CHAPTER 1

Preventing and Reducing Underage Drinking: An Overview

This document is excerpted from:
The September 2016 Report to Congress on the Prevention and Reduction of Underage Drinking

Introduction

Alcohol remains the most widely used substance of abuse among America's youth. According to the Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality (CBHSQ), through a special analysis based on 2014 data, a higher percentage of youth who are 12 to 20 years old used alcohol in the past month (22.8 percent) than tobacco (15.3 percent) or illicit drugs (14.0 percent) (CBHSQ, 2015c). The extent of alcohol consumption by those younger than the legal drinking age of 21 constitutes a serious threat to both public health and public safety. In response, governments at the federal, state, and local levels have sought to develop effective approaches to reduce underage drinking and its associated costs and consequences. The actions of government alone, however, cannot solve this serious problem. Only a broad, committed collaboration among governments, parents of underage youth, other adults, caregivers (people who provide services to youth, such as teachers, coaches, health and mental health care providers, human services workers, and juvenile justice workers), prevention professionals, youth, and private-sector organizations and institutions can reach an effective solution to this national challenge.

Underage drinking is a complex and challenging social problem that has defied an easy solution. Although selling alcohol to youth under age 21 is illegal in all 50 states and the District of Columbia, some states make it legal to provide (but not sell) alcohol to youth under special circumstances, such as at religious ceremonies, in private residences, or in the presence of a parent or guardian. Despite broad restrictions, underage youth find it relatively easy to acquire alcohol, often from adults. Alcohol use often begins at a young age; the average age of first use for youths who initiated before age 21 is about 16.2 years old, and 10 percent of 9- to 10-year-olds have already started drinking (Donovan et al., 2004; CBHSQ, 2015c). Alcohol use increases with each additional year of age, and by age 20, more than half (51.7 percent) of youths report having had one or more drinks in the past 30 days (CBHSQ, 2015b). Underage drinkers are much more likely than adults to drink heavily and recklessly. Studies consistently indicate that about 78 percent of college students—of whom 48 percent are underage—drink alcohol, and about 35 percent of all college students engage in binge drinking (i.e., when men consume five or more drinks in a row and women consume four or more drinks in a row; National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2002).[10]

Scientific research over the past decade has broadened our understanding of the ways and extent to which underage alcohol use threatens the immediate and long-term development, well-being, and future mental development of young people. Alcohol is a leading contributor to fatal injuries and a major cause of death for people younger than 21. The potential consequences of underage drinking include alcohol-related traffic crashes and fatalities, other unintentional injuries (such as burns and drowning), increased risk of suicide and homicide, physical and sexual assault, academic and social problems, inappropriate and risky sexual activity, and adverse effects on the developing brain (NIAAA, 2005a). The consequences of underage alcohol use extend beyond underage drinkers: society also pays. For example, in 2014, 51 percent of all deaths in traffic crashes involving a 15- to 20-year-old driver with a blood alcohol concentration of 0.08 or higher

[10] Binge drinking is broadly defined as consumption of a large amount of alcohol over a relatively short period of time. No common terminology has been established to describe different drinking patterns. Specific definitions of binge drinking differ across various studies and surveys (e.g., see Courtney & Polich, 2009). In SAMHSA's National Survey on Drug Use and Health (NSDUH) data, a primary data source for this report, "binge drinking" is defined as five or more drinks on one occasion on at least 1 day in the past 30 days. Appendix B discusses this issue in more detail.

were people other than the drinking driver (e.g., passengers, occupants of other vehicles.[11] In 2006, almost $27 billion (about 12 percent) of the total $223.5 billion economic costs of excessive alcohol consumption were related to underage drinking (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011).

As noted below, the problems associated with college drinking, in addition to traffic crashes and injury-related deaths, include sexual assault or date rape; violent crime on college campuses; and academic consequences, including missing class, falling behind, doing poorly on exams or papers, and receiving lower grades overall. Campus alcohol use also affects the academic performance of nondrinkers by contributing to a noisy and disruptive environment that is not conducive to studying.

The National Effort to Reduce Underage Drinking

Underage drinking has been recognized as a public health problem for many years. Over the past 20 years, a comprehensive national effort to address underage drinking has been initiated and subsequently intensified, as the multidimensional consequences associated with underage drinking have become more apparent. Substantial progress has been made through strengthening federal policy, implementing a national media campaign, increasing and supporting the involvement of the community through grants and other mechanisms, and collaborating with private agencies, such as the Robert Wood Johnson Foundation.

After Prohibition ended in 1933, states assumed authority for alcohol control, including the enactment of laws restricting youth access to alcohol. The majority of states designated 21 as the minimum legal drinking age (MLDA) for the "purchase or public possession" of alcohol. But beyond setting a minimum drinking age, the nation's alcohol problems were largely ignored through the 1960s (NIAAA, 2005b). However, on December 31, 1970, Congress established NIAAA to "provide leadership in the national effort to reduce alcohol problems through research."

Between 1970 and 1976, 29 states lowered their MLDAs to 18, 19, or 20 years old, 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, Ferreira, & Sicherman, 1974; Douglass, Filkins, & Clark, 1974; Wagenaar, 1983, 1993; Whitehead, 1977; Whitehead et al., 1975; Williams, Rich, Zador, & Robertson, 1974). As a result, 24 of the 29 states raised their MLDAs between 1976 and 1984, although to different minimum ages. Some placed restrictions on the types of alcohol that could be consumed by people younger than 21. Only 22 states set an MLDA of 21. In response, the Federal Government enacted the National Minimum Drinking Age Act of 1984, which mandated reduced federal highway funds to states that did not raise their MLDAs to 21. By 1987, all remaining states had raised their MLDAs to 21 in response to the federal legislation.

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 the Department of Justice, through the Office of Justice Programs' Office of

[11] Special data analysis provided by the National Center for Health and Statistics, National Highway Traffic Safety Administration (NHTSA) for this report (L. Daniels, personal communication, December 22, 2015).

Juvenile Justice and Delinquency Prevention (OJJDP), establish and implement the Enforcing the Underage Drinking Laws (EUDL) program, a state- and community-based initiative.

