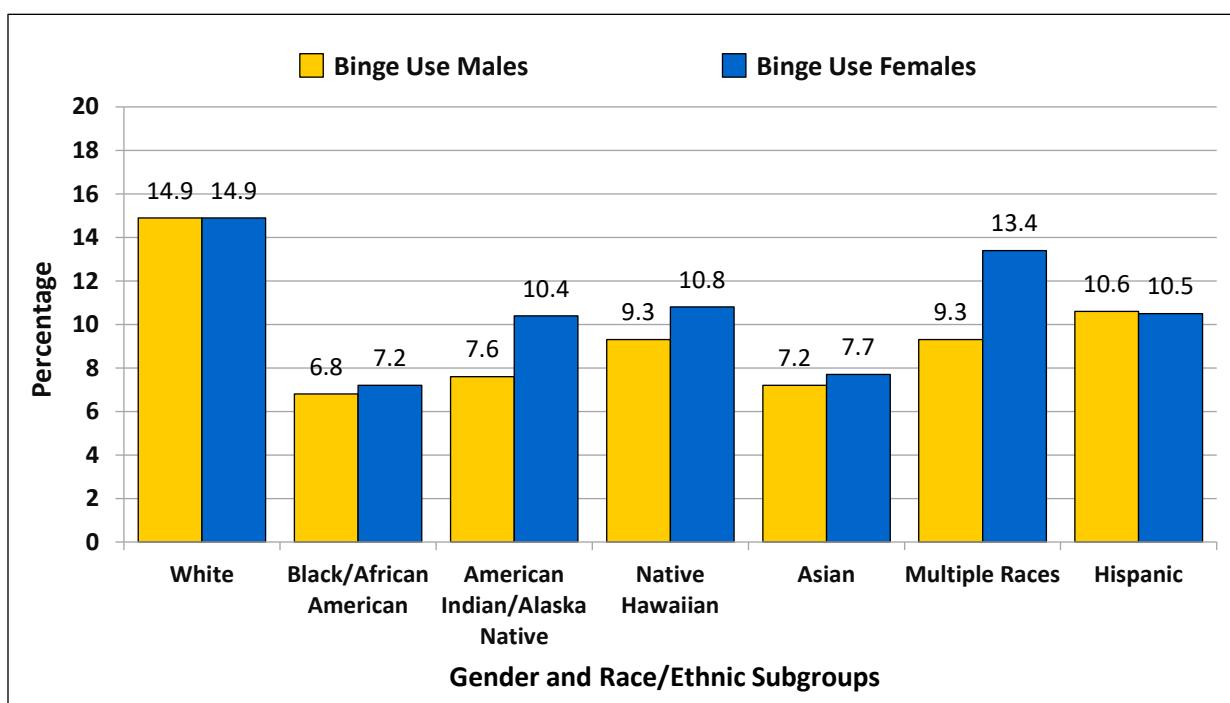
- White males (28.5 percent); White females (27.8 percent).
- Hispanic or Latino males (22.4 percent); Hispanic or Latina females (20.8 percent).
- Native Hawaiian or Other Pacific Islander males (22.3 percent); Native Hawaiian or Other Pacific Islander females (23 percent).
- Males of multiple races (21.2 percent); females of multiple races (23.3 percent).
- American Indian or Alaska Native males (20.1 percent); American Indian or Alaska Native females (21.8 percent).
- Black or African American males (17.5 percent); Black or African American females (17.1 percent).
- Asian males (16 percent); and Asian females (14.5 percent; CBHSQ 2018c).

NSDUH data (2015–18 combined) on binge alcohol use among males and females ages 12–20 by gender and race/ethnicity are shown in Exhibit 2.16 (CBHSQ, 2020). Estimates of underage binge drinking by gender and race/ethnicity include:

- White males (14.9 percent); White females (14.9 percent).
- Hispanic males (10.6 percent); Hispanic females (10.5 percent).
- Native Hawaiian or Other Pacific Islander males (9.3 percent); Native Hawaiian or Other Pacific Islander females (10.8 percent).
- Males of multiple races (9.3 percent); females of multiple races (13.4 percent).
- American Indian or Alaska Native males (7.6 percent); American Indian or Alaska Native females (10.4 percent).
- Asian males (7.2 percent); Asian females (7.7 percent).
- Black males (6.8 percent); Black females (7.2 percent).

³² To 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: 2017–18 Combined Data NSDUH (CBHSQ, 2020)



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

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 et al., 2000; Hingson & Zha, 2009); violent behavior, including predatory and dating violence (Blitstein et al., 2005; Ellickson et al., 2003; Ramisetty-Mikler et al., 2004; 2006); criminal behavior (Eaton et al., 2007); prescription medication misuse (Hermos et al., 2008); unplanned and unprotected sex (Hingson et al., 2003); motor vehicle crashes (Hingson et al., 2002); and physical fights (Hingson, Heeren, & Zakocs, 2001).

Recent research funded by the National Institute on Alcohol Abuse and Alcoholism and 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 NSDUH 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 16.3 years old. However, among those who initiated alcohol use in the past year, 776,000 reported being ages 12–14 when they initiated. This means that for every day in 2018, approximately 2,125 young people 12–14 years of age drank alcohol for the first time (CBHSQ, 2020).

The NSDUH survey (CBHSQ, 2020) indicates that the average age of initiation of alcohol use is:

- 15 years old among people with lifetime alcohol use.
- 15.1 years among people with past-month use.
- 15.2 years among people with past-year use.
- 14.9 years among people with past-month binge drinking.

Age at First Use: Current MTF and YRBS

Alcohol use by the end of 6th grade was reported by 10.1 percent of 8th grade respondents in 2018, 7.1 percent of 10th grade respondents, and 3.4 percent of 12th grade respondents³³ (Miech et al, 2019). 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 initiates³⁴ 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 16.3 in 2018, with significant increases since 2006. This indicates a delay in initiation of drinking (CBHSQ, 2020).³⁵

Exhibit 2.17: Average Age of First Use Among Past-Year Initiates of Alcohol Use Who Initiated Before Age 21: 2004–18 NSDUH Data (CBHSQ, 2020)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
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*	16.3*

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

Prevalence of *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (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 DSM-IV-TR (American Psychiatric Association [APA], 2000) diagnosis of alcohol abuse or dependence.

Almost 4 percent of underage youth met criteria for alcohol abuse or dependence (CBHSQ, 2020)

According to 2018 NSDUH data, about 3.7 percent of 12- to 20-year-olds met criteria for DSM-IV-TR alcohol abuse or dependence (CBHSQ, 2020).

³³ The 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.

³⁴ Past-year initiates are people who drank alcohol for the first time in their lives in the 12 months before the survey interview.

³⁵ Appendix B further discusses methodological issues in measuring age at first use and other indicators of alcohol initiation.

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

Trends in DSM-IV-TR alcohol use disorder (abuse or dependence) among people ages 12–20 from 2004–18 are provided in Exhibit 2.18. There has been an ongoing and significant decline in alcohol use disorder (a 61.5 percent decline since 2004). Nonetheless, the prevalence of DSM-IV-TR alcohol abuse or dependence among underage people who drink remains high (CBHSQ, 2020).

Underage alcohol abuse or dependence disorders have declined since 2004 (CBHSQ, 2020)

Exhibit 2.18: Past-Year DSM-IV-TR Alcohol Abuse or Dependence for 12- to 20-Year-Olds: 2004–18 NSDUH Data (CBHSQ, 2020)*

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% Change 2004–18
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*	3.7*	-61.5%

*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 2017–18 NSDUH data, the prevalence for DSM-IV-TR alcohol abuse or dependence for 18- to 20-year-olds (7.7 percent) is significantly lower than for 21- to 24-year-olds (11.7 percent) and 25- to 29-year-olds (9.4 percent) but not significantly different than for 30- to 34-year-olds (8.2 percent). In addition, 0.4 percent of 12- to 14-year-olds and 2.9 percent of 15- to 17-year-olds met criteria for DSM-IV-TR alcohol abuse or dependence (CBHSQ, 2020). The prevalence of alcohol abuse or dependence as defined by DSM-IV-TR is highest among those ages 21–29 (Exhibit 2.19).

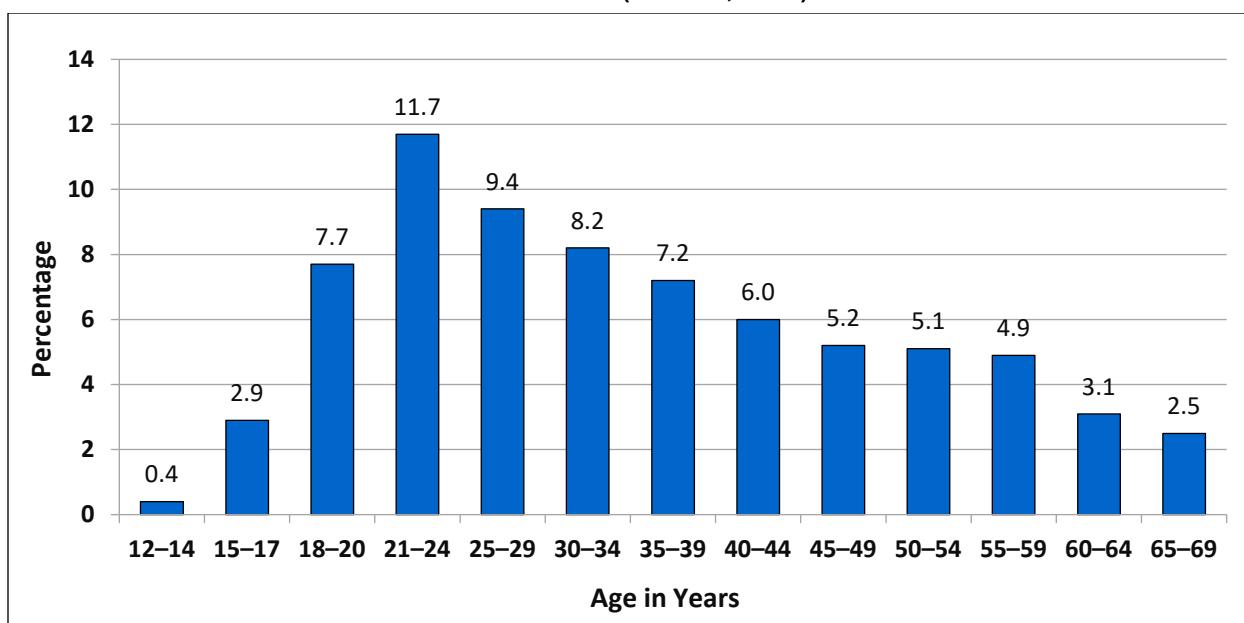
Exhibit 2.20 provides trends in DSM-IV-TR diagnoses by age and gender from 2004–18. There has been a significant decline in prevalence for all groups since 2004.

Driving After Drinking: Current Data

As detailed in Chapter 1, the greatest mortality risk for underage people who drink continues to be from motor vehicle crashes. Slightly more than 60 percent of unintentional deaths of 12- to 20-year-olds in 2018 were from motor vehicle accidents (CDC, 2020b).

The 2018 NSDUH survey indicates that 4.2 percent of youth ages 16–20 reported driving after drinking at least once in the past year. This is not significantly different from the 4.1 percent reported in 2017 and is a troubling number of drivers likely to cause property damage, injuries, and deaths related to traffic crashes (0.9 million in 2018; CBHSQ, 2019a).

**Exhibit 2.19: Prevalence of Past-Year DSM-IV-TR Alcohol Abuse or Dependence by Age: 2017–18
NSDUH Data (CBHSQ, 2020)**



Driving After Drinking: Trends

One important sign of progress in addressing underage drinking is that the number of alcohol-related traffic deaths among young drivers ages 15–20 has declined 84 percent since 1982, shortly before passage of the National Minimum Age Drinking Act in 1984 (National Highway Traffic Safety Administration [NHTSA], Fatality Analysis Reporting System [FARS]). Data since 1997 from NHTSA’s FARS are provided in Exhibit 2.21.

Using MTF data, O’Malley and Johnston (2013) reported—and have subsequently updated through annual special analyses—longitudinal data for high school seniors who reported any of the following behaviors in the past 2 weeks: Driving after drinking any alcohol; driving after five or more drinks; being a passenger when the driver has had any alcohol; or being a passenger with a driver who has had five or more drinks (Exhibit 2.22; O’Malley, 2019). As demonstrated in Exhibit 2.22, all four of these behaviors have declined in the last decade, although reports of driving after binge drinking or riding with a driver who had been binge drinking rose slightly this year. Rates 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 5.5 percent of high school students reported driving after they consumed alcohol. Trend analysis of data from 2013–17 indicate there has been a significant linear decrease in this prevalence rate; there was also a significant decrease in the prevalence of having driven a car when drinking alcohol from 2015 (7.8 percent) to 2017 (5.5 percent; Kann et al., 2018).

Exhibit 2.20: Past-Year DSM-IV-TR Alcohol Abuse or Dependence for 12- to 20-Year-Olds, by Age and Sex: 2004–18 NSDUH Data (CBHSQ, 2020)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	% Change 2004–18
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*	3.7*	-61.5%
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*	1.6*	-73.3%
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*	7.6*	-54.8%
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*	3.7*	-65.7%
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*	3.6*	-56.6%

Exhibit 2.21: Trends in Fatalities for 15- to 20-Year-Old Drivers: NHTSA, FARS 1997–2017 Final File and 2018 Annual Report File