As national concern about underage drinking grew, in part because of advances in science that increasingly revealed adverse consequences, Congress appropriated funds for a study by the National Academies to examine the relevant literature to "review existing Federal, state, and nongovernmental programs, including media-based programs, designed to change the attitudes and health behaviors of youth." The National Research Council (NRC) and the Institute of Medicine (IOM) issued the report *Reducing Underage Drinking: A Collective Responsibility* in 2004 (NRC & IOM, 2004). Since then, a number of programs aimed at preventing and reducing underage drinking have been initiated at the federal, state, and local levels. Chapter 3 describes major programs at the federal level; Chapter 4 describes initiatives at the state level.

The conference report accompanying H.R. 2673, the "Consolidated Appropriations Act of 2004," directed the Secretary of the U.S. Department of Health and Human Services (HHS) to establish the Interagency Coordinating Committee on the Prevention of Underage Drinking (ICCPUD) and to issue an annual report summarizing all federal agency activities related to the problem. The HHS Secretary directed the SAMHSA Administrator to convene ICCPUD in 2004. ICCPUD includes representatives from HHS's Office of the Surgeon General (OSG), Centers for Disease Control and Prevention (CDC), Administration for Children and Families, Office of the Assistant Secretary for Planning and Evaluation, and National Institutes of Health, including NIAAA and the National Institute on Drug Abuse; U.S. Department of Justice, OJJDP; Office of Safe and Healthy Students; Department of Transportation, National Highway Traffic Safety Administration; White House Office of National Drug Control Policy; Department of the Treasury; U.S. Department of Defense; and Federal Trade Commission (FTC).

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

In December 2006, Congress passed the Sober Truth on Preventing (STOP) Underage Drinking Act, Public Law 109-422, popularly known as the STOP Act. The Act states, "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 also calls for three annual reports:

1. A report to Congress from the HHS Secretary that includes:
   - A description of all programs and policies of federal agencies 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.
- Measures of the exposure of underage populations to messages regarding alcohol in advertising and the entertainment media, as reported by the FTC.
- Surveillance data, including information about the onset and prevalence of underage drinking, consumption patterns, and the means of underage access, and certain other data included in the report.
- Such other information regarding underage drinking as the Secretary determines to be appropriate.

2. A report on state underage drinking-prevention and enforcement activities that includes:
   - A set of measures to be used in preparing the report on best practices.
   - Categories of underage-drinking-prevention policies, enforcement practices, and programs (see Chapter 4 for a list of specific categories).
   - Additional information on state efforts or programs not specifically included in the Act.

3. A report on the national media campaign mandated by the STOP Act, including the production, broadcasting and evaluation of the campaign, and the effectiveness of the campaign.

Chapters 1 through 3 of this document constitute the report to Congress on underage drinking; Chapter 4 and the individual state reports at the end of the document constitute the State Report. Chapter 5 constitutes the Report to Congress on the National Media Campaign to prevent underage drinking. Together, these reports fulfill the STOP Act mandate and are designed to build on the efforts that precede it. For example, the State Report provides data that provide a substantial resource for state and local coalitions and policymakers. It reports on comprehensive assessments of state underage drinking laws, policies, and programs in individual state reports. This is critical information for states as a foundation for enhancing their underage drinking prevention efforts.

In fall 2005, ICCPUD sponsored a national meeting of the states to prevent and reduce underage alcohol use. At the meeting, the Surgeon General announced his intent to issue a *Call to Action* on the prevention and reduction of underage drinking. Subsequently, OSG worked closely with SAMHSA and NIAAA to develop the report. In 2007, the *Surgeon General's Call to Action to Prevent and Reduce Underage Drinking*, the first on that subject, was issued (Office of the Surgeon General, 2007). Based on the latest and most authoritative research, particularly on underage drinking as a developmental issue, the *SG's Call to Action* outlines a comprehensive national effort to prevent and reduce underage alcohol consumption. It includes six goals and describes the rationale, challenges, and strategies of each goal, including specific actions for parents and other caregivers, communities, schools, colleges and universities, the criminal and juvenile justice systems, law enforcement, the alcohol industry, and the entertainment and media industries.

ICCPUD agencies collaborated to provide information and data for the *SG's Call to Action.* The 2006 Federal Comprehensive Plan set forth three general goals:

1. Strengthening a national commitment to address underage drinking

2. Reducing demand for, availability of, and access to alcohol by people younger than 21 years
3. Using research, evaluation, and scientific surveillance to improve the effectiveness of policies and programs designed to prevent and reduce underage drinking

The six specific goals and associated strategies in the *SG's Call to Action* for the nation build on these three general goals.

As the nation's leading medical spokesperson, the Surgeon General is in a unique position to call attention to national health problems. By issuing the *SG's Call to Action,* the Surgeon General sought to raise public awareness and foster changes in American society—goals similar to those described to Congress in the Comprehensive Plan. The *SG's Call to Action* has incorporated—and, therefore, superseded—the Comprehensive Plan.

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

Principles and Goals of the *SG's Call to Action*

The national effort to prevent and reduce underage drinking outlined in the *SG's Call to Action* is based on the following principles from which its goals were derived:

- *Underage alcohol use is a phenomenon directly related to human development.* Because of the nature of adolescence, alcohol poses a powerful attraction to adolescents and can have unpredictable outcomes that put every child at risk.
- *Factors that protect adolescents from alcohol use, as well as put them at greater risk, change during the course of adolescence.* Individual characteristics, developmental issues, and shifting factors in adolescents' environments all play a role.
- *Protecting adolescents from alcohol use requires a comprehensive, developmentally based approach* that is initiated prior to puberty and continues throughout adolescence with support from families, schools, colleges, communities, the healthcare system, and government.
- *Prevention and reduction of underage drinking is the collective responsibility of the nation.* "Scaffolding the nation's youth"[12] is the responsibility of all people in all of the social systems with which adolescents interact: family, schools, communities, healthcare systems, religious institutions, criminal and juvenile justice systems, all levels of government, and society as a whole. Each social system has a potential effect on the adolescent, and the active involvement of all systems is necessary to fully maximize existing resources to prevent

[12] "Scaffolding the nation's youth" is the Surgeon General's term for a structured process through which parents and society facilitate positive adolescent development and minimize risk by protecting against adolescents' natural risk-taking, sensation-seeking tendencies. It is a fitting metaphor for the support and protection that parents and society provide children and youth to help them function in a more mature way until they are ready to function without that extra support. This external support system—or scaffold—around the adolescent promotes healthy development and protects against alcohol use and other risky behaviors by facilitating good decisionmaking, mitigating risk factors, and buffering the potentially destructive outside influences that draw adolescents to use alcohol.

underage drinking and its related problems. When all of the social systems work together toward the common goal of preventing and reducing underage drinking, they create a powerful synergy that is critical to realizing the vision.

- *Underage alcohol use is not inevitable, and parents and society are not helpless to prevent it.* The *SG's Call to Action* proposes a vision for the future wherein each child is free to develop to his or her potential without the impairment of alcohol's negative consequences. The fulfillment of that vision rests on the achievement of six goals that the *SG's Call to Action* sets for the nation:
  - **Goal 1:** Foster changes in American society that facilitate healthy adolescent development and help prevent and reduce underage drinking.
  - **Goal 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.
  - **Goal 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.
  - **Goal 4:** Conduct additional research on adolescent alcohol use and its relationship to development.
  - **Goal 5:** Work to improve public health surveillance on underage drinking and on population-based risk factors for this behavior.
  - **Goal 6:** Work to ensure that laws and policies at all levels are consistent with the national goal of preventing and reducing underage alcohol consumption.

The 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 *SG's Call to Action*, at http://www.surgeongeneral.gov/topics/underagedrinking/calltoaction.pdf.

Underage Drinking Among College Students

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

> The tradition of drinking has developed into a kind of culture—beliefs and customs—entrenched in every level of college students' environments. Customs handed down through generations of college drinkers reinforce students' expectation that alcohol is a necessary ingredient for social success. These beliefs and the expectations they engender exert a powerful influence over students' behavior toward alcohol.[13]

Campus drinking culture persists 13 years later (Johnston, O'Malley, Bachman, Schulenberg, & Miech, 2015a).

Extent of the Problem

Although colleges and universities vary widely in their student binge-drinking rates, overall rates of college student drinking and binge drinking exceed those of same-age peers who do not attend college (Johnston, O'Malley, Bachman, et al., 2015a). Of college students, 79.4 percent drink, and 35.4 percent report drinking five or more drinks on an occasion in the past 2 weeks. Binge-

[13] 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; Presley et al., 1996a, b).

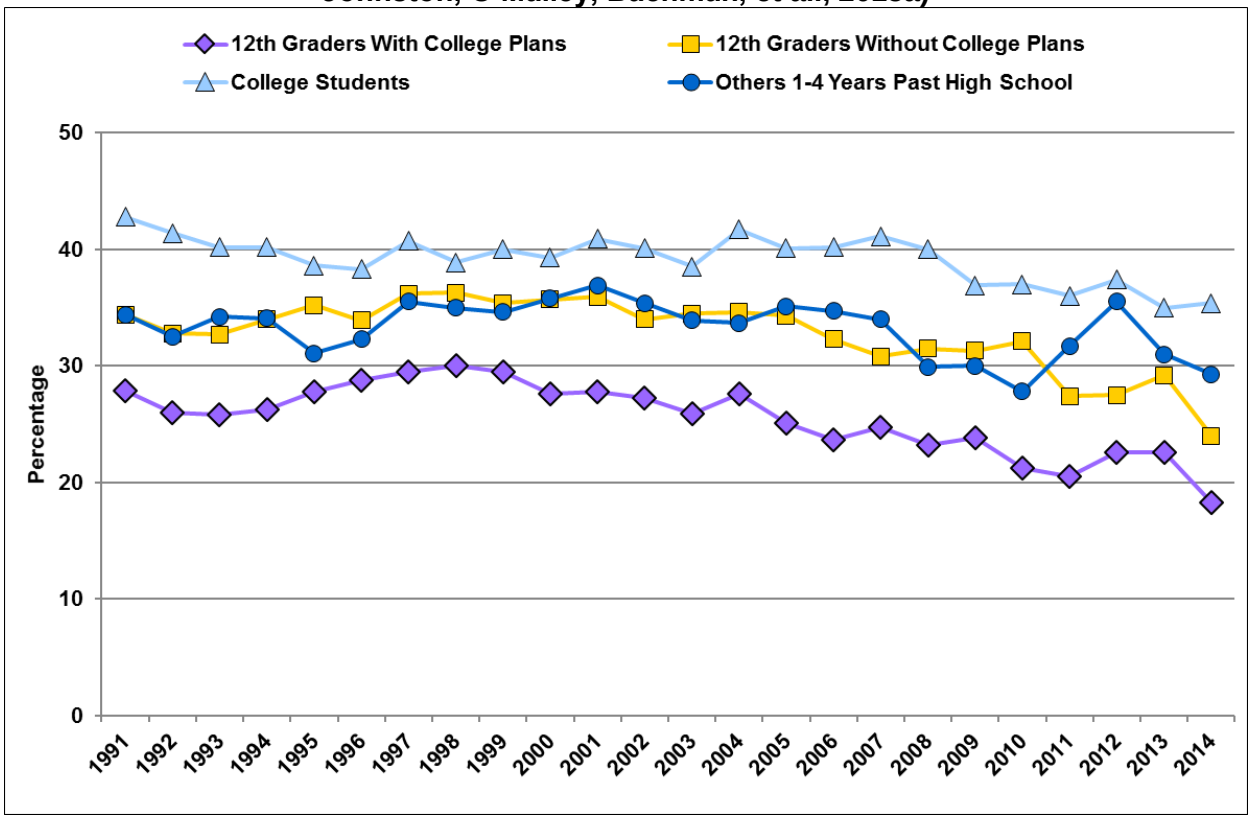
drinking rates among college students have shown little decline since 1993 (Johnston, O'Malley, Bachman, et al., 2015a). Although college-bound 12th graders are consistently less likely than non-college-bound counterparts to report heavy drinking, college students report higher rates of binge drinking than college-age youth who are not attending college (Exhibit 1.1; Johnston, O'Malley, Bachman, et al., 2015a).