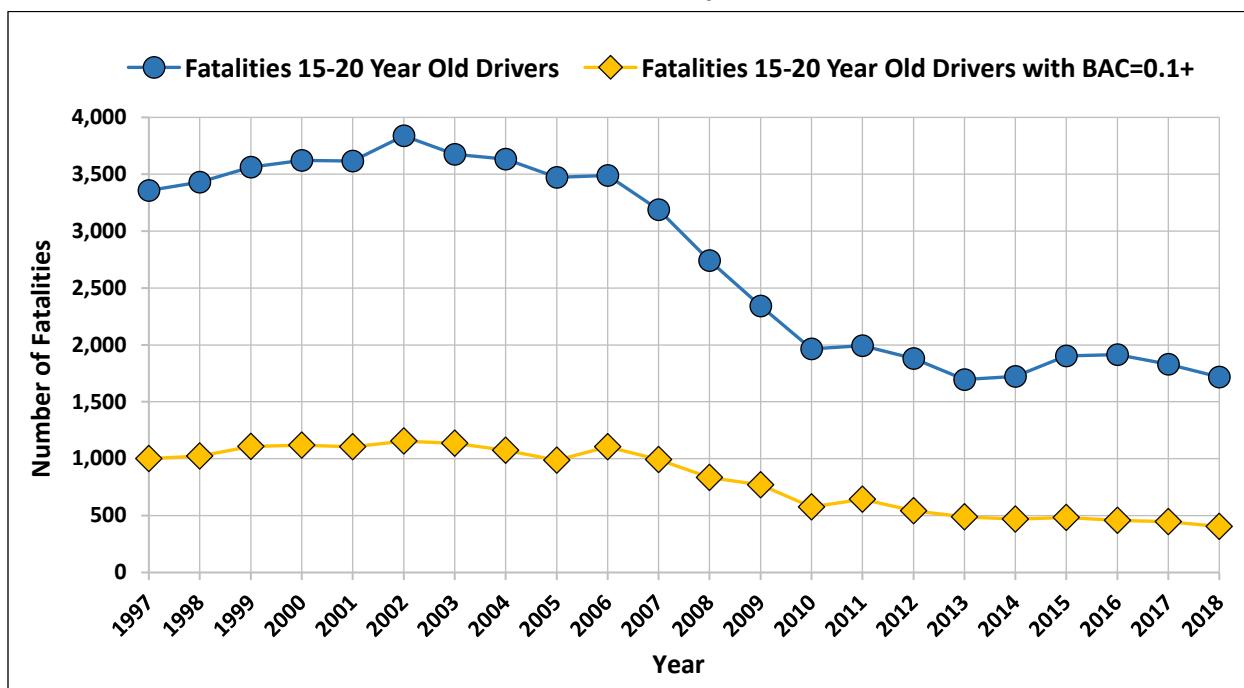
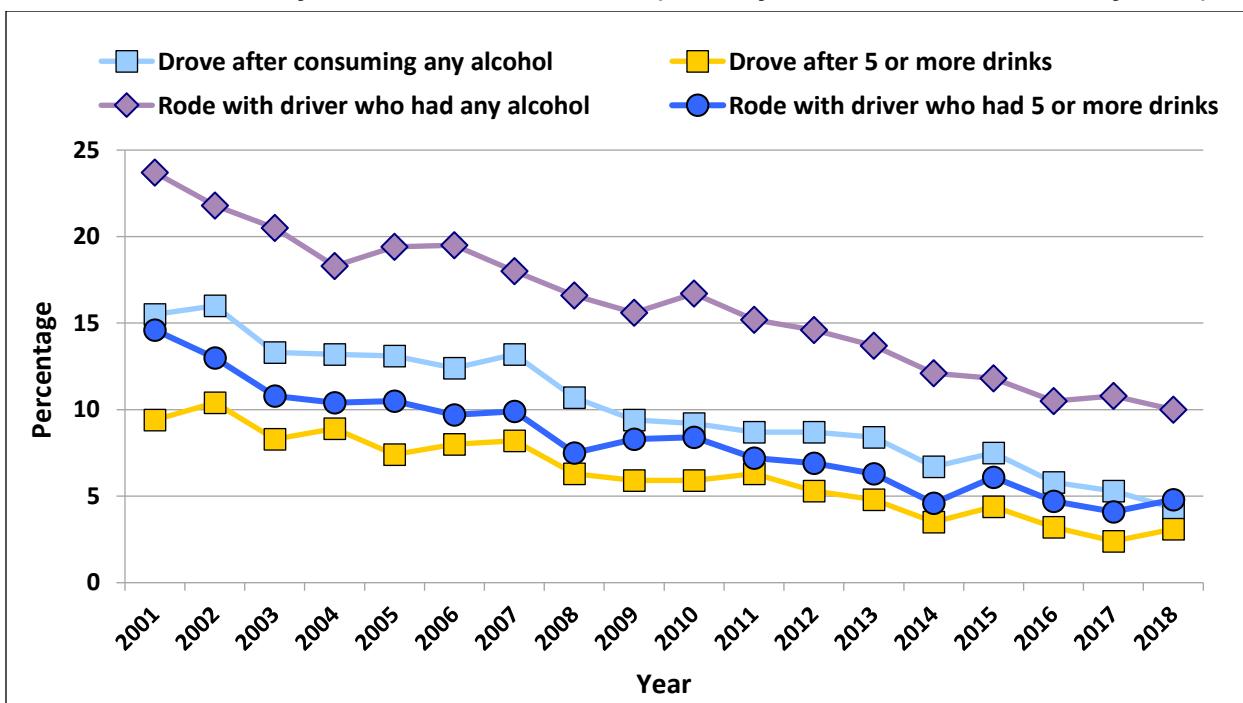


Exhibit 2.22: Trends in Percentage of 12th Graders Reporting Driving After Alcohol Use or Riding After Alcohol Use by the Driver: 2019 MTF Data (O’Malley & Johnston, 2013; O’Malley, 2019)



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 (O’Malley & Johnston, 2013). Very high percentages of high school seniors who drove after drinking five or more drinks experienced consequences. O’Malley and Johnston (2013) reported that 43.2 percent received a ticket or warning, and 30.2 percent were involved in a crash.

High school seniors who drive more frequently are more likely to drive after drinking (O’Malley & Johnston, 2013). Driving after drinking in college students is associated with living off campus (Quinn & Fromme, 2012), spending more evenings out (O’Malley & Johnston, 2013), higher socioeconomic status, and driving someone else’s car without permission (Delcher et al., 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 16–20 reported driving under the simultaneous influence of alcohol and illicit drugs in 2014. Although the trend in impaired driving has decreased since 2002, it remains a concern (Lipari et al., 2013).

Summary of Progress

The above data demonstrate that meaningful progress has been made in reducing underage drinking prevalence, DSM-IV-TR alcohol use disorder, 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, 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 remains for national, state, and local policy environments, 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, the Interagency Coordinating Committee on the Prevention of Underage Drinking remains committed to an ongoing, comprehensive approach to preventing and reducing underage drinking.

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 People Who Drink

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.³⁶ 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 although more than one-fourth of traffic crash deaths among young people are alcohol related, stronger alcohol policy environments are associated with lower mortality rates from alcohol-related motor vehicle crashes (Hadland et al., 2017).

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.

³⁶ For 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 & Best Practices Report*, produced concurrently with this report and available at <https://www.stopalcoholabuse.gov>.

The higher MLDA in the United States relative to other countries may be partially responsible for the lower binge drinking rates among U.S. teenagers. Data from 2015 indicate that in many European countries, a significant proportion of young people ages 15–16 report binge drinking at rates much higher than in the United States (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 et al. (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 1993–2005 were significantly correlated. Analyzing YRBS data from 1999–2009, 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 five 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.

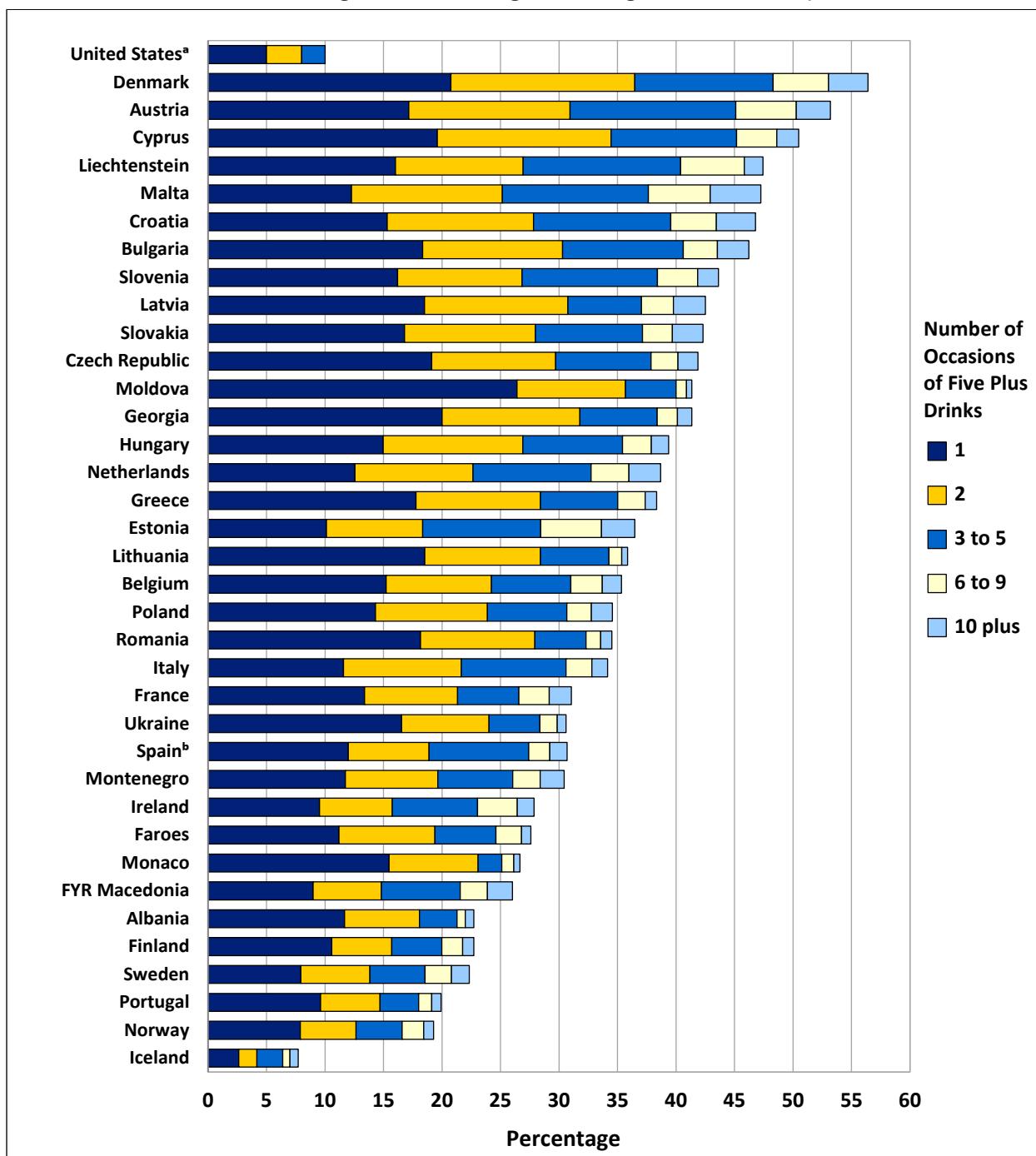
Availability and Access to Alcohol

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 Five-Plus 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 European School Survey Project on Alcohol and Drugs data collection is available at www.espad.org.

^aU.S. data are from the Monitoring the Future (MTF) survey.

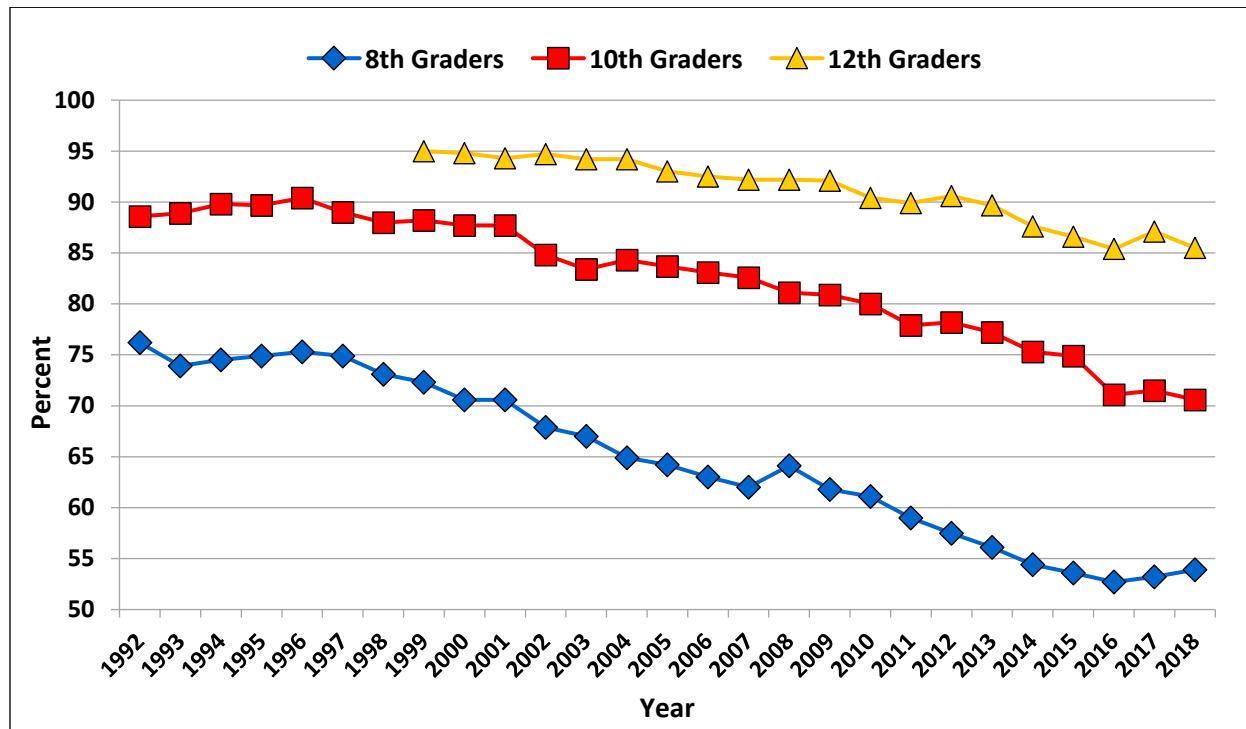
^bNumber of days, not occasion

According to data collected from the MTF survey, the following percentage of students reported that alcohol would be “fairly easy” or “very easy” to get (Miech et al., 2019):

- 53.9 percent of 8th graders.
- 70.6 percent of 10th graders.
- 85.5 percent of 12th graders.

Perceived availability has generally declined since the 1990s (although there was a slight uptick for 2017 and 2018). These reductions in perceived availability may be attributable in part to the policies and enforcement practices described in the *State Performance & Best Practices for the Prevention and Reduction of Underage Drinking Report* ([SPBP Report] available at <https://www.stopalcoholabuse.gov>). Continued attention to these policies and practices may lead to further reductions in perceived availability.

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: 2018 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 12–14, the most common sources were (CBHSQ, 2019a):

- Getting it from a parent or guardian (19.7 percent).
- Taking it from their own home (18.5 percent).
- Receiving it free from someone under age 21 (16.9 percent).

For youth ages 15–17, the most common sources were (CBHSQ, 2019a):

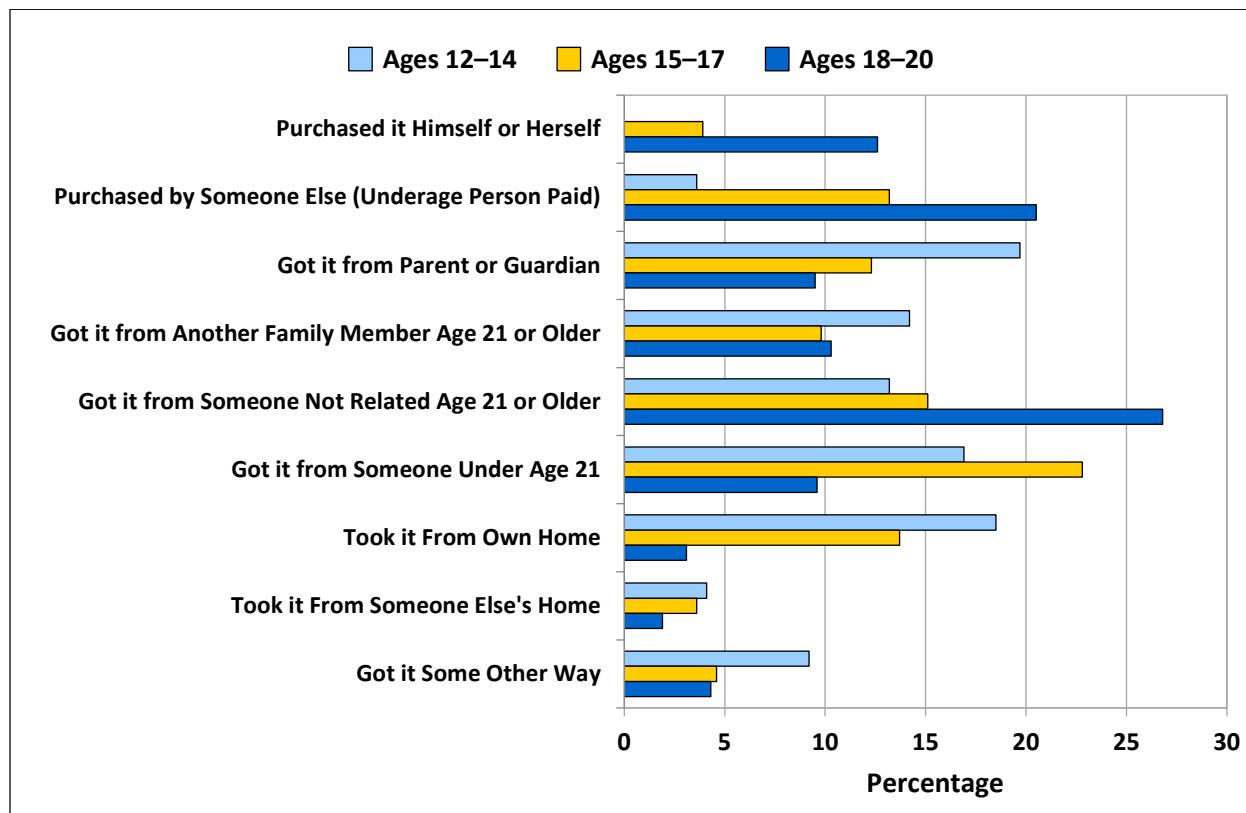
- Receiving it free from someone under age 21 (22.8 percent).
- Receiving it free from an unrelated person age 21 or older (15.1 percent).