This finding suggests that college environments influence drinking practices (Hingson, Heeren, Levenson, Jamanka, & Voas, 2002; Kuo, Wechsler, Greenberg, & Lee, 2003; see also LaBrie, Grant, & Hummer, 2011). Underage college students drink about 48 percent of the alcohol consumed by students at 4-year colleges (Wechsler, Lee, Nelson, & Kuo, 2002). Some college students far exceed the binge criterion of five drinks per occasion (Wechsler, Molnar, Davenport, & Baer, 1999; Wechsler & Nelson, 2008).

Adverse Consequences of College Drinking

The consequences of underage drinking in college are widespread and serious (White & Hingson, 2014). A study of roughly 5,500 college women on two campuses revealed that nearly 20 percent experienced some form of sexual assault while at college (Krebs, Lindquist, Warner, Fisher, & Martin, 2009). Estimates are that more than 97,000 students were victims of alcohol-related sexual assault. However, the incidence of college sexual assaults is difficult to measure and different studies report different rates (DeMatteo & Galloway, 2015).

Exhibit 1.1: Prevalence of Binge Drinking in the Past 2 Weeks by 12th Graders With and Without College Plans, College Students, and Others 1 to 4 Years Past High School: 1991–2014 (Miech, Johnston, O'Malley, Bachman, & Schulenberg, 2015; Johnston, O'Malley, Bachman, et al., 2015a)

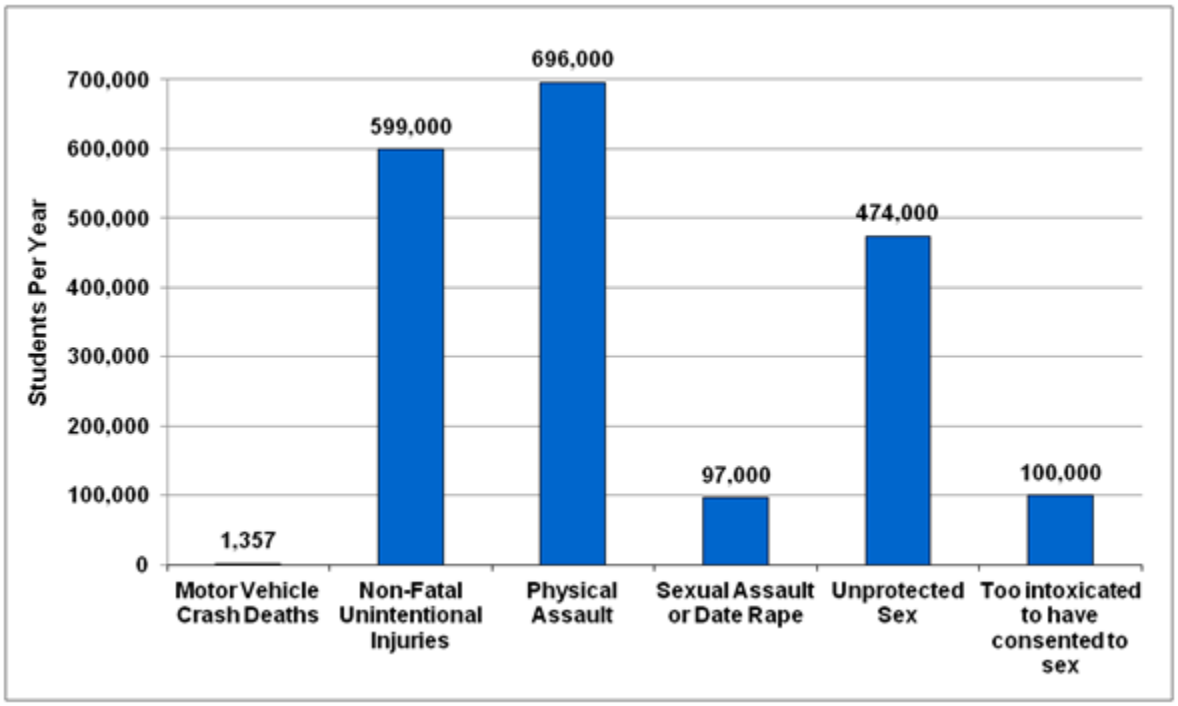


A review by Abbey (2011) of three relevant studies concluded that approximately half of all reported and unreported sexual assaults involve alcohol consumption by the perpetrator, victim, or both (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004; Seto & Barbaree, 1995; Testa, 2002). Abbey and colleagues further reported that typically, if the victim consumes alcohol, the perpetrator does as well. Estimates of perpetrators' intoxication during the incident ranged from 30 percent to 75 percent.

Many other adverse social consequences are linked with college alcohol consumption. Hingson, Zha, and Weitzman (2009) estimated that annually, more than 696,000 college students were assaulted or hit by another student who had been drinking; another 599,000 were unintentionally injured while under the influence of alcohol. In addition, they estimated that roughly 474,000 students ages 18 to 24 have had unprotected sex while under the influence of alcohol, and each year more than 100,000 students ages 18 to 24 report having had sexual intercourse when so intoxicated they were unable to consent (Hingson et al., 2009; Exhibit 1.2).

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). About 11 percent of college student drinkers report having damaged property while under the influence of alcohol (Hingson, Heeren, Winter, & Wechsler, 2005).

Exhibit 1.2: Prevalence of Alcohol-Related Morbidity and Mortality Among College Students Ages 18–24 (calculated using methods of Hingson et al., 2005, 2009)



College Drinking Prevention Best Practices

For many years, NIAAA has invested substantial resources in supporting studies on individual and environmental interventions to address college drinking. As a result, knowledge about best practices continues to grow.

NIAAA's CollegeAIM

In 2015, NIAAA launched a major new resource, CollegeAIM (the College Alcohol Intervention Matrix) to help college officials address harmful and underage student drinking. The centerpiece of CollegeAIM is a comprehensive, easy-to-use, matrix-based tool that helps inform 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 help schools make informed choices among available strategies, thereby increasing the schools' chances for success and helping to improve student health and safety.