- Taking it from their own home (13.7 percent).
- Giving someone else money to purchase the alcohol (13.2 percent).

For youth ages 18–20, the most common sources were (CBHSQ, 2019a):

- Receiving it from an unrelated person age 21 or older (26.8 percent).
- Giving someone else money to purchase the alcohol (20.5 percent).

Exhibit 3.3: Source of Last Alcohol Used Among Past-Month Alcohol Users Ages 12–20, by Age Group: 2018 Data NSDUH (CBHSQ, 2019a)



NSDUH divides sources of last alcohol use into two categories: (1) The underage person who drank 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). Data from 2018 show that among all underage people who currently drink, 27.8 percent paid for alcohol the last time they drank, either purchasing the alcohol themselves or giving money to someone else to do so (CBHSQ, 2019a).

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: 33.2 percent of 18- to 20-year-olds did so compared with 17.2 percent of 15- to 17-year-olds and 3.6 percent of 12- to 14-year-olds. Underage males who drink were more likely to have paid for alcohol themselves on their last drinking occasion (33.4 percent) than their female counterparts (22.2 percent; CBHSQ, 2019a). YRBS data showed that high school students who drank usually obtained alcohol from others, but those who binge drank were three times more likely than those

who currently drank but did not binge drink to give others money to purchase alcohol for them and to purchase alcohol themselves (Esser et al., 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 et al., 2013). Similarly, a South Carolina program that increased compliance checks showed a decline of drinking and driving crashes with drivers under age 21 (George 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. For example, spirits and beer are most likely to be consumed during binge drinking episodes in youths (ages 13–20; Naimi et al., 2015). College-age students who drink appear to underestimate pour sizes for both liquor and wine, potentially resulting in overpouring and subsequent intoxication (Kohn et al., 2017). Tracking young people’s beverage preferences is thus an important aspect of prevention policy.

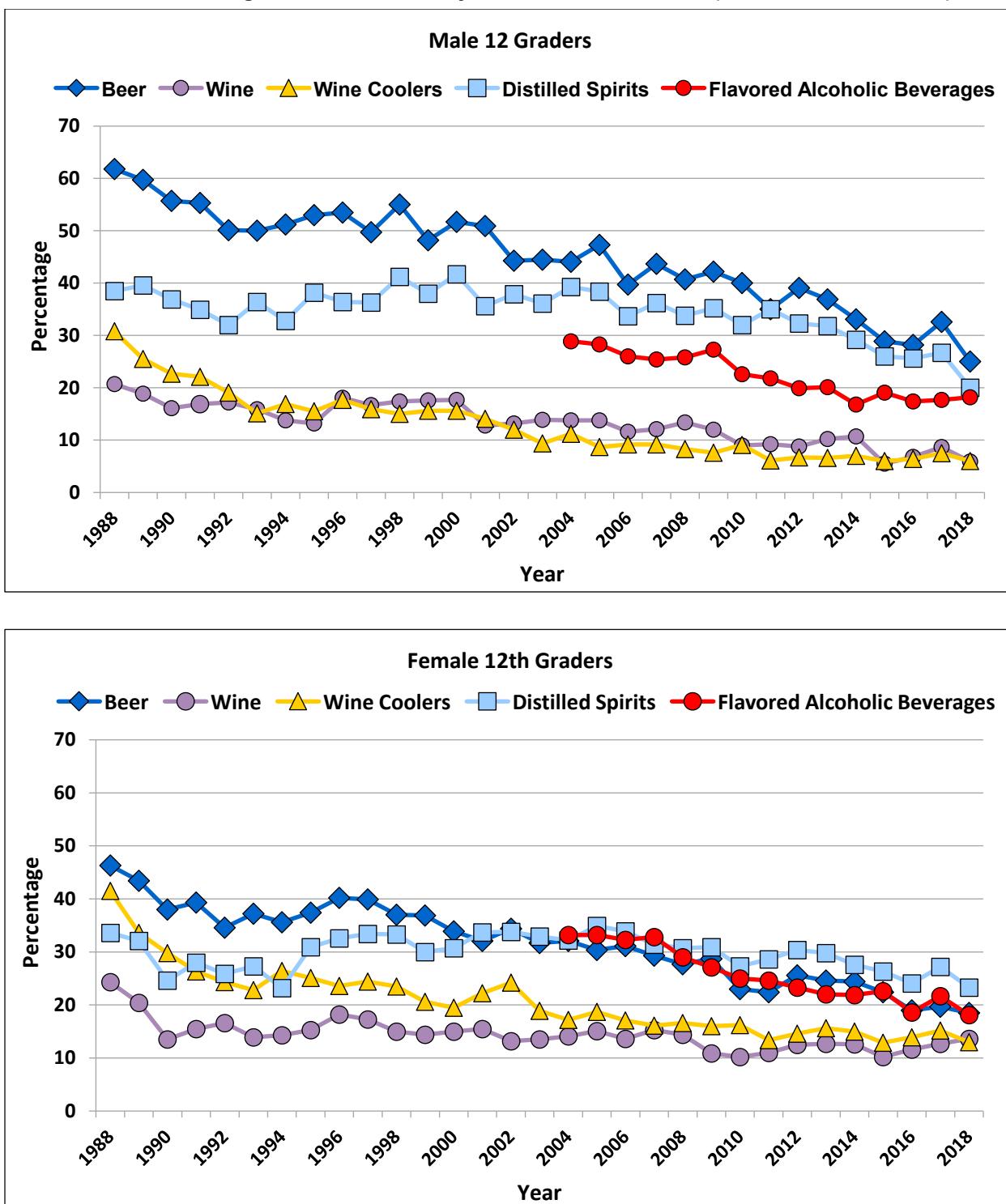
Since 1988, data from the MTF survey indicate beverage choices have shifted markedly for both male and female 12th graders (Exhibit 3.4; Johnston et al., 2019b). In 1988, beer was the beverage of choice for both sexes by a large margin. However, by 2011, for males, consumption of beer had declined and 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, followed by a significant decline to the lowest levels recorded in 2018. For females, a similar change occurred earlier (in 2005); females continue to choose distilled spirits over beer by a slight margin (Johnston et al., 2019b).

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 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., 2019b).

Data from eight states (a subset of YRBS data) indicate that, among students in grades 9–12 who reported binge drinking, distilled spirits were the most prevalent beverage type (Siegel et al., 2011). In a study of a nationally representative sample of youth ages 13–20 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 et al., 2015).

Several studies (Albers et al., 2015; Fortunato et al., 2014; Naimi et al., 2015; Siegel et al., 2013) focused on brand preferences of underage people who drink, consistently finding that underage people who drink 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.

Exhibit 3.4: Trends in Percentage of Male and Female 12th Graders Using Specific Types of Alcoholic Beverages in the Past 30 Days: 1988–2018 MTF Data (Johnston et al., 2019b)



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 (151–190 proof) as standard spirits products (80–101

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 13–20, 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 people who drink consume grain alcohol, they are significantly more likely to binge. Given the dangers of high-potency grain alcohol, some states have banned its sale.³⁷ Improved data on these products, including underage use and related injury, would help policymakers evaluate appropriate responses.

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

As previously noted, many factors influence youth drinking decisions. 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 recent review of 12 different longitudinal studies published since 2008 found significant associations between youth exposure to alcohol advertising and alcohol consumption in all 12 studies (Jernigan et al., 2017). To assess whether there is evidence of causality demonstrated between the marketing of alcohol and underage alcohol use (onset and severity of consumption), eight manuscripts were commissioned addressing elements of the Bradford Hill criteria³⁸ as part of a larger Cochrane review that is in progress.

The reviews addressed evidence from neurobiological models (Courtney et al., 2020), psychological processes (Jackson & Bartholow, 2020), cognitive responses to advertising (Henehan et al., 2020), econometric evidence (Saffer, 2020), and the effects of digital marketing (Noel et al., 2020). A review by Weizman and Lee (2020) explored the similarities in the current literature on alcohol to that used to infer causality between tobacco advertising and tobacco use. Citing these reviews, as well as integrating the findings from several previous reviews (e.g., Jernigan et al. [2017]), Sargeant and Barbor (2020) conclude that “when marketing research is assembled and evaluated according to the Bradford Hill criteria, there is persuasive evidence that exposure to alcohol marketing is one cause of drinking onset during adolescence and also one cause of binge drinking” (p.120). The authors propose a research and policy agenda to continue to address alcohol advertising and underage drinking.

Advertising may also play a role in underage brand preference. A study analyzing the population-level exposure of youth ages 12–20 to brand-specific advertising found that underage youth were more than five 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 et al., 2016).

The Sober Truth on Preventing Underage Drinking Act requires the *Report to Congress on the Prevention and Reduction of Underage* (RTC) to include measures of the exposure of underage populations to messages regarding alcohol in advertising and the entertainment media, as

³⁷ Maryland (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.

³⁸ The criteria are: (1) Strength of association (effect size), (2) consistency, (3) specificity, (4) temporality, (5) biological gradient (dose-response relationship), (6) plausibility, (7) coherence, (8) experimental evidence, and (9) analogy (Hill, 1965).

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-plus) 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 television, 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-plus), and 14.6 percent were seen by underage persons. The overall audiences for major social media (Facebook, Twitter, and YouTube) exceed the standard that over 70 percent of the audience must be over 21; Facebook further limits alcohol ad viewing to people who previously registered as 21-plus, 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-plus population).

Another study of youth exposure to alcohol advertising found that from 2001–09, youth exposure to alcohol advertising on television in the United States, as measured by gross rating points, increased 71 percent. During the same period, adult (ages 21–49) 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 et al., 2013).

In 2009, 13 percent of youth exposure on cable television came from advertising that was non-compliant with the industry's voluntary placement standards (Center on Alcohol Marketing and Youth [CAMY], 2010; Jernigan et al., 2013). A subsequent analysis of the 2005–12 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 et al., 2016).

A subsequent series of reports analyzing youth exposure to alcohol advertising found that underage youth were exposed 29 billion times to alcohol ads on cable television in 2017 and 2018, 651 million (2.3 percent) of which exceeded the alcohol industry's voluntary placement standard (Henehan, et al., 2019). During this same time period, total underage exposures to alcohol advertising on cable television declined by 6.1 percent, and non-compliant alcohol advertising exposures declined by 14.4 percent.

Despite these improvements, underage youth are still exposed to billions of alcohol advertisements annually on cable television 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 cable television alcohol advertising on underage drinking and the shift toward advertising on the Internet and social media.

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 (73.4 percent) people ages 12–20 who consumed alcohol in the past month were with two or more people the last time they drank, 17.3 percent were with one other person the last time they drank, and 9.3 percent were alone (CBHSQ 2019a).

Most underage males and females who drink were with two or more other people on their last drinking occasion (72.1 percent of males who drink and 74.8 percent of females who drink). The percentage of males who reported drinking alone was 11.7 compared with 6.9 percent of

females; 18.3 percent of females who drink reported drinking with one other person compared with 16.2 percent of males who drink (CBHSQ 2019a).

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 (four drinks) than did those who drank with one other person (2.7 drinks) or drank alone (three drinks; CBHSQ, 2020).

Males consumed more drinks than did females when drinking with two or more people. When the last drinking occasion was with two or more other people, males averaged 4.5 drinks, whereas females averaged 3.4 drinks (CBHSQ, 2020). Number of drinks consumed by social context also varies by age group, as shown in Exhibit 3.5.

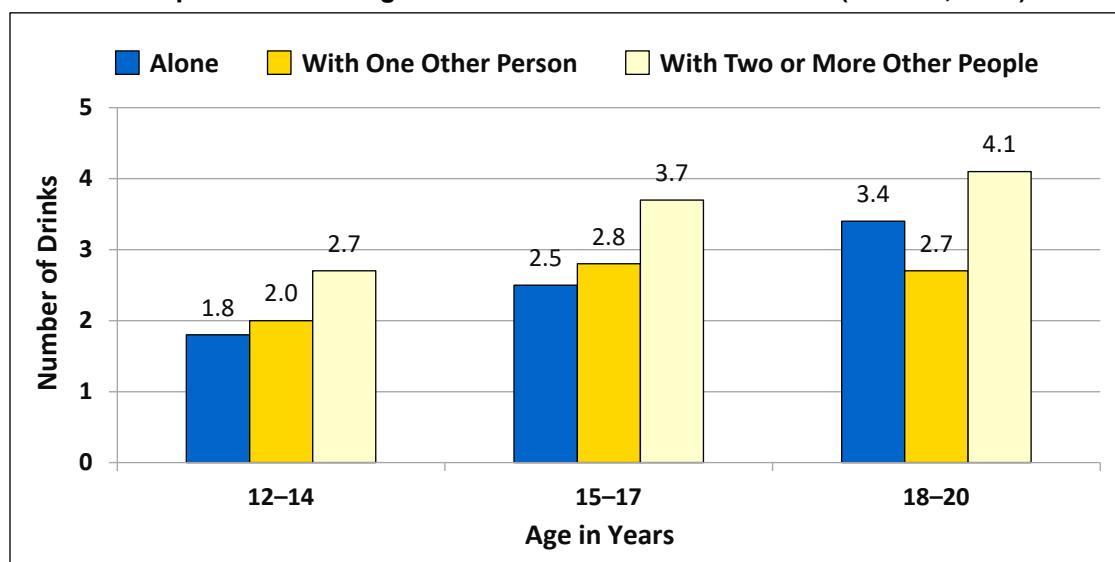
Location of Alcohol Use

Most underage people who drink reported last using alcohol in someone else's home (47.8 percent) or within their own home (37.5 percent). The next most popular drinking locations were at a restaurant, bar, or club (7.5 percent); at some other place (5.7 percent); or at a park, beach, or parking lot (4.6 percent CBHSQ, 2018a).

Thus, most young people drink in social contexts that appear to promote heavy consumption and where people other than the person drinking may be harmed by the behavior of the person who is drinking. Some locations, such as an unsupervised home of individuals other than the person drinking, and bars and nightclubs, are more likely to be associated with an increased risk of alcohol-related violence (Mair et al., 2015).

People ages 18–20 who drink were more likely than those in younger age groups to have been in a restaurant, bar, or club on their last drinking occasion (9.8 percent for ages 18–20 versus 1 percent for ages 12–14 and 2.3 percent for ages 15–17; Exhibit 3.6; CBHSQ 2019a).