CollegeAIM compares and rates nearly 60 types of interventions on effectiveness, anticipated costs and barriers to implementation, public health research, and research amount and quality. The matrix interventions are classified as either environmental-level strategies or individual-level strategies (Exhibits 1.3 and 1.4). Environmental-level strategies target the campus community and student population as a whole. Individual-level strategies focus on individual students, including those in higher risk groups such as first-year students, student-athletes, and members of Greek organizations. See http://www.stopalcoholabuse.gov for more detail about the strategies; go to Report to Congress, Supplemental Information, [Individual-Level Strategies and Environmental-Level Strategies Summary Tables].

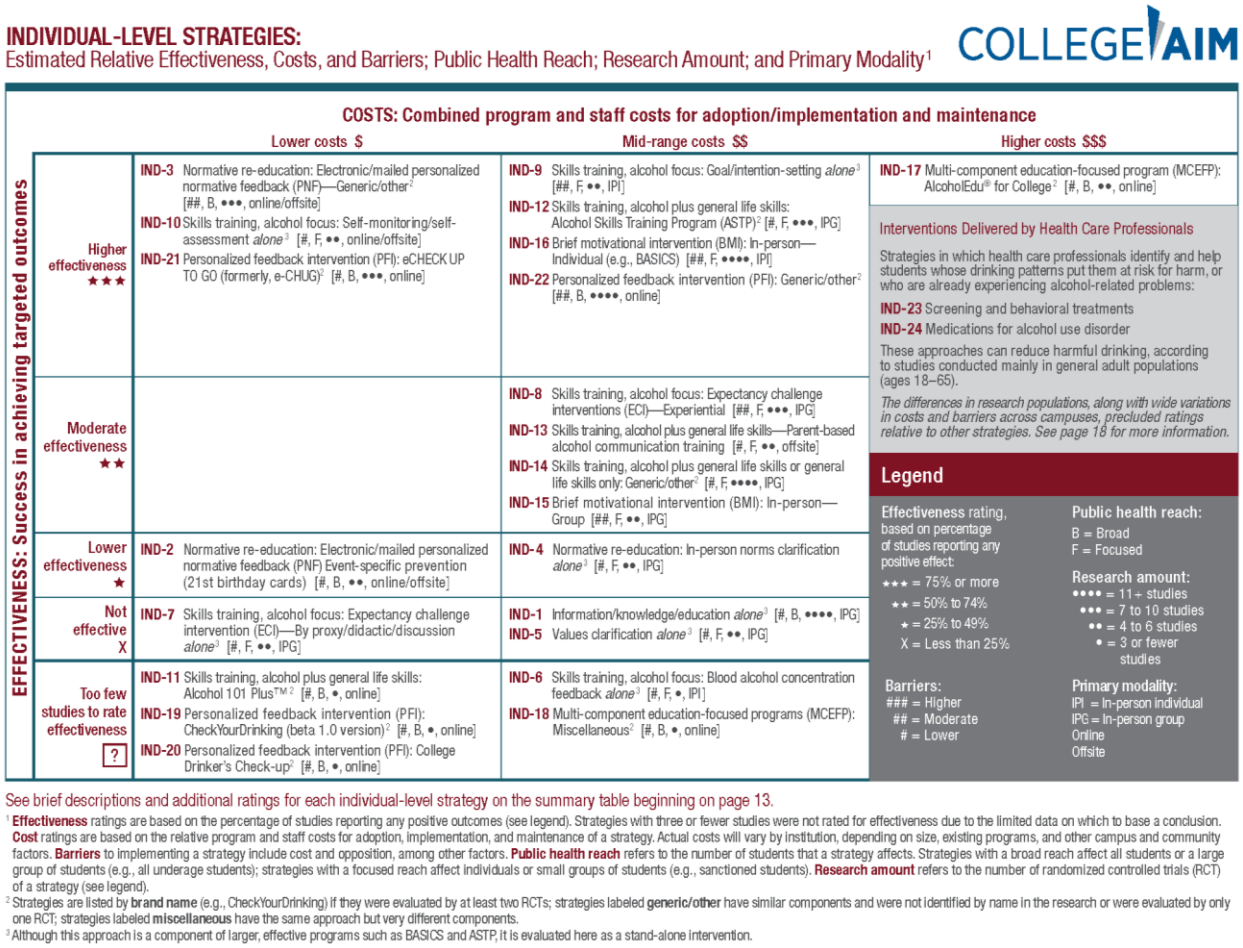
With CollegeAIM, school officials can learn how their current strategies compare with other alternatives; discover possible new strategies to consider; and select a combination of approaches that best meets the particular needs of their students and campuses. Further information about CollegeAIM, including a detailed FAQ section and a strategy planning worksheet for college prevention staff, is available at http://www.collegedrinkingprevention.gov/collegeaim.

Mixing Alcoholic Beverages with Other Drugs: The Case of Caffeinated Alcoholic Beverages

People have for millennia experimented with combining alcohol with other mind-altering substances to intensify alcohol's intoxicating effects. A recent example of this phenomenon popular with young people involves combining alcohol with caffeine. This combination is not new—for example, Irish coffee, a traditional bar drink, combines caffeinated coffee and whisky. However, the popularity of such combinations among young people has increased rapidly in the past 10 years with the increase in availability of energy drinks (which often contain large quantities of caffeine) and the introduction of premixed caffeinated alcoholic beverages (CABs).

Research suggests that mixing alcohol and caffeine poses public health and safety risks, because the caffeine can mask the depressant effects of alcohol without changing the alcohol's intoxicating properties (http://www.cdc.gov/alcohol/fact-sheets/cab.htm). This could lead some to believe they are more capable of operating a vehicle, and presents other risks such as encouraging binge drinking, particularly among young drinkers.