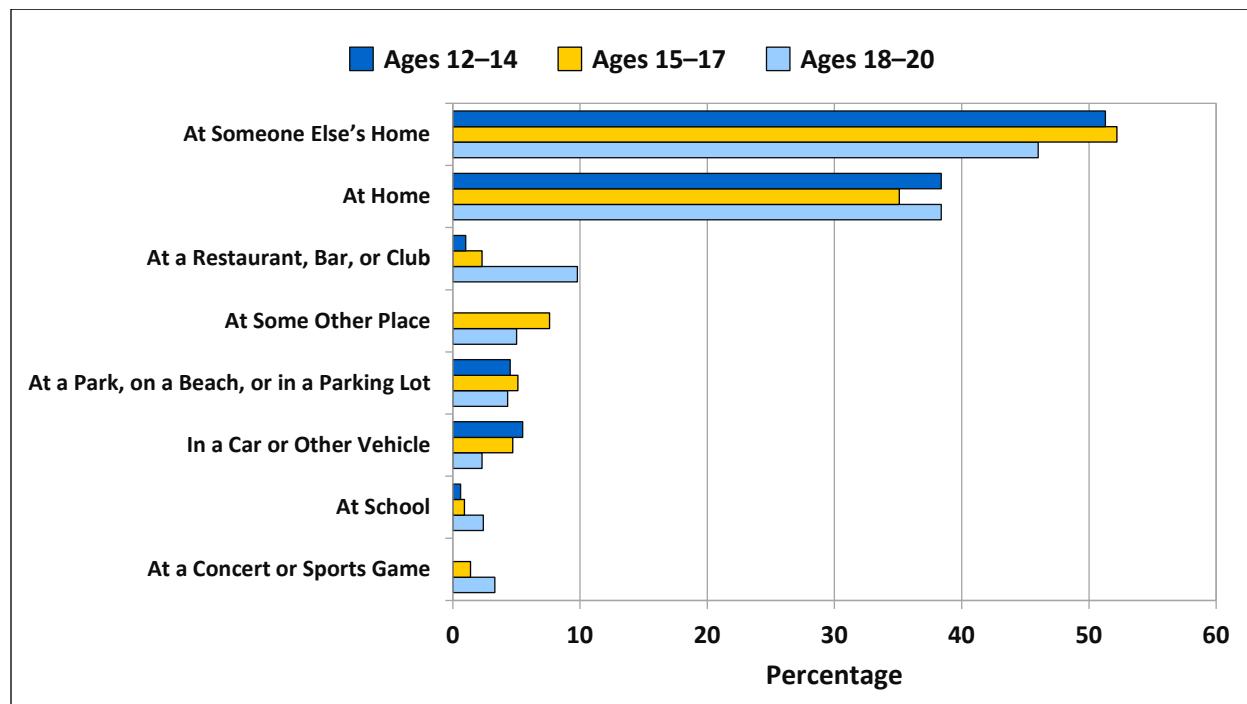
Exhibit 3.5: Average Number of Drinks Consumed on Last Occasion of Alcohol Use in the Past Month Among People With Past-Month Alcohol Use Ages 12–20, by Social Context and Age Group: Annual Averages Based on 2017–18 NSDUH Data (CBHSQ, 2020)



Underage Drinking Parties

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

Exhibit 3.6: Drinking Location of Last Alcohol Use Among People With Past-Month Alcohol Use Ages 12–20 by Age Group: 2018 NSDUH Data (CBHSQ, 2019a)



Parties are settings for binge drinking and other patterns of consumption leading to high blood alcohol concentrations (BACs; Clapp et al., 2008; Clapp et al., 2006; Demers et al., 2002; Paschall & Saltz, 2007; Usdan et al., 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). Because large numbers of youth are drinking outside their own homes, drinking parties may significantly increase the risk of driving after drinking (Gonzales et al., 2015).

Drinking parties pose serious problems for law enforcement officers. These include breaking up parties without allowing people who drink 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 people who engaged in past-year drinking. (For more information on state social host laws and on party-related enforcement practices, see the *SPBP 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* (National Institute on Alcohol Abuse and Alcoholism [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.³⁹

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 binge drinking (12.9 percent those with college plans versus 16.5 percent of those without college plans), individuals in college⁴⁰ report higher rates of binge drinking than do individuals of the same age who are not attending college (Johnston et al., 2019a; Exhibit 3.7). Of full-time college students, 59.9 percent drink currently compared with 50.2 percent of those of the same age but not in college; 28.8 percent report binge drinking behavior in the past 2 weeks compared with 25 percent of their non-college peers (Miech et al., 2019; Schulenberg et al., 2019).

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

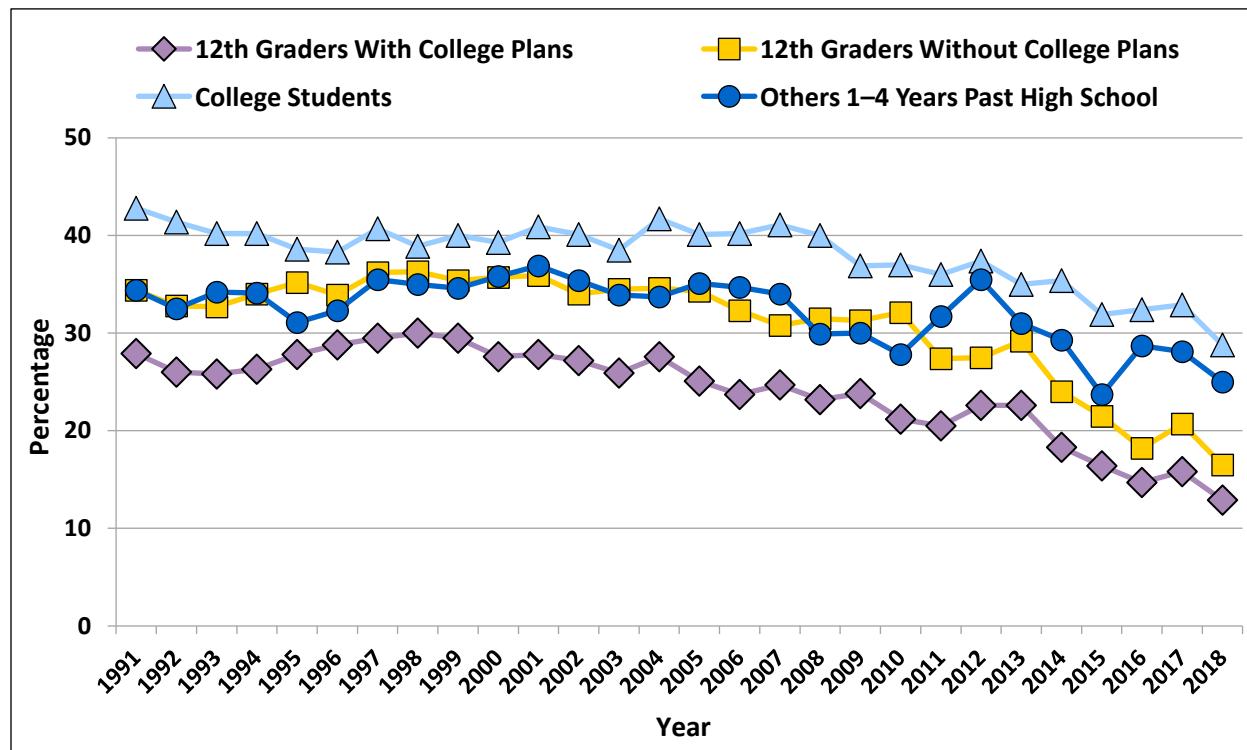
Binge-drinking rates among college students have declined from 40.2 percent in 1993 to a current rate of 28.8 percent (Schulenberg et al., 2019); however, drinking patterns remain a

³⁹ 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 et al., 1994; 1995; 1999).

⁴⁰ College students are defined as those follow-up MTF respondents 1–4 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 1–4 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 et al., 2002).

concern. Whereas binge drinking tends to be lower among non-college peers (25 percent in 2018), extreme binge drinking (which represents the upper levels of already dangerous levels of consumption) is of concern among both college students and non-college youth, particularly for males. According to combined 2012–18 MTF data,⁴¹ 9.5 percent of college students (15.1 percent of males, 6.1 percent of females) reported consuming ten or more drinks in a row in the past 2 weeks. In comparison, for non-college peers, 10.2 percent (16.1 percent of males and 5.4 percent of females) reported consumption of ten or more drinks (Schulenberg et al., 2019).

Exhibit 3.7: Prevalence of Binge Drinking in the Past 2 Weeks by 12th Graders With and Without College Plans, College Students, and Others 1–4 Years Past High School: 1991–2018 MTF Data (Miech et al., 2019; Schulenberg et al., 2019)



Additional information about detailed patterns of alcohol use among emerging adults (ages 18–24), including binge drinking, alcohol-impaired driving, and alcohol-related deaths and overdose hospitalizations, is provided in a recent article by Hingson et al. (2017). Of particular concern is the finding that alcohol-related overdose deaths increased in this age group during the 1998–2014 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 et al., 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).

⁴¹ Data are combined due to the low number of cases resulting from a single questionnaire form.

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 (e.g., seeing underage drinking as a rite of passage) have been shown to be very important influences on underage drinking.

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

Studies have found that some parenting practices have proven beneficial in reducing adolescent alcohol use (Beck et al., 2003; Ennett et al., 2001; Resnick et al., 1997; Watkins et al., 2006).

Parental monitoring, communication, and emotional support have a positive effect on adolescent alcohol use and are predictive of reduced adolescent alcohol problems (Ennett et al., 2001; Wood et al., 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 et al., 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 et al., 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 et al., 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 likely 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 (Meyers & Dick, 2010).

Research suggests that genes have a stronger influence on the development of problematic use, whereas environment seems to play a greater role in initiation of use (Rhee et al., 2003).⁴² For example, the current college environment may increase the likelihood that people with genetic predispositions to alcohol use disorder 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.

⁴² Problematic 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 (EBPs) 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 age 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.

As part of their mission, 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/CDC:** CDC's mission is to work 24/7 to protect America from health, safety, and security threats, both foreign and in the U.S. 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 motor vehicle crash injuries, other injuries, violence, sexually transmitted diseases, and fetal alcohol spectrum disorders. *Website:* <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/NIH/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/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 use 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):** The OPA promotes health across the reproductive lifespan through innovative, evidence-based adolescent health and family planning programs, services, strategic partnerships, evaluation, and research. OPA administers the [Title X Family Planning](#) program, the [Teen Pregnancy Prevention](#) Program, the [Pregnancy Assistance Fund](#) program, and the [Embryo Adoption](#) program. OPA advises the Secretary and the Assistant Secretary for Health on a wide range of topics, including adolescent health, family planning, sterilization, and other population issues. (Note: The Office of Adolescent Health merged with the OPA in June 2019). *Website:* <https://www.hhs.gov/opa/>.
- **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 disorders and substance use disorders (SUDs); 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/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 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>.
- **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/osh/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 ages 17–20. Website: <https://www.uscg.mil>.
- **DoJ/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. In 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)/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; it has 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 promotes alcohol industry compliance with self-regulatory commitments. Website: <https://www.ftc.gov>. It also operates the alcohol consumer education program (<https://dontserveteens.gov>).
- **Office of National Drug Control Policy (ONDCP):** A component of the Executive Office of the President, 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 the Community Anti-Drug Coalitions of America (CADCA) and Mothers Against Drunk Driving, to promote effective strategies for preventing underage drinking and related harms.

A Commitment to EBPs

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 National Academy of Medicine), 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.

EBPs Resource Center

In 2018, SAMHSA launched a new EBP Resource Center, which aims to provide communities, clinicians, policymakers, and others in the field with the information and tools they need to incorporate EBPs 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)

The Community Guide is a collection of evidence-based recommendations and findings from the [Community Preventive Services Task Force \(CPSTF\)](#). The CPSTF is an independent, nonfederal panel of public health and prevention experts that receives technical, scientific, and administrative support from CDC. They oversee systematic reviews of the effectiveness and economics of public health programs, services, and other interventions used in real-world settings, issue recommendations and findings based on these reviews, and identify gaps in the evidence where additional research is needed. CPSTF findings, the systematic review evidence on which they are based, and supporting materials are available online at www.thecommunityguide.org. The systematic reviews are also published in peer-reviewed journals.

CDC's Alcohol Program works with The Community Guide, SAMHSA, NIAAA, and other partners to conduct systematic reviews of population-based intervention approaches to prevent excessive alcohol consumption (including underage and binge drinking) and alcohol-impaired driving. The CPSTF recommends the following intervention approaches:

- [Dram Shop Liability](#)
- [Increasing Alcohol Taxes](#)
- [Maintaining Limits on Days of Sale](#)
- [Maintaining Limits on Hours of Sale](#)
- [Regulation of Alcohol Outlet Density](#)
- [Electronic Screening and Brief Intervention \(e-SBI\)](#)
- [Enhanced Enforcement of Laws Prohibiting Sales to Minors](#)

The CPSTF recommends against the following intervention approach:

- [Privatization of Retail Alcohol Sales](#)

More information about CPSTF recommendations for preventing excessive alcohol consumption and related harms are online at www.thecommunityguide.org/topic/excessive-alcohol-consumption.

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

- [Blood Alcohol Concentration \(BAC\) Laws](#)
- [Lower BAC Laws for Young \(under age 21\) or Inexperienced Drivers \(also known as Zero Tolerance laws\)](#)
- [Maintaining Current Minimum Legal Drinking Age \(MLDA\) Laws](#)
- [Publicized Sobriety Checkpoint Programs](#)

- Ignition Interlocks, or devices installed in motor vehicles to prevent operation by any driver previously convicted of alcohol-impaired driving who has a BAC above a specified level
- Mass Media Campaigns, which are most effective when combined with other effective laws and programs
- Multicomponent Interventions with Community Mobilization
- School-Based Instructional Programs to reduce riding with alcohol-impaired drivers

More information about CPSTF interventions for preventing alcohol-impaired driving can be found at www.thecommunityguide.org/content/task-force-findings-motor-vehicle-injury.

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, Chapter 1, in this chapter, 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.⁴³

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

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

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

The ICCPUD includes the following officials, as specified in the STOP Act:

- *Secretary of HHS*
- *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 CDC*
- *Director of NIAAA*
- *Director of NIDA*
- *Director of ONDCP*
- *Administrator of NHTSA*
- *Administrator of OJJDP*
- *Chairman of the FTC*

⁴³ For details regarding these substance use-related objectives, go to: <https://www.healthypeople.gov/2020/topics-objectives/topic/substance-abuse/objectives?topicId=40>.

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 *2020 RTC* summarizes major initiatives underway throughout the federal government to prevent and reduce underage alcohol use in America.

ICCPUD

The 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 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:

- 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 EBPs 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 convened a meeting of the national STOP Act stakeholders on August 1, 2019, to discuss the *2019 Report to Congress on the Prevention and Reduction of Underage Drinking (RTC)* and 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, 2 and 3 of the *2019 RTC*.
- A technical expert panel was formed of ICCPUD members to review materials from the national media campaign “Talk. They Hear You”® (TTYH).
- 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 continued community engagement efforts, including postcards, posters, and an enhanced presence on the ICCPUD portal, <https://www.stopalcoholabuse.gov>.
- The first ICCPUD Community Engagement Webinar on the STOP Act and Underage Drinking Prevention was held on October 24, 2019.

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).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.

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

HHS/ACF/Family and Youth Services Bureau (FYSB)

Activities Related to Underage Drinking

Runaway and Homeless Youth 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,

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 metabolized 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).

street outreach, transitional living programs, 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* funding supports street-based services with runaway, homeless, and street youth 21 years and younger 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*, 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 the MGH program, the funding provides shelter and services to meet the needs of pregnant and parenting homeless youth to promote long-term economic independence 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 people experiencing domestic violence and their children. In 2019, the appropriation level was \$164,500,000. *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 1,202 domestic violence shelters, 260 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 2019, programs provided more than 209,956 presentations for adults and youth and public awareness events reaching 6.1 million people, which included 2.2 million youth.
- FVPSA operates the National Domestic Violence Hotline and its two special projects, loveisrespect (focused on youth and healthy relationships) and StrongHearts Native Helpline.

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/CDC

Activities Specific to Underage Drinking

Reducing Youth Exposure to Alcohol Marketing: In FY 2019, CDC funded a contractor 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 television.

- The contractor, continuing the work of the Center on Alcohol Marketing and Youth (www.camy.org), 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 that did not comply with voluntary industry guidelines declined by 51.2 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:* www.cdc.gov/ardi.

- 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 age 18 years and older that is conducted monthly in all states, the District of Columbia, and three U.S. territories. The 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 drinking days, frequency of binge drinking (\geq four drinks per occasion for women; \geq five 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 people who binge drink and driving after binge drinking.
- States can also include an optional module to assess 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. Some states and large urban school districts also conduct surveys among students in grades 6–8, although not all of the same behaviors are assessed among these middle school students. *Website:* <https://www.cdc.gov/healthyyouth/data/yrbs/index.htm>.

- The YRBSS includes standard questions about current drinking, frequency of binge drinking (\geq four drinks per occasion for female students; \geq five 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, riding with a driver who had been drinking, 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 in all 50 states, the District of Columbia, and Puerto Rico. The case definition consists of suicides, homicides, deaths due to legal intervention, unintentional firearm deaths, and deaths of undetermined intent. This information can be used to develop, inform and tailor violence prevention efforts. *Website:* <https://www.cdc.gov/violenceprevention/datasources/index.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 free of charge via CDC's Web-based Injury Statistics Query and Reporting System. An NVDRS Restricted Access Database (RAD) is also available through CDC's National Center for Injury Prevention and Control to researchers who meet specific criteria. At this time, there is no cost for accessing the NVDRS RAD.

HHS/IHS

Activities Related to Underage Drinking

ASAP: The objective of ASAP is to reduce the incidence and prevalence of alcohol and substance misuse among the AI/AN population to a level that is at or below the general U.S. population. More than 50 percent of the mental health programs and more than 90 percent of the alcohol and substance misuse programs are tribally operated. *Website:*

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

- Implements alcohol and substance misuse 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 (BH) 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 provides recurring funding to 12 YRTCs to address the ongoing issues of substance misuse 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 misuse 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.

Methamphetamine and Suicide Prevention Initiative (MSPI): The IHS MSPI is a nationally coordinated program focusing on providing much-needed methamphetamine and suicide prevention and intervention resources for AI/AN communities. IHS currently funds 175 MSPI-related grants and federal program awards, totaling \$27,972,247. *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 misuse and suicide prevention from a community-driven context.
- Increases tribal, Urban Indian Organization, 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 misuse.

- 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 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 BH strategies.

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

HHS/NIH/NIAAA

Activities Specific to Underage Drinking

NIAAA supports a broad and diverse program of biomedical research that aims to advance understanding of the factors that contribute to underage drinking and to improve the prevention and treatment of alcohol-related problems among youth. Research spans the areas of: 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; the development and testing of individual- and environmental-level interventions, including policies to prevent and reduce underage drinking; the implementation and evaluation of ASBI in primary care and other settings; the development and testing of alcohol use disorder treatments for adolescents; and the translation and dissemination of evidence-based interventions for underage drinking. Examples of specific NIAAA efforts in this domain include:

Studying the Impact of Adolescent Drinking on the Developing Brain: NIAAA supports multiple research consortia and projects examining the effects of alcohol exposure during adolescent brain development. The research findings are expected to inform future strategies to prevent the initiation and escalation of underage drinking and to treat alcohol-related problems among youth.

- *Neurobiology of Adolescent Drinking in Adulthood (NADIA) Consortium:* (<https://www.med.unc.edu/alcohol/nadiaconsortium>). For 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 second phase, the Consortium built upon these findings to further investigate the mechanisms through which adolescent alcohol exposure impacts brain maturation and adult brain function. In FY 2020, NIAAA renewed the consortium for a third period of funding.

- *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 12–21. 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.
- *Adolescent Brain Cognitive Development (ABCD) Study*: (<https://abcdstudy.org>). Launched in 2015, the ABCD Study is the largest long-term study of brain and cognitive development in children in the United States. ABCD is following over 12,000 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. ABCD is a partnership of the Collaborative Research on Addiction at NIH initiative (i.e., NIAAA, NIDA, National Cancer Institute) and other NIH Institutes. In FY 2020, the study was renewed for a second period of funding.

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 was also produced in collaboration with and endorsed by the American Academy of Pediatrics (AAP), which recommends screening all adolescents regarding alcohol use.
- 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.
- 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.
- Studies have evaluated the guide in primary care, emergency department, and school settings and among youth with chronic health conditions and demonstrated its utility in identifying alcohol use and risk for alcohol use disorder.

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 supports research projects designed to target heavy alcohol use and associated behaviors among college-age youth, including studies that are developing mobile health interventions for students at 4-year and community colleges, as well as for young adults in other settings.
- *College Alcohol Intervention Matrix (CollegeAIM):* As part of its college drinking prevention initiative, NIAAA developed a resource 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.
 - CollegeAIM provides information on more than 60 individual- and environmental-level strategies to prevent and reduce harmful and underage drinking 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. These factors 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 more comprehensive approach.
 - NIAAA's overarching goal with CollegeAIM is the provision of evidence-based information in an accessible and practical way to facilitate its use as a foundation for college drinking prevention and intervention activities. CollegeAIM was first issued in 2015 and updated in 2019 to reflect more recent research.
 - CollegeAIM is available at <https://www.collegedrinkingprevention.gov/CollegeAIM>.

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 interventions (brief and extended in duration):* In FY 2019, NIAAA continued to support and encourage research on screening and brief interventions to prevent and/or reduce alcohol use and alcohol-related harms among underage and young adult populations. A recent NIAAA-supported study demonstrated that adolescent patients who received alcohol screening, brief intervention, and referral to treatment in pediatric primary care settings had improved mental health and substance use outcomes over a 3-year follow up period.
- *Culturally appropriate interventions:* NIAAA supports studies to develop and evaluate interventions such as:
 - A family-based underage drinking prevention program for Latino emerging adults (18–20 years) 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 ANs.

- Combined individual- and community-level interventions (e.g., community mobilization and awareness activities, restricting alcohol sales to minors) to reduce underage drinking by AI youth living on rural California Indian reservations.
- *Underage drinking treatment:* NIAAA-supported treatment research includes studies that test the efficacy of integrated behavioral treatments for youth with alcohol use disorder and that examine the neurobiological processes that link specific components of alcohol treatment interventions with improved treatment outcomes.
- *The impact of policies on alcohol-related behaviors and outcomes:* NIAAA supports and continues to encourage research that examines the public policy effects on alcohol-, marijuana-, and other substance-related behaviors and outcomes across the lifespan.

Key NIAAA Resources 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. In 2019, the factsheets “College Drinking,” “Fall Semester – A Time for Parents to Discuss the Risks of College Drinking,” and “Parents – Talk with Your High School Grads about Celebrating Safely” were all updated.

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.

HHS/NIH/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 1-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 tests CTC in seven 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 5–12, 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 survey of substance misuse (including alcohol) behaviors and related attitudes of 8th, 10th, and 12th grade high 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). MTF also includes topical questions about riding with a drinking driver and driving after drinking alcohol (12th grade only) on a subset of questionnaires. 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 sub-sample of each graduating class every 2 years until age 35 and then every 5 years thereafter. Results from the survey are released each winter. 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 1997–2002. Before publication, it was reviewed for accuracy of content and interpretation by a scientific advisory committee and reviewed for readability and applicability by a 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 Checkup (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 misuse. 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 NDFW can be found at <https://teens.drugabuse.gov/national-drug-alcohol-facts-week>.
- *2019 National Drug & Alcohol IQ Challenge:* As part of the 2019 NDAFW, 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/OASH–ODPHP, OPA

Activities Related to Underage Drinking

OPA Website: The OPA website provides resources for parents and adolescents who are struggling with alcohol use. Websites: <https://www.hhs.gov/ash/oah/adolescent-development/substance-use/alcohol/index.html>; <https://www.hhs.gov/ash/oah/resources-and-training/for-families/alcohol/index.html>.

- State-level data on adolescent alcohol use is available. Website: <https://www.hhs.gov/ash/oah/facts-and-stats/national-and-state-data-sheets/adolescents-and-substance-abuse/index.html>.

Adolescent Health: Think, Act, Grow® (TAG): 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>.

- The 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/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, which focuses primarily on opioid use but also includes information on alcohol use disorders and their treatment.

HHS/SAMHSA

Activities Specific to Underage Drinking

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 television and print public service announcements (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 television 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 *RTC, State Performance & Best Practices for the Prevention and Reduction of Underage Drinking Report*, and the *State Reports – Underage Drinking Prevention and Enforcement*.
- Town Hall Meetings are held approximately every 2 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 12–25 years old.

Strategic Prevention Framework Partnerships for Success (SPF PFS) Program: The purpose of this grant program is to address underage drinking among persons ages 9–20 and may also be used to target up to two additional, data-driven substance misuse 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 misuse.
- \$46 million in funding was available for FY 2018.

STOP Act Grant Program: SAMHSA's CSAP provides up to \$50,000 per year for 4 years to current or previously funded Drug-Free Communities Program (DFC) grant recipients to enhance implementation of EBPs 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 SUD 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-hours-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 SUDs 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 SUD 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 non-profit health maintenance organizations and preferred provider organizations 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: The purpose of this CSAT program is to expand SUD treatment and related recovery and reentry services to sentenced offenders/ex-offenders who have an SUD and/or co-occurring substance use and mental disorders and 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 EBPs.

Grants to Expand Substance Misuse Treatment Capacity in Family, Juvenile, and Adult Treatment Drug Courts:

Treatment Drug Courts: These programs support courts that use the treatment drug court model to provide SUD 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 \$23 million was available in 2018 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 three national ATTCs: The National Coordinating Office, the National AI and AN ATTC, and the National Hispanic and Latino ATTC.
- During 2018 and 2019, the ATTC implemented more than 2,300 events serving over 50,800 healthcare professionals.

Prevention Technology Transfer Centers (PTTC): In 2018, SAMHSA used cooperative agreements to create and support a network of PTTC. The purpose of the PTTC network is to improve implementation and delivery of effective substance misuse prevention interventions and provide training and technical assistance services to the substance misuse prevention field. It does this by developing and disseminating tools and strategies needed to improve the quality of substance misuse prevention efforts; providing intensive technical assistance and learning resources to prevention professionals to improve their understanding of prevention science, epidemiological data, and implementation of evidence-based and promising practices; and, developing tools and resources to engage the next generation of prevention professionals. *Website:* <https://ptcnetwork.org/>.

- 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 AI and AN PTTC and the National Hispanic and Latino PTTC.
- During FY 2019, the PTTC network implemented 365 events serving 9,000 prevention professionals.

Tribal Training and Technical Assistance Center (TTAC): The Tribal TTAC provides TTA on mental disorders and SUDs, 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's IHS and other agencies in charge of assisting Indian Country.

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 ages 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 SUDs, SUD treatment, mental health measures, mental health service use, co-occurring SUDs, and driving under the influence of alcohol and other substances.
- 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 SUD 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*, an annual survey of all SUD treatment facilities in the I-BHS.
- *National Mental Health Services Survey*, an annual survey of all mental health treatment facilities.
- *Treatment Episode Data Set*, a compilation of data on the demographic and substance use characteristics of admissions to and discharges from SUD treatment, primarily at publicly funded facilities.
- *Mental Health-Treatment Episode Data Set and Mental Health-Client Level Data*, 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 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 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.

DFC: The DFC Program, created by the Drug-Free Communities Act of 1997, is a program of the ONDCP administered by SAMHSA 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 misuse among youth by addressing the risk and protective factors at the community level.
- Grants are for \$125,000 for up to 5 years.

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, developing refusal skills, long-term risks, and the lasting 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 misuse 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 SUD prevention efforts, including universal, selective, and indicated prevention strategies. The placement of BH personnel in primary care medical settings is intended to combat stigma associated with receiving BH care and provides an opportunity to improve early screening, identification, and intervention of many BH 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 SUDs in those served by the military health system (MHS). ASMAC provides expert advice on issues related to the supply of illegal substances and prescription medications, responsible use and demand reduction of addictive substances,

promotion of healthy behaviors—including alcohol use—and the identification, prevention, and treatment of other SUDs. ASMAC also provides subject matter expert (SME) advice to other interagency or advisory functions.

Defense Health Agency’s BH Clinical Community, recently established the Substance Misuse and Addictive Behaviors Working Group (SMAB WG), which supports the coordination, integration, and oversight of SUD and other addictive behavior-related clinical care across the MHS. The SMAB WG facilitates MHS-level SUD and addictive behavior-related clinical care activities to standardize, optimize, and harmonize MHS use of associated data and policies.

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.

Own Your Limits Counter-Marketing Campaign: The DoD’s new Own Your Limits campaign was launched in September 2019, replacing the former “That Guy” campaign. Own Your Limits is an education campaign that utilizes behavior change tactics to encourage and help active duty Service members learn how to drink responsibly if they choose to drink alcohol. The primary target audience of the campaign is 18- to 24-year-old enlisted Service members, but many materials can be applied across the Active Component. The campaign is not Service specific; it is designed to resonate with members of all Service branches. The goals of the campaign are to:

- Give Service members the information and motivation they need to make responsible choices when drinking alcohol, which includes sticking to safe drinking limits;
- Support the DoD’s efforts to build and sustain a ready and resilient force by providing resources and information to Service members so they can serve honorably and drink responsibly;
- Support professionals in their mission to educate Service members on the importance of drinking alcohol responsibly; and
- Provide friends and family of Service members with the information and resources they need to talk to their Service member about alcohol use concerns.

The campaign is web based and built on a responsive platform, meaning Service members can access the site on any device 24/7. Campaign content, messaging, imagery, and how messages are delivered to Service members is based on focus group sessions conducted across all Service branches. *Website:* OwnYourLimits.org

The campaign includes:

- A responsive website with resources and information for Service members, their friends and family, and professionals to encourage and support responsible drinking for those who choose to drink. Digital tools available on the site include several calculators (e.g. calorie counter, drink size, BAC) and an evidence-based online anonymous quiz for Service members to check their drinking habits, identify risky behavior, and get resources.
- Social media channels (Facebook—Own Your Limits and Instagram—@ownyourlimits) featuring engaging graphics and information to encourage responsible drinking. Engages with more 70,000 fans on our social media platforms.

- A quarterly e-newsletter called *The Buzz on Responsible Drinking* highlighting campaign updates and other resources for professionals to use in their work with Service members. Website visitors can sign up by visiting OwnYourLimits.org and clicking “Contact Us” in the top right-hand corner to send a message with “SUBSCRIBE” in the message section.
- Downloadable materials, such as fact sheets and posters that can be linked to or printed directly from the campaign website for use.
- Bulk ordering of printed and promotional materials (e.g., factsheets, posters, and educational drink coasters) for professionals to order to support their efforts addressing alcohol use among Service members.
- Additional campaign measures and metrics are currently being monitored and will be included in future reports.