Exhibit 1.3: NIAAA College Alcohol Intervention Matrix, Individual-Level Strategies (Source: NIAAA)



INDIVIDUAL-LEVEL STRATEGIES:
Estimated Relative Effectiveness, Costs, and Barriers; Public Health Reach; Research Amount; and Primary Modality[1]

COLLEGE AIM

COSTS: Combined program and staff costs for adoption/implementation and maintenance

EFFECTIVENESS: Success in achieving targeted outcomes

	Lower costs $	Mid-range costs $$	Higher costs $$$
Higher effectiveness ★★★	**IND-3** Normative re-education: Electronic/mailed personalized normative feedback (PNF)—Generic/other[2] [##, B, ●●●, online/offsite] **IND-10** Skills training, alcohol focus: Self-monitoring/self-assessment *alone*[3] [#, F, ●●, online/offsite] **IND-21** Personalized feedback intervention (PFI): eCHECK UP TO GO (formerly, e-CHUG)[2] [#, B, ●●●, online]	**IND-9** Skills training, alcohol focus: Goal/intention-setting *alone*[3] [##, F, ●●, IPI] **IND-12** Skills training, alcohol plus general life skills: Alcohol Skills Training Program (ASTP)[2] [#, F, ●●●, IPG] **IND-16** Brief motivational intervention (BMI): In-person—Individual (e.g., BASICS) [##, F, ●●●●, IPI] **IND-22** Personalized feedback intervention (PFI): Generic/other[2] [##, B, ●●●●, online]	**IND-17** Multi-component education-focused program (MCEFP): AlcoholEdu® for College[2] [#, B, ●●, online] **Interventions Delivered by Health Care Professionals** Strategies in which health care professionals identify and help students whose drinking patterns put them at risk for harm, or who are already experiencing alcohol-related problems: **IND-23** Screening and behavioral treatments **IND-24** Medications for alcohol use disorder These approaches can reduce harmful drinking, according to studies conducted mainly in general adult populations (ages 18–65). *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.*
Moderate effectiveness ★★		**IND-8** Skills training, alcohol focus: Expectancy challenge interventions (ECI)—Experiential [##, F, ●●●, IPG] **IND-13** Skills training, alcohol plus general life skills—Parent-based alcohol communication training [#, F, ●●, offsite] **IND-14** Skills training, alcohol plus general life skills or general life skills only: Generic/other[2] [#, F, ●●●●, IPG] **IND-15** Brief motivational intervention (BMI): In-person—Group [##, F, ●●, IPG]	
Lower effectiveness ★	**IND-2** Normative re-education: Electronic/mailed personalized normative feedback (PNF) Event-specific prevention (21st birthday cards) [#, B, ●●, online/offsite]	**IND-4** Normative re-education: In-person norms clarification *alone*[3] [#, F, ●●, IPG]	
Not effective X	**IND-7** Skills training, alcohol focus: Expectancy challenge intervention (ECI)—By proxy/didactic/discussion *alone*[3] [#, F, ●●, IPG]	**IND-1** Information/knowledge/education *alone*[3] [#, B, ●●●●, IPG] **IND-5** Values clarification *alone*[3] [#, F, ●●, IPG]	
Too few studies to rate effectiveness ?	**IND-11** Skills training, alcohol plus general life skills: Alcohol 101 Plus™[2] [#, B, ●, online] **IND-19** Personalized feedback intervention (PFI): CheckYourDrinking (beta 1.0 version)[2] [#, B, ●, online] **IND-20** Personalized feedback intervention (PFI): College Drinker's Check-up[2] [#, B, ●, online]	**IND-6** Skills training, alcohol focus: Blood alcohol concentration feedback *alone*[3] [#, F, ●, IPI] **IND-18** Multi-component education-focused programs (MCEFP): Miscellaneous[2] [#, B, ●, online]	

Legend

Effectiveness rating, based on percentage of studies reporting any positive effect:
★★★ = 75% or more
★★ = 50% to 74%
★ = 25% to 49%
X = Less than 25%

Public health reach:
B = Broad
F = Focused

Research amount:
●●●● = 11+ studies
●●● = 7 to 10 studies
●● = 4 to 6 studies
● = 3 or fewer studies

Barriers:
= Higher
= Moderate
= Lower

Primary modality:
IPI = In-person individual
IPG = In-person group
Online
Offsite

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

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

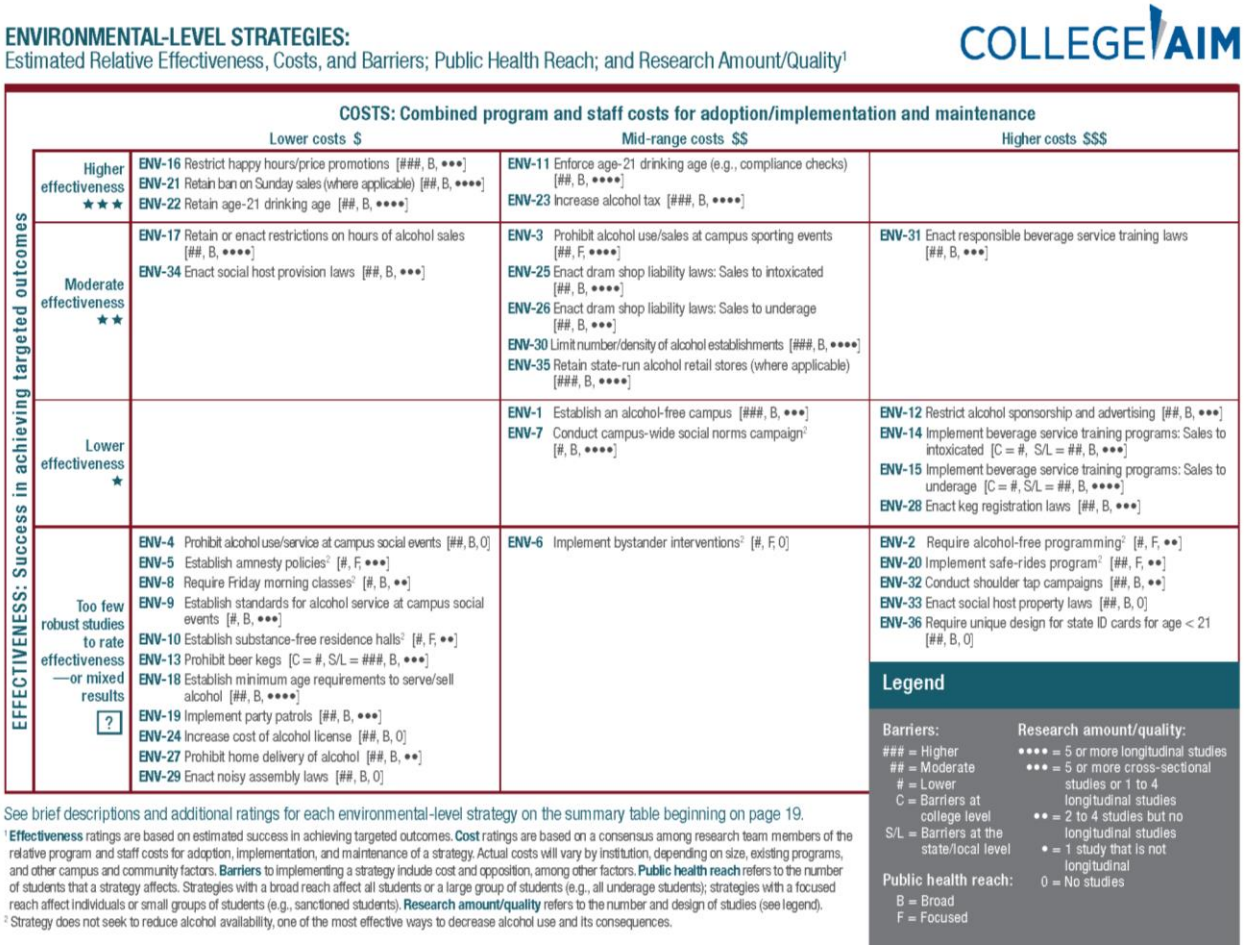
[2] Strategies are listed by **brand name** (e.g., CheckYourDrinking) if they were evaluated by at least two RCTs; strategies labeled **generic/other** have similar components and were not identified by name in the research or were evaluated by only one RCT; strategies labeled **miscellaneous** have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