Service-Level Prevention Programs

Marine Corps Substance Abuse Program (SAP): The U.S. Marine Corps (USMC) SAP provides plans, policies, and resources to prevent substance misuse and related consequences. 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 BH 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 BH concerns.
- *Selected Training:* USMC adopted the evidence-based motivational intervention called PRIME for Life® (PFL) 4.5 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.

- *SACCs:* USMC SACCs are required to undergo accreditation/certification not less than once every 4 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 and consistent 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 with a continuing education hour in alcohol, tobacco, and other drugs. 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. Although 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 BH Prevention Capability staff support the MEF Prevention Capability. Civilian BH personnel are placed in Active Duty Operating Forces to assist the Commander in executing BH 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 BH 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 misuse 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 misuse rehabilitation, and accountability. NADAP efforts comprise:

- *Aware Program:* A command-level alcohol misuse 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 misuse. 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 PFL. PFL 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: SAPR, domestic violence prevention, equal opportunity, substance misuse prevention, nutrition and physical readiness, suicide prevention, and BH.
- *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 misuse 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 misuse 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!

Navy Substance Abuse Rehabilitation Program (SARP): The Navy Medicine SARP provides early intervention and prevention resources to Sailors and Marines at its 39 ashore and 11 shipboard locations, affording resources to prevent the consequences of ongoing alcohol misuse, including underage drinking.

SARP alcohol and substance misuse early intervention and education includes:

- *PFL:* Partnering with the Office of the Chief of Naval Operations (OPNAV N17), SARP rolled out an evidence-based early intervention and prevention alcohol misuse curriculum titled PRIME for Life® in December 2019, aligning with DoD, DHS, and other federal agencies utilizing the PFL curriculum. The program challenges Sailors and Marines to self-assess high-risk drinking behaviors in making positive changes to attitudes and beliefs around alcohol misuse. It is highly effective at targeting younger Sailors and Marines ages 17–25, reducing stigma in seeking education and treatment for alcohol misuse.
- *Navy My Ongoing Recovery Experience (MORE):* Since 2010, SARP has maintained a strong partnership with the Hazelden-Betty Ford Foundation to execute the Navy MORE Program. Navy MORE is an evidence-based web, smartphone application, and telephonic recovery support program for Sailors and Marines with alcohol misuse, featuring world-wide access 24 hours a day, 7 days a week, including regular telephonic and email contact with a dedicated recovery coach. The Navy MORE Program has helped return over 1,000 Sailors and Marines back to duty following a relapse, avoiding administrative separation or other disciplinary action as a result of problematic alcohol misuse.
- *Establishment of a Coordinated Continuum of Care:* The Navy Bureau of Medicine and Surgery, USMC Marine and Family Programs, and the USMC Health Services have an MOU defining the continuum of psychological health and problematic alcohol and substance misuse services offered on Marine Corps installations. This coordination establishes communication among all stakeholders to ensure a coordinated comprehensive system of care, guided by a philosophy of “no wrong door” for Marines and attached Sailors obtaining alcohol misuse early intervention and treatment.

Army Substance Abuse Programs: The Army Substance Abuse Program establishes, administers, and evaluates substance misuse prevention training and professional training programs for all Army personnel worldwide within the Active Component, National Guard, and Army Reserve. The goal of the Army Substance Abuse Program 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 the Army Substance Abuse Program 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 misuse. 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. 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 misuse counseling services and alcohol/drug misuse 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 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. with 21 counselors on hand, reducing the early return of families from overseas for these issues.

BH System of Care: A standardized system of care to prevent, identify, treat, and track BH issues affecting service members and other beneficiaries. BH System of Care includes 11 integrated BH enterprise programs that operates as a single BH system that supports the readiness of the force by promoting health identifying BH issues early in the course of the illness, delivering evidence-based treatment, fully leveraging other members of the Army community and monitoring efficiency and effectiveness through transparent metrics.

Substance Use Disorder Clinical Care (SUDCC): Provides SUD clinical care, including assessment, treatment, and aftercare, for service members and other beneficiaries within an integrated medical and BH model to enhance health and readiness. The goal of the SUDCC is to provide integrated and co-located BH care for service members and other beneficiaries. The SUDCC provides SUD treatment as part of a comprehensive plan to address total BH needs. Integrated care will maximize the opportunity for a rapid and successful recovery.

Child and Family Behavioral Health System (CAFBHS): The CAFBHS is the Army's comprehensive BH model designed to support the needs of Army children and families through the alignment and collaboration with the Army's patient-centered medical homes. The prevention and early intervention of SUDs is interwoven into all aspects of the CAFBHS model. Specifically, the CAFBHS incorporates the CRAFFT, a well validated clinical assessment tool designed to screen for substance-related risks and problems in adolescents, in evaluations and on-going follow-up of all adolescents 12 years old and older as part of the adolescent version of the BH Data Portal, the Army's online screening and assessment process. In addition, CAFBHS primary care manager (PCM) training curriculum educates PCMs on how to use the CRAFFT in primary care as a routine assessment of substance misuse. Overseas and in Hawaii, CAFBHS' School BH providers embedded in schools collaborate closely with drug and alcohol counselors from the Army's ASACS program. In addition to efforts targeting substance use prevention and early intervention, all CAFBHS specialty providers (e.g., psychiatry, psychology, social work, marriage and family therapists) integrate substance misuse issues into their assessment and treatment of children and adolescents and when appropriate refer to another level of care or

agencies as needed. By providing a spectrum of BH services from consultation to treatment for Army children and families across multiple settings (e.g., primary care, schools, BH clinics in military treatment facilities), the CAFBHS program supports overall family well-being in all aspects of functioning.

Army Campaigns: The Army campaign division of ASAP recognizes and endorses campaigns that go beyond alcohol or other drug misuse 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) SUD Prevention Program: The USAF ADAPT encourages healthy and safe alcohol use (and non-use for underage people) as the normative lifestyle choice for young USAF personnel. Prevention efforts include:

- Collaborating with other prevention and resiliency programs, and coordinating with violence prevention integrators to reduce underage drinking, alcohol misuse, alcohol-related misconduct, and illicit drug use;
- Utilizing a comprehensive, four-level community-based approach, including: Strong leadership support, individual-level interventions, base-level interventions, and community-level interventions;
- Delivering individualized alcohol brief counseling—an evidence-based, brief targeted prevention intervention—using motivational interviewing strategies, client and provider manuals, critical thinking exercises, harm reduction skill building, and client-driven change planning; and
- Piloting an evidence-based, web-delivered alcohol prevention intervention with young airmen arriving at their first Permanent Duty Station (during the First Term Airmen Course) at six Air Force bases in 2020. *Website:* <https://checkupandchoices.com/>.

ED/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 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. *Website:* <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 misuse, violence prevention in education, and promotion of student health and well-being. *Website:*

https://www2.ed.gov/about/offices/list/oese/osh/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 (e.g., 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.

DHS/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 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 SUDs to the appropriate level of treatment.
- Substance misuse 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).
- As with other active duty services, the USCG uses PFL and myPRIME as its principal intervention to educate members on high-risk and binge drinking consequences.

- USCG was the first active duty force to raise its drinking age to 21.

DOT/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 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>.

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 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.

FTC

Activities Specific to Underage Drinking

Consumer Education: In 2019, FTC continued its alcohol consumer education program, “We Don’t Serve Teens” (WDST), urging adults to stop teens’ easy access to alcohol. *Website:* <https://www.DontServeTeens.gov>.

- 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 promote the WDST message around the country at no cost to the government.

ONDCP

DFC Support Program: The 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 ONDCP, in partnership with SAMHSA, 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://obamawhitehouse.archives.gov/ondcp/grants>.

DFC Coalitions are made up of community leaders representing 12 sectors that organize to meet the local prevention needs of the youth and families in their communities. These 12 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 misuse
12. Other organizations involved in reducing substance misuse

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 (i.e., 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 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	FY2019 actual
CDC	\$1,200,000	\$1,041,730	\$1,081,200	\$986,587	\$949,894	\$1,100,000	\$900,000	\$900,000	\$900,000	\$616,432
ED	\$40,580,995	\$8,782,000 ^a	— ^b	— ^b	— ^b	0	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	\$58,000,000
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	\$110,173,115
OJJDP ^f	\$25,000,000	\$20,708,500	\$4,862,895	\$5,000,000	\$2,500,000	0	0	0	0	0
NHTSA	\$625,000	\$600,000	\$645,000	\$600,000	\$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	\$169,389,547

^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 (HEC) 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 into a new technical assistance center, the National Center on Safe Supportive Learning Environments. 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 Safe Schools/Healthy Students grant activity that focuses on alcohol misuse prevention.

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

^d NIAAA FY 2010 ARRA funding.

^e FY 2017–18 figures include SPF State Initiative Grants (SIG), Under Age Drinking, Adult Media Campaign, STOP Act grants, and ICCPUD. FY 2017–18 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 *2020 Report to Congress on the Prevention and Reduction of Underage Drinking* (2020 RTC) on the national media campaign, “Talk. They Hear You.”® (TTHY), as required by the Sober Truth on Preventing Underage Drinking (STOP) Act. It details the annual production, broadcasting, and evaluation of TTHY and details the effectiveness of the campaign in reducing underage drinking, the need for and likely effectiveness of an expanded adult-oriented media campaign, and the feasibility and the likely effectiveness of a national youth-focused media campaign to combat underage drinking. The chapter begins by providing background and an overview of TTHY, and then describes the campaign’s target audience and components. The chapter also presents a detailed description of the campaign’s evaluation and subsequent refinement.

Background

The Substance Abuse and Mental Health Services Administration’s (SAMHSA) mission is to reduce the effects of substance misuse and mental disorders on America’s communities. In particular, SAMHSA works toward underage drinking prevention by supporting state and community efforts, promoting the use of evidence-based practices, educating the public, and collaborating with other agencies and interested parties. In 2004, the U.S. Department of Health and Human Services (HHS) Secretary directed SAMHSA to convene the newly established Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) and serve as the lead agency. ICCPUD was formalized in 2006 with Congress’ passage of the STOP Act. Created to coordinate all federal agency activities related to the problem of underage drinking, ICCPUD’s vision is to provide national leadership in both federal policy and programming to support state and community activities that prevent and reduce underage drinking. ICCPUD’s mission is to: (1) 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 well-being of America’s children and youth, and (2) provide resources and information on underage drinking prevention, intervention, treatment, enforcement, and research.

Under ICCPUD’s leadership, SAMHSA’s Center for Substance Abuse Prevention developed the TTHY campaign in response to directives set forth in Section 2(d) of the STOP Act, requiring the HHS Secretary 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. ICCPUD has been instrumental in the overall development of TTHY, using input from experts and organizations representing a wide range of parties, including public health advocacy groups, the alcohol industry, ICCPUD member agencies, the U.S. Congress, and subject matter experts (SMEs). TTHY addresses two of the core goals laid out in ICCPUD’s Preventing & Reducing Underage Drinking 2018 Comprehensive Plan:

- Goal 1: Strengthen a national commitment to address the problem of underage drinking, and

- Goal 2: Reduce demand for, the availability of, and access to alcohol by persons under the age of 21.

To maintain its lasting message and keep it consistent and relevant over time, the TTHY campaign trademarked its logo in 2016, making it the official property of HHS (see Exhibit 5.1). This trademark instills trust in the campaign, lends credibility to TTHY materials, and promotes consistency when organizations implement TTHY in their communities.

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 campaign received separate funding to expand content to include information on alcohol in conjunction with other substances.

Recognizing the dynamic national context, SAMHSA expanded TTHY to prepare parents and caregivers to talk with 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 9–15 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 seventh year and has evolved into an ongoing communications initiative. In that time, the campaign has also become a well-recognized brand.

Underage drinking and substance use are national public health issues with serious implications, especially among adolescents. The TTHY campaign has become an important part of SAMHSA's prevention efforts. The campaign's goal 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 issues of alcohol and other drugs with their children (see Exhibit 5.2).

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.

Exhibit 5.1: TTHY Service Mark Certificate

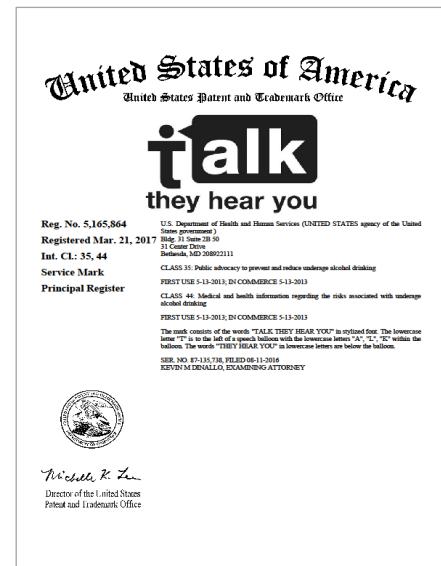


Exhibit 5.2: TTHY Print Public Service Announcement (PSA)



TTHY campaign objectives include⁴⁵ 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 other substance use prevalence* (knowledge);
3. Increase parent or caregiver *disapproval of underage drinking and other substance use* (attitudes);
4. Increase parent or caregiver *knowledge, skills, and confidence in how to talk with their children* about, and prevent, underage drinking and other substance use (attitudes); and
5. Increase parent or caregiver *actions to prevent underage drinking and other substance use* by talking with their children about alcohol and other substances (behaviors).

Exhibit 5.3: Return on Investment of the TTHY National Media Campaign

The TTHY earned media campaign⁴⁶ has yielded more than an \$11-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 community engagement meetings each year to interact with local groups who use the campaign and to learn specific details about their prevention efforts.

Since the campaign's inception, initial investment costs for development and implementation have been a little more than \$1,000,000 per year, totaling \$11,537,925 over an 11-year period. Earned media outreach efforts have generated an estimated \$128.2 million in earned media placements on major networks and affiliates—with television, print, and radio PSAs having collectively garnered 10.8 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 23,130 donated labor hours from local community organizations, which equates to approximately 12 full-time employees and \$493,594 in estimated salary.

TTHY Target Audience

Alcohol use by those younger than the legal age of 21 remains a serious public health and safety problem, undermining the well-being of America's youth. In fact, alcohol continues to be the most widely misused substance among America's youth. According to SAMHSA's 2018 National Survey on Drug Use and Health (NSDUH), an estimated 7.1 million people ages 12–20

⁴⁵ Note that although 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.

⁴⁶ “Definition of earned media: Earned media, also referred to as media relations, word-of-mouth, public relations, 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.).

had consumed alcohol in the past month. The same survey found that in the past month, 4.6 million of those ages 12–20 had used marijuana and 349,000 had misused opioids.

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 & Institute of Medicine, 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. Although it may not always seem like it, children do hear their parents’ concerns, which illustrates the importance of conversations between parents and children regarding 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

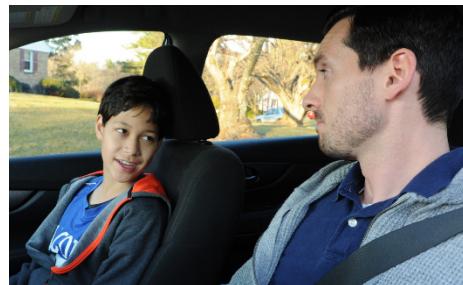
TTHY messages and materials are disseminated through television, radio, and print PSAs; social media; the campaign website; partner networks; and direct outreach. Campaign messages:

- Emphasize the importance of parents talking with their kids about underage drinking and other 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 other drug use;
- Highlight underage drinking and other substance use statistics that are likely to catch parents’ attention;
- Focus on helping parents address the issues of underage drinking and other substance use in a manner that emphasizes their children’s ability to make autonomous decisions; and
- Model behaviors and situations when parents can begin the conversation about the dangers of alcohol and other drugs with their children.

PSAs

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. The campaign continues to diversify its audiences based on emerging data, partner feedback and needs, and collaboration opportunities with other federal agencies and stakeholder organizations.

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. The military audience PSA was developed as part of a collaboration with the U.S. Department of Defense (DoD) to make the campaign's message more relevant for parent populations in the military. 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 developed a collection of three PSAs focused on underage drinking and other substance use prevention, along with separately funded PSAs specifically focused on vaping and marijuana use prevention. The additional PSA topics emerged as a priority in direct response to the doubling of vaping rates from 2017–19 and the ongoing changes in laws regarding marijuana in a growing number of states across the country. Each of these new creative executions addresses underage drinking prevention, as well as other substances that are often used in combination with alcohol. These PSAs are scheduled for a staggered release, beginning in 2020.

As discussed in Exhibit 5.3, since the campaign launched in 2013, TTHY television, radio, and print PSAs have collectively garnered more than 10.8 billion impressions. Distribution has generated an estimated \$128.2 million in free airtime and ad space.

Partner Engagement

The TTHY campaign works with nearly 600 local, state, and national partners to support outreach and dissemination of campaign materials across the United States. Partners include government agencies as well as prevention, retail, healthcare, community, and school-based organizations.

In addition to PSAs, TTHY promotional materials include discussion starter videos, brochures, fact sheets, infographics, original soundtracks, 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, along with talking points, draft social media messages, and email templates to ensure consistent outreach to parents and community members.

The TTHY campaign sent six targeted emails with customizable blog posts, newsletter blurbs, and social media content to more than 1,500 contacts interested in receiving campaign updates in 2019. These emails focused on topics such as encouraging schools to share the campaign with parents and caregivers during Red Ribbon Week, the nation's oldest and largest drug prevention awareness campaign. The emails consistently exceeded email open and link click rates for government campaigns.

In 2019, TTHY hosted three virtual community engagement meetings to meet the needs expressed by community partners in the previous year. These meetings included valuable tips for working with local media to promote the campaign, an overview of the campaign's evaluation history and recent updates, and best practices for conducting campaign evaluations locally.

Alabama-based campaign partner Marengo County Community in Action shared its insights for working with local media to promote the campaign to parents and caregivers during one of the community engagement meetings (see Exhibit 5.5). With a limited budget to implement the campaign in Marengo County, the coalition worked with local media to secure double the amount of paid advertising spots by simply advocating for the campaign's message. The coalition shared other helpful tips for stewarding relationships with local media to continue promotion long after the paid advertising spots were over.

Website

The TTHY website (see Exhibit 5.6) 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 other 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>.

Exhibit 5.5: TTHY Community Partner Marengo County Community in Action Shared Helpful Best Practices for Other Coalitions to Consider While Working With the Media to Promote the Campaign Locally

 **Key Takeaways**

- Check with your local broadcasting companies to see how many PSAs have been shared this year → Work with them to help fill their PSA quota.
- Create as many free ways as possible to share the message; Consider paying for space once a year, if possible.
- Make connections with every broadcaster in your area; tap into the sources quarterly; use social media weekly.
- Be awesome!

www.underagedrinking.samhsa.gov 

Parents can use an interactive “create your own action plan” to generate tips on when and how to talk with 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 other 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; and
5. Building their child’s skills and strategies for avoiding underage drinking and other substance use.

Collective promotional activities from January 1, 2019, through December 31, 2019, helped drive 51,422 visits and 117,617 views to the TTHY website.

Mobile Application

Available to parents since July 2015, the TTHY mobile application (see Exhibit 5.7) 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 12,685 times as of December 2019.

In 2019, SAMHSA posted social media messages promoting the TTHY mobile application. These social media posts garnered 264 engagements (i.e., reactions, comments, shares, and replies) and contributed to 2,484 visits and 5,213 page views to <https://www.samhsa.gov/underage-drinking/mobile-application>.

A recent review in the peer-reviewed journal *Health Promotion Practice* 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 RTC (available at <https://www.stopalcoholabuse.gov>).

Exhibit 5.6: TTHY Materials Are Available on the SAMHSA Website (<https://www.samhsa.gov/underage-drinking>)



The campaign also began developing a new TTHY mobile application in 2019. This new app will help parents and caregivers learn how to turn common scenarios into opportunities to talk with their children about alcohol and other substances. It will also help them gain the necessary skills, confidence, and knowledge to start and continue these important conversations as they're kids get older by providing a safe and accessible medium to practice. The new mobile app's content management system will enable the campaign to promote featured TTHY products for parents and caregivers, educators, and communities; make them available for download; and enable users to share products via their social media networks. It will also enable the campaign to send push notifications to users to promote key campaign messaging and materials more frequently and strategically. This new mobile application is scheduled to launch in 2020.

Exhibit 5.7: The TTHY Mobile App



Beyond Formal Partnerships

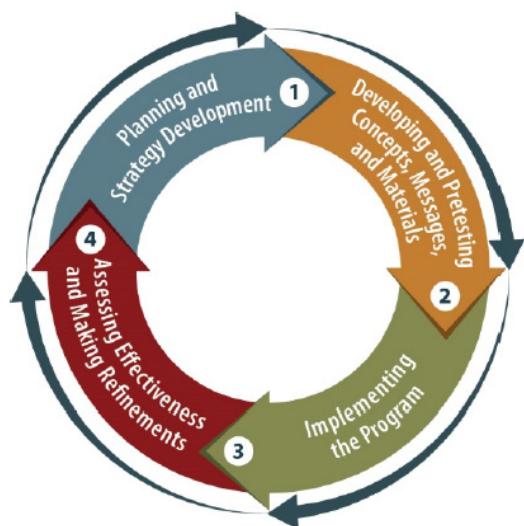
There is evidence to suggest that TTHY mass media exposure extends well beyond the formal partnerships described above. For instance, to estimate the potential reach of TTHY across the United States, the annual STOP Act survey was expanded in 2019 to include a set of five new questions. These survey items were designed to elicit data on the states' use of media campaigns, and specifically, their knowledge of, and use of, the TTHY campaign. Findings suggest that the majority of the states (75 percent) participate in some kind of media campaign aimed at preventing underage drinking, and that 29 states reported participating in the TTHY campaign directly. Of those, 4 out of 5 states (79 percent) reported that their most frequent form of collaboration was disseminating TTHY materials at the local level. Most (72 percent) engaged in this type of activity even without the benefit of procuring funds to do so.

Campaign Refinement and Evaluation

For the TTHY campaign, SAMHSA develops products that are relevant, relatable, and resonate with the target audience. Thus, the STOP Act called not only for ongoing development, as detailed above but a comprehensive evaluation of TTHY materials. ICCPUD oversees and guides the development of all campaign messaging and materials, and assisted in the development of all campaign evaluation tools and processes.

Evaluation procedures were executed using gold standard procedures to the extent possible. Specifically, 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. Formative evaluation is also critical because it alerts campaign planners to audience preferences and motivators early in the planning process. Applying these findings to campaign materials ensures

Exhibit 5.8: The NCI Health Communications Model



prior to launch. Thus, following the National Cancer Institute (NCI) model (see Exhibit 5.8), 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.

Although 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.

A Brief History of Formative Campaign Development and Evaluation Instrument Refinement Activities

Before the 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 2015–16 versions of the RTC, available at <https://www.stopalcoholabuse.gov>. Following this effort, a national parent/caregiver survey pilot project was launched in January 2016 to further inform evaluation planning and execution

their relevance and appeal to the campaign’s target audiences.

During campaign development, parents and caregivers, youth, and key 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.

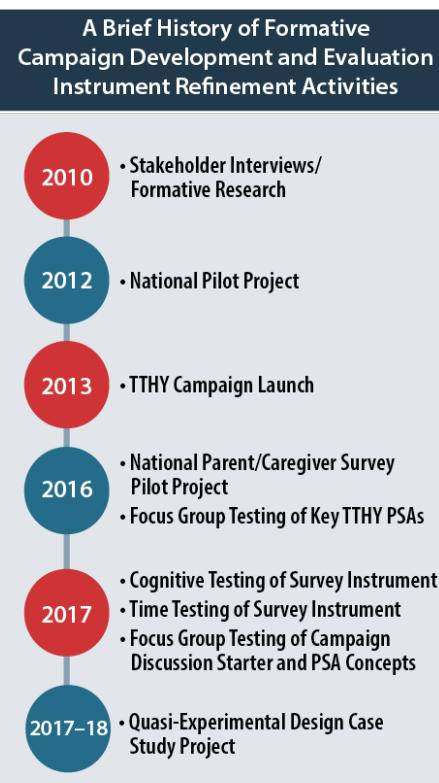
Typically, four focus groups are conducted for each PSA produced, and the feedback from parents and caregivers is integrated into the campaign. Feedback received during these formative market testing efforts are incorporated into final campaign materials

for the TTHY campaign.⁴⁷ 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–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 RTC (<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 SMEs in the survey design space, as well as a rigorous cognitive testing procedure. As described more fully in the 2018 RTC, cognitive testing of the survey instrument was conducted from August–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, p. 109).⁴⁸

Based on the feedback from these efforts, final edits were made to the survey instrument before its eventual use in the 2017–18 case study project (described below). A full report of this testing on the 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 Office of Management and Budget (OMB) package submitted for this project, a full accounting of



⁴⁷ The 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.

⁴⁸ Note: 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.

which can be found in the archived Time Testing Report,⁴⁹ 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 completion of the *2019 RTC*, additional evaluation-related activities have either already been executed or are in progress.

Recent Past, Present, and Future TTHY Summative Evaluation Overview				
2017–18	2018–19	2019	2019–20	2020–21
• Quasi-Experimental Design Case Study Project	• Trends Analysis	• Technical Experts Panel	• Parent Questionnaire	• Case Study Replication

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.

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 was fielded from October 2017–June 2018 and completed in summer 2018 to further supplement findings from the parent questionnaire and trends analysis described below. A replication of this case study effort is currently underway.

The second method used to evaluate TTHY is an annual parent questionnaire, for which OMB package #0930-0385 was approved on August 19, 2019 (expiration date: August 31, 2022). Questionnaire fielding launched in December 2019 and is currently near completion.

The final project conducted as part of SAMHSA's data triangulation efforts is the trends analysis, which was launched in the last quarter of 2018 and completed in August 2019.

The case study (and its replication), the parent questionnaire, and the trends analysis projects were designed to track the short-, intermediate-, and long-term outcomes of the TTHY campaign. These evaluation activities (and any subsequent findings gleaned to date) are described in more detail below. To ensure comparable data, we are employing methodologies in the replication effort that are consistent with the baseline case study approach. Findings from each wave 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).

⁴⁹ A topline report of evaluation findings of these efforts can also be found in the *2018 RTC* (<https://www.stopalcoholabuse.gov>).

Case Study Replication Project

Whereas the parent questionnaire data currently being collected will gather information that can be used to improve current TTHY materials and provide guidance for future development, and the trends analysis attempts to track whether or not there has been an effect on underage drinking incidence since the launch of TTHY, the case study efforts explore details of *if* and *how* exposure to the TTHY campaign affects parent/caregiver and student attitudes and behaviors.

More specifically, the intent of the case study evaluation is twofold:

1. To identify evidence regarding the relationship between campaign exposure and changes in parents' attitudes and behavior regarding underage drinking in the selected sites, and
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 during the same period.

Findings from the initial case study effort (2017–18) have borne out evidence of positive campaign effects.⁵⁰ 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. Thus, SAMHSA is currently designing a replication of the initial case study project. This and subsequent case studies will serve as ongoing, supplemental evaluation efforts of the TTHY campaign (to be conducted every 2–3 years). The current “‘Talk. They Hear You.’ Campaign Evaluation: Case Studies” OMB package #0930-0385 is set to expire on May 31, 2020, and a renewal OMB package was submitted in November 2019. The goal is to secure OMB approval of the renewal in time for the upcoming case study data collection effort (to launch at the start of the 2020–21 school year).

The replication of the case study will employ the same evaluation design, data collection, and data analyses plans as the original case study. As with the initial case study, the replication effort will also utilize 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 will use a forced campaign exposure within the intervention school setting. Using a difference-in-differences analytic model, findings from this site will be compared to the comparison site, which will not receive the intervention. Sites will be 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 allows SAMHSA to further identify correlations between changes in parent and youth attitudes and behaviors to determine second-order effects.

More specifically, just as in the initial case study, the replication effort 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. In an effort to account for *how* the

⁵⁰ Details of and findings from the 2017–18 case study were provided in the 2019 RTC. Copies of both the detailed and topline findings reports are included in SAMHSA’s archives and are available upon request. 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*.

campaign may have impacted KABs among parents and caregivers, one-on-one in-depth interviews among parents/caregivers at the intervention site will also be conducted. This follow-up qualitative evaluation procedure is an effective method of identifying the usefulness of specific campaign components for discussing underage drinking with children. Monthly environmental scan interviews will also be conducted throughout the intervention period with key stakeholders. Interviews will be conducted at both sites, with the intent of tracking potential influences on campaign outcomes outside of TTHY exposures.

As with the initial case study effort, the combination of qualitative and quantitative sources of information from the replication effort will allow evaluators to estimate the overall utility and impact of the campaign, as well as inform further development of TTHY campaign materials and the campaign dissemination approach. Recruitment is currently underway for the intervention and control school site conditions, and data collection efforts are slated for October 2020–June 2021.

Parent Questionnaire

In addition to replicating the 2017–18 case study project, SAMHSA is currently conducting a parent questionnaire of parents/caregivers of children ages 9–20.⁵¹ As described above, this is a critical piece of the plan for evaluation triangulation. Again, whereas the case studies explore details of *if* and *how* exposure to the TTHY campaign affects parent and student attitudes and behaviors, and the trends analysis attempts to track whether or not there has been an impact on underage drinking incidence since TTHY’s launch, the overall objective of the parent questionnaire is to garner insights from parents of children ages 9–20 on various creative components of the campaign, with the primary intent of improving current TTHY materials and providing guidance for future development.

Further, this project delivers on the evaluation requirements of the recently expanded scope of the TTHY campaign,⁵² which now focuses on smoking and “other substances” in addition to underage drinking. The questionnaire used in the current project builds on the focus group testing conducted during the initial development phase of TTHY, which advanced core campaign concepts and message development and deepened program planners’ insights about TTHY’s intended audience. However, although the items planned for use in the parent questionnaire were developed to resemble those questionnaire items used to initially test the effectiveness of campaign materials, this is the first TTHY effort that involves evaluating substances beyond alcohol. Thus, the parent questionnaire activity proposed here will allow us to confirm the effectiveness of evolving, final, and potential future campaign materials that target behaviors beyond underage drinking. Further, the limited set of attitudinal and behavioral items we are

⁵¹ 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 9-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 commenced.

⁵² In 2017, the campaign received separate funding to expand content to include information on alcohol and other substances, including prescription pain medications and marijuana. In 2018, the campaign also expanded its target age range to include resources for parents and caregivers of children up to the age of 20.

also collecting as part of this effort will allow us to contextualize audience feedback based on varied perspectives and communication behaviors related to underage drinking, tobacco product consumption, and other substance use. Therefore, information garnered via this project will allow us to better understand the type of messaging that may be most impactful among specific subgroups of our parent population by substance type.