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

In 2007, these 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. 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 took coordinated action to address these concerns, issuing warning letters to four manufacturers of caffeinated beverages:

- The 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.
- The Federal Trade Commission's letters advised that the marketing and sale of caffeinated alcohol could constitute an unfair or deceptive act in violation of the Federal Trade Commission Act; it urged the companies to take "swift and appropriate steps to protect consumers."
- The Alcohol and Tobacco Tax and Trade Bureau letters warned that adulterated caffeinated malt beverages were mislabeled under the Federal Alcohol Administration Act.

Exhibit 1.4: NIAAA College Alcohol Intervention Matrix, Environmental-Level Strategies (Source: NIAAA)



ENVIRONMENTAL-LEVEL STRATEGIES:
Estimated Relative Effectiveness, Costs, and Barriers; Public Health Reach; and Research Amount/Quality[1]

COLLEGE AIM

COSTS: Combined program and staff costs for adoption/implementation and maintenance

EFFECTIVENESS: Success in achieving targeted outcomes

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

Legend

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

Public health reach:
B = Broad
F = Focused

Research amount/quality:
●●●● = 5 or more longitudinal studies
●●● = 5 or more cross-sectional studies or 1 to 4 longitudinal studies
●● = 2 to 4 studies but no longitudinal studies
● = 1 study that is not longitudinal
0 = No studies

See brief descriptions and additional ratings for each environmental-level strategy on the summary table beginning on page 19.

[1] **Effectiveness** ratings are based on estimated success in achieving targeted outcomes. **Cost** ratings are based on a consensus among research team members of the relative program and staff costs for adoption, implementation, and maintenance of a strategy. Actual costs will vary by institution, depending on size, existing programs, and other campus and community factors. **Barriers** to implementing a strategy include cost and opposition, among other factors. **Public health reach** refers to the number of students that a strategy affects. Strategies with a broad reach affect all students or a large group of students (e.g., all underage students); strategies with a focused reach affect individuals or small groups of students (e.g., sanctioned students). **Research amount/quality** refers to the number and design of studies (see legend).

[2] Strategy does not seek to reduce alcohol availability, one of the most effective ways to decrease alcohol use and its consequences.

The letters stated that further action, including seizure and injunction, was possible.[14] In response, the four companies ceased using added caffeine in their products; by summer 2011, with few (if any) exceptions, malt-based CABs were no longer available in the United States.[15] In parallel with the federal actions against CABs, numerous states enacted statutory or administrative bans on such beverages.

Young people continue to mix alcohol and energy drinks on their own, despite the Federal Government's removal of CABs from the marketplace. An NIAAA research study assessed the extent of this practice and its public health and safety effects on college students (Patrick & Maggs, 2014). A sample of 508 students reported alcohol and energy drink use on 4,203

[14] See http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm233987.htm#2. The FDA investigation and warning letters involved companies that produce 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).

[15] 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 (http://www.stopalcoholabuse.gov/media/ReportToCongress/2012/report_main/report_to_congress_2012.pdf), Appendix E.

days over seven semesters, starting in their freshman year. Of the sample, 30.5 percent reported combined use at least once, and respondents consumed energy drinks on 9.6 percent of the days when they reported drinking alcohol. Heavier drinking, longer times drinking, and increased negative effects occurred when alcohol was combined with energy drinks, compared with drinking occasions without energy drinks. The research suggests that continued attention to this issue is needed among policymakers and educators.

Federal and State Actions Regarding Powdered Alcohol

On March 10, 2015, the TTB, which approves alcohol labeling, issued label approvals for Palcohol, a powdered product. A container of Palcohol contains 1 ounce of powder, which, which, when mixed as directed with 200 milliliters of water, results in a beverage with 10 percent alcohol by volume. The company has approval to market five versions: vodka, rum, cosmopolitan, lemon drop, and powderita (margarita flavor). Public health professionals and state government officials raised concerns that, because powdered alcohol is easy to conceal and transport, it would appeal to underage drinkers (Naimi & Mosher, 2015). They also argued that the product raises 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.[16] Two recent studies suggest that underage drinkers would consume powdered alcohol if they had access to it (Stogner, Baldwin, Brown, & Chick, 2015; Vail-Smith, Chaney, Martin, & Chaney, 2016).