More specifically, the parent questionnaire data collection structure consists of a two-part instrument that includes both a screener and a questionnaire. The screener includes questions on whether or not the respondent is a primary caretaker of a child/children ages 9–20 who live at least part-time in the respondent’s home. This ensures that we are capturing our intended adult caregiver audience for message evaluation. The subsequent portion of the questionnaire will assess respondent feedback on the following issues:

1. TTHY product appeal;
2. Whether parents report learning anything new from the campaign materials;
3. Whether parents believe that TTHY encourages parents to discuss *underage drinking* and other substance use with their children;
4. Parents’ intent to act; and
5. How the TTHY messaging and materials can be improved.

The design of the parent questionnaire uses a repeat cross-sectional data collection effort of substance use and TTHY-related KABs among parents/caregivers of middle school-aged children, to be repeated annually. SAMHSA used the Qualtrics[©] Survey platform to develop and disseminate the electronic questionnaire. The instrument was fielded among a proprietary panel sample that is amassed and managed by Qualtrics. The sample was pulled from a research panel of approximately 18 million research participants. The sample comes from traditional, actively managed, double-opt-in market research panels, with the final data collection aligning with U.S. Census demographic data. The questionnaire launched in December 2019. All 5,000 planned completes were achieved by mid-January 2020. Evaluators are now in the process of developing and executing an analytics plan. A final report of findings is scheduled for delivery by April 2020.

Trends Analysis Project

As part of its evaluation triangulation efforts, SAMHSA also recently completed work on a trends analysis project. Again, whereas the parent questionnaire and case study projects track short- and intermediate-term outcomes of the TTHY campaign, the trends analysis attempts to track the longer-term outcomes of whether there has been an effect on underage drinking since the launch of TTHY in 2013.

The trends analysis included a systematic investigation of the characteristics and potential impact of alcohol use by 12- to 21-year-old youth in the United States by analyzing two national public health databases from 2010–17: The NSDUH and the Youth Risk Behavior Surveillance System (YRBSS). A topline summary of trends analysis findings and a detailed data report were completed in the 3rd and 4th quarters of 2019; they can be provided from SAMHSA’s archives upon request.

Overall, the trends data demonstrate a negative downward trend in underage alcohol use. Although approximately half of youth ages 12–21 have tried alcohol, this downward trend is

noted across all age groups and ethnicities (and, according to the NSDUH data, geographic locations). Both data sets indicate that the current average age of initiation is 15 years, with NSDUH data demonstrating that the magnitude of alcohol use is decreasing over time across all age groups, and YRBSS data suggesting that youth are pushing their first use of alcohol to older ages. For instance, in 2011, the most common age of initiation was 9–10 years (30 percent) and 11–12 years (30.1 percent), but in 2017, 15–16 years was the most common age of initiation. As part of the federally coordinated approach to address the problem of underage drinking, the combined efforts of ICCPUD’s member agencies play an important role in the prevention and reduction of underage alcohol use. SAMHSA’s TTHY campaign contributes to these underage drinking prevention and reduction efforts.

Conclusions

Supporting the development and justification of the TTHY campaign involves a complex interplay of formative, process, and outcomes evaluation efforts. Evaluation findings to date suggest that SAMHSA has met many markers for early success, including strongly resonating with intended TTHY audiences. The growing body of evidence presented in this report supports that key campaign messages serve as important cues to action that increase both the plans and actions of parents to talk with their children about underage drinking. There is further evidence to suggest that TTHY increases parents’ confidence not only in talking with their children about underage drinking but also in the behavioral efficacy of that action.

In meeting the requirements of the STOP Act, SAMHSA, under the leadership of ICCPUD, will continue to garner support for program efficacy over the next 2 years. For instance, SAMHSA’s evaluation plans for the upcoming 2020–21 evaluation cycle, which includes the parent questionnaire and case study replication, will continue to establish links between TTHY exposure and the campaign’s stated outcomes in quantifiable ways. Armed with data from these and future efforts, SAMHSA will persist in its work to estimate overall campaign impact, as well as to ensure that the TTHY campaign evolves in ways that resonate with its primary target audiences and meet the needs of the U.S. population at large.

APPENDIX A: ICCPUD Members

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

Surgeon General

U.S. Department of Health and Human Services

Alex M. Azar, II

Secretary

U.S. Department of Health and Human Services

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

Mark Esper

Secretary

U.S. Department of Defense

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 F. Koob, Ph.D.

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

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 Simons

Chair

Federal Trade Commission

Nora D. Volkow, M.D.

Director

National Institute on Drug Abuse

National Institutes of Health

U.S. Department of Health and Human Services

APPENDIX B: Surveys

Information about underage alcohol use, abuse, and consequences primarily comes from three federally funded surveys—the National Survey on Drug Use and Health (NSDUH), Monitoring the Future (MTF; conducted pursuant to federal grants), and the national Youth Risk Behavior Survey (YRBS). Each of these surveys makes a unique contribution to our understanding of the nature of youth alcohol use.

- NSDUH assesses illicit drug, alcohol, and tobacco use among noninstitutionalized individuals age 12 and older and serves as the major federal source of nationally representative data on substance use in the general population of the United States.
- MTF examines attitudes and behaviors of 8th, 10th, and 12th graders with regard to alcohol, drug, and tobacco use and provides important data on substance use and the attitudes and beliefs that may contribute to such behaviors.
- YRBS examines risk behaviors among high school students and provides vital information on specific behaviors that cause the most significant health problems among American youth.

It is important to note that each of these surveys uses different methodologies, and for that reason, sometimes generate different prevalence estimates of youth substance use.

To improve federal policymakers' understanding of the influence of methodological differences on those estimates, the Office of the Assistant Secretary for Planning and Evaluation within the Department of Health and Human Services (HHS) commissioned a group of recognized experts in survey design, sampling techniques, and statistical analysis to examine and compare the survey methodologies. The resulting papers and accompanying federal commentaries appeared in a special issue of the *Journal of Drug Issues* (Volume 31, Number 3, Spring 2001).

Experts agreed that the overall methodology for each survey is strong and that observed differences are not the result of flaws or serious weaknesses in survey design. In fact, some differences are to be expected—such as those resulting from home- versus school-based settings. From a policy perspective, serious and complex issues such as youth alcohol use and related behavior often require examination and analysis from multiple perspectives. Because no one survey is absolute or perfectly precise, input from multiple sources is not only valuable, but necessary.

National Survey on Drug Use and Health (NSDUH)

As noted, NSDUH is the primary source of information on the use of illicit drugs, alcohol, and tobacco in the civilian, noninstitutionalized population of the United States age 12 or older. The survey also collects information on mental health and mental health service utilization among youth ages 12 to 17 and adults age 18 or older.

Initiated in 1971 and conducted annually since 1990, questionnaires are administered to individuals who constitute a representative sample of the population through face-to-face, home-based interviews. The Substance Abuse and Mental Health Services Administration (SAMHSA) sponsors the survey, and it is planned and managed by SAMHSA's Center for Behavioral Health Statistics and Quality (CBHSQ). 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 2022 sample design allocates more interviews to the largest 12 states, enabling greater precision for national NSDUH estimates. For the 2018 survey, 67,791 interviews were completed, for a weighted response rate of 66.6 percent.

Due to improvements in the survey in 2002, the 2002 data constitute a new baseline for tracking trends in substance use (before 2002, NSDUH was called the National Household Survey on Drug Abuse [NHSDA]). For that reason, SAMHSA recommends that estimates from 2002 forward not be compared with estimates from 2001. In 2015, substantial changes were again made to data collection equipment, respondent materials, and the survey questionnaire used for NSDUH to improve quality and address changing research needs. Where noted, some trend data will not be available for several years.

Two modifications were made to the NSDUH questionnaire in 2017 that affect alcohol measures:

- Respondents who reported using alcohol in the past 30 days and also reported using alcohol on 0 days in that period were no longer defined as being past-month alcohol users. Due to programmed logic, such respondents in 2017 were not asked subsequent questions in the consumption of alcohol section that applied to past-month alcohol users, and were not asked about the misuse of prescription drugs with alcohol in the past 30 days.
- The logic for determining respondents' eligibility to be asked questions about alcohol use disorder was updated. 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.
- Modifications made for the 2018 questionnaire related to alcohol consumption were directed at adult respondents only.

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 2018, completed questionnaires were obtained from 89 percent of all sampled students in 8th grade (n=14,800), 86 percent in 10th grade (n=15,100), and 81 percent in 12th grade (n=14,500).

University of Michigan staff members administer the questionnaires to students, usually in their classrooms during a regular class period. Questionnaires are self-completed and formatted for optical scanning. In 8th and 10th grades, the questionnaires are completely anonymous. In the 12th grade, they are confidential (to permit longitudinal follow-up of a random subsample of participants). Extensive procedures are followed to protect the confidentiality of subjects and their data.

Youth Risk Behavior Survey (YRBS)

In the late 1980s, only a limited number of health-related school-based surveys such as MTF existed in the United States. To remedy this, the Centers for Disease Control and Prevention (CDC) developed the Youth Risk Behavior Surveillance System (YRBSS) to monitor six categories of priority health-risk behaviors that contribute substantially to the leading causes of death, disability, and social problems among youth and young adults.

YRBSS includes biennial national, state, and local school-based surveys of representative samples of students in grades 9 through 12, as well as other national and special-population surveys. CDC conducts the national survey—YRBS—with a target population composed of all public and private high school students in the 50 states and the District of Columbia. Education and health agencies conduct state and local surveys.

The national sample is not an aggregation of state and local surveys, and state and local estimates cannot be obtained from the national sample. In 2017, the latest year for which data are available, 14,765 students provided usable questionnaires for the national YRBS for an overall student 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 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/yrhs>
- *Information from NHTSA on underage drinking and on drinking and driving:*

<https://www.trafficsafetymarketing.gov/get-materials/drunk-driving/underage-drinking-prevention>

<https://one.nhtsa.gov/Driving-Safety/Impaired-Driving>

- *Information from NIAAA on underage drinking:*

<https://www.niaaa.nih.gov/alcohol-health/special-populations-co-occurring-disorders/underage-drinking>

<https://www.niaaa.nih.gov/alcohol-health/special-populations-co-occurring-disorders/college-drinking>

- *Information from NIDA on underage drinking:*

<http://www.monitoringthefuture.org>

APPENDIX C: Abbreviations

Federal Departments and Agencies

Department of Defense

Army National Guard	DoD
Education Activity	ARNG
U.S. Air Force	DoDEA
U.S. Army Reserve	USAF
U.S. Coast Guard	USAR
U.S. Marine Corps	USCG
U.S. Navy	USMC

Department of Education

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

Department of Health and Human Services

Administration for Children and Families	HHS
Family and Youth Services Bureau	ACF
Agency for Healthcare Research and Quality	FYSB
Centers for Disease Control and Prevention	AHRQ
Centers for Medicare & Medicaid Services	CDC
Division of Behavioral Health	CMS
<i>Eunice Kennedy Shriver</i> National Institute of Child Health and Human Development	DBH
Food and Drug Administration	NICHD
Health Resources and Services Administration	FDA
Indian Health Service	HRSA
National Cancer Institute	IHS
National Institute on Alcohol Abuse and Alcoholism	NCI
National Institute on Drug Abuse	NIAAA
National Institutes of Health	NIDA
Office of Adolescent Health	NIH
Office of Disease Prevention and Health Promotion	OAH
Office of the Assistant Secretary for Health	ODPHP
Office of the Assistant Secretary for Planning and Evaluation	OASH
Office of Public Health and Science	ASPE
Office of the Surgeon General	OPHS
Substance Abuse and Mental Health Services Administration	OSG
Center for Mental Health Services	SAMHSA
Center for Substance Abuse Prevention	CMHS
Center for Substance Abuse Treatment	CSAP
Office of Applied Studies	CSAT
	OAS

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

Programs, Agencies, and Organizations

Addiction Technology Transfer Center	ATTC
Adolescent Brain Cognitive Development Study	ABCD
Adolescent Health: Think, Act, Grow	TAG
Adolescent Support and Counseling Services	ASACS
Alcohol and Drug Abuse Prevention Training	ADAPT
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
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
Communities that Care	CTC
Drug Abuse Warning Network	DAWN
Drug Free Communities Program	DFC
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
Indian Children's Program	ICP
Institute of Medicine (now National Academy of Medicine)	IOM

Interagency Coordinating Committee on the Prevention of Underage Drinking	ICCPUD
International Association of Chiefs of Police	IACP
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 Center for Health Statistics	NCHS
National Center for Statistics and Analysis	NCSA
National Consortium on Alcohol and Neurodevelopment in Adolescence	NCANDA
National Drug and Alcohol Facts Week	NDAFW
National Epidemiologic Survey on Alcohol and Related Conditions	NESARC
National Health Interview Survey	NHIS
National Household Survey on Drug Abuse	NHSDA
National Mental Health Services Survey	N-MHSS
National Organizations for Youth Safety	NOYS
National Prevention Network	NPN
National Research Council	NRC
National Survey on Drug Use and Health	NSDUH
National Violent Death Reporting System	NVDRS
Navy Alcohol and Drug Abuse Prevention	NADAP
Offender Reentry Program	ORP
Office of Indian Alcohol and Substance Abuse	OIASA
Office of the Assistant Secretary for Planning and Evaluation	ASPE
Pacific Institute for Research and Evaluation	PIRE
Partnerships for Success	PFS
Pregnancy Risk Assessment Monitoring System	PRAMS
PRIME for Life	PFL
PROmoting School/Community-University Partnerships to Enhance Resilience	PROSPER
Screening, Brief Intervention, Referral, and Treatment	SBIRT
Sexual Assault Prevention and Response	SAPR
Skills, Mastery, and Resistance Training	SMART
Sober Truth on Preventing Underage Drinking Act	STOP Act
State Highway Safety Offices	SHSOs
Strategic Prevention Framework	SPF
Substance Abuse Prevention and Treatment Block Grant	SABG
Talk. They Hear You. [®]	TTHY
Unit Marine Awareness and Prevention Integrated Training	UMAPIT
We Don't Serve Teens	WDST
Web-based Injury Statistics Query and Reporting System	WISQARS TM
Youth Regional Treatment Centers	YRTCs
Youth Risk Behavior Surveillance System	YRBSS
Youth Risk Behavior Survey	YRBS

Other Acronyms

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
Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition	DSM-IV-TR
Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition	DSM-V
Evidence-based practices	EBPs
Family Violence Prevention and Services Act	FVPSA
Fetal alcohol spectrum disorders	FASDs
Knowledge, attitudes, and behaviors	KABs
Memorandum of understanding	MOU
Minimum legal drinking age	MLDA
Public service announcement	PSA
Screening and brief intervention	SBI
Substance abuse counseling center	SACC
Substance abuse program	SAP
Training and technical assistance	TTA
Years of potential life lost	YPLL

APPENDIX D: References

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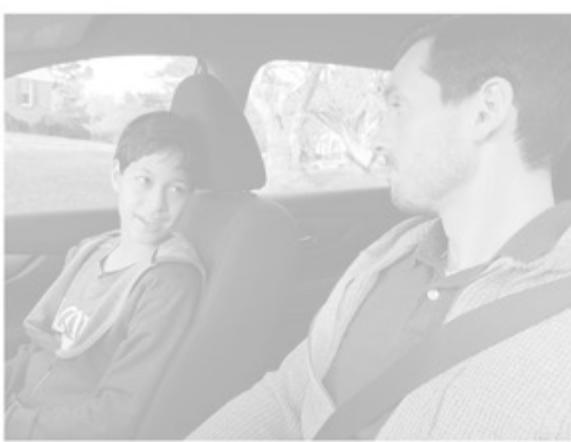
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