The states have authority to determine which alcohol products may be sold within their borders. The sale of powdered alcohol was already illegal in Alaska, dating back to 1995. As of November 2015, 26 other states had enacted a permanent or temporary ban on powdered alcohol. Alabama, Connecticut, Georgia, Hawaii, Illinois, Indiana, Kansas, Louisiana, Maine, Michigan, Nebraska, Nevada, New Jersey, New York, North Carolina, North Dakota, Ohio, Oregon, South Carolina, Tennessee, Utah, Vermont, Virginia, and Washington statutorily prohibit the sale of powdered alcohol. Maryland and Minnesota have enacted temporary 13-month statutory bans. Four states—Colorado, Delaware, Michigan, and New Mexico—have expanded the statutory definition of alcohol so that powdered alcohol can be regulated under their existing alcohol statutes. Bills have also been introduced in 11 state legislatures (Arizona, Florida, Iowa, Massachusetts, Missouri, New Mexico, Oklahoma, Pennsylvania, Rhode Island, Wisconsin, and Wyoming) and the District of Columbia to ban the sale of powdered alcohol, and in Kentucky to expand the statutory definition of alcohol to include powdered alcohol. Additionally, two control states—Massachusetts and Pennsylvania—will not sell powdered alcohol in their state stores. Visit http://www.stopalcoholabuse.gov for complete legal citations; go to Report to Congress, Supplemental Information, State Report Citations.

As of February 2016, powdered alcohol products were not available for purchase in the United States.

[16] See http://www.cbsnews.com/news/palcohol-powdered-alcohol-may-present-serious-health-risks; http://www.house.leg.state.mn.us/members/pressrelease.asp?pressid=8577&party=1&memid=10753

Extent of Progress

The STOP Act requires the HHS Secretary to report to Congress on "the extent of progress in preventing and reducing underage drinking nationally." An examination of trend data reported in federally sponsored surveys suggests that meaningful progress is being made in reducing the extent of underage drinking. It is generally inadvisable to draw conclusions based on changes from one year to the next because of natural fluctuations; examining trends over a multiyear period is much more informative. Exhibits 1.5, 1.6, and 1.7 provide estimates of past-year alcohol use from 2004 through 2014 based on NSDUH data.[17] All age groups showed a statistically significant decline in both past-month alcohol use and binge alcohol use in 2014 compared with 2004.

As shown in the last columns in Exhibits 1.5 and 1.6, for most age groups the declines have been substantial. Not unexpectedly, changes among 18- to 20-year-olds were smaller but still statistically significant. The large number of 18- to 20-year-olds using alcohol also accounts for the smaller percentage change among 12- to 20-year-olds compared with 12- to 17-year-olds. As shown in Exhibit 1.7, there was a statistically significant increase in average age at first use over the same time period (SAMHSA, 2014b).

Exhibit 1.5: Past-Month Alcohol Use for 12- to 20-Year-Olds, 2004–2014

Age	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	% Change 2004 to 2014
12-13	4.3%	4.2%	3.9%	3.5%*	3.4%*	3.5%*	3.2%*	2.5%*	2.2%*	2.1%*	2.1%*	-50.8%
14-15	16.4%	15.1%	15.6%	14.7%*	13.3%*	13.1%*	12.4%*	11.3%*	11.1%*	9.5%*	8.5%*	-47.8%
16-17	32.5%	30.1%*	29.8%*	29.2%*	26.3%*	26.5%*	24.6%*	25.3%*	24.8%*	22.7%*	23.3%*	-28.3%
18-20	51.1%	51.1%	51.6%	50.8%	48.6%*	49.5%	48.5%*	46.8%*	45.8%*	48.8%*	44.2%*	-13.6%
12-17	17.6%	16.5%*	16.7%*	16.0%*	14.7%*	14.8%*	13.6%*	13.3%*	12.9%*	11.6%*	11.5%*	-34.4%
12-20	28.7%	28.2%	28.4%	28.0%	26.5%*	27.2%*	26.2%*	25.1%*	24.3%*	22.7%*	22.8%*	-20.6%

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

Exhibit 1.6: Past-Month Binge Alcohol Use for 12- to 20-Year-Olds, 2004–2014

Age	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	% Change 2004 to 2014
12-13	2.0%	2.0%	1.5%	1.5%	1.5%	1.6%	1.0%*	1.1%*	0.9%*	0.8%*	0.8%*	-60.4%
14-15	9.1%	8.0%	9.0%	7.8%*	7.0%*	7.0%*	6.7%*	5.7%*	5.4%*	4.5%*	3.9%*	-57.2%
16-17	22.4%	19.7%*	20.1%*	19.5%*	17.2%*	17.1%*	15.3%*	15.0%*	15.0%*	13.1%*	13.1%*	-41.4%
18-20	36.8%	36.1%	36.2%	35.9%	33.9%*	34.9%	33.1%*	31.2%*	30.5%*	29.1%*	28.5%*	-22.4%
12-17	11.1%	9.9%*	10.3%	9.7%*	8.9%*	8.9%*	7.9%*	7.4%*	7.2%*	6.2%*	6.1%*	-45.1%
12-20	19.6%	18.8%	19.0%	18.7%	17.5%*	18.2%*	16.9%*	15.8*	15.3%*	14.2%*	13.8%*	-29.5%

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

[17] The 2006–2010 estimates are based on data files revised in March 2012.

Exhibit 1.7: Average Age at First Use Among Past-Year Initiates of Alcohol Use Who Initiated Before Age 21, 2004–2014

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
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*

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

Data from the Monitoring the Future (MTF) survey and YRBS also suggest positive movement.[18] This alignment within and across surveys, even without statistical significance across all three surveys, is a good sign. These data demonstrate that meaningful progress has been made in reducing underage drinking prevalence. The factors that have contributed to this progress are varied and complex; however, one clear factor has been increased attention to this issue at all levels of society. Federal initiatives have raised underage drinking to a prominent place on the national public health agenda, created a policy climate in which significant legislation has been passed by states and localities, raised awareness of the importance of aggressive enforcement, and stimulated coordinated citizen action. These changes are mutually reinforcing and have provided a framework for a sustained national commitment to reducing underage drinking.

Nevertheless, the rates of underage drinking are still unacceptably high, resulting in preventable and tragic health and safety consequences for the nation's youth, families, communities, and society as a whole. Therefore, ICCPUD remains committed to an ongoing, comprehensive approach to preventing and reducing underage drinking. This report, with its yearly updates to state reports and survey responses, is part of that sustained effort to reduce underage drinking in America.

[18] For comparability with the 2014 NSDUH data, the latest MTF data included in the report are also from 2014. The 2015 MTF data, which became available in December 2015, will be included in the next report.