

**CHAPTER 1**

**Preventing and Reducing Underage**

**Drinking: An Overview**

This document is excerpted from:  
**The December 2015 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) through a special analysis based on 2013 data, a higher percentage of youth who are 12 to 20 years old used alcohol in the past month (22.7 percent) than tobacco (16.9 percent) or illicit drugs (13.6 percent; SAMHSA, 2014a). 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 such 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; SAMHSA, 2014c). 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 (SAMHSA, 2014b). 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 males consume five or more drinks in a row and females consume four or more drinks in a row; National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2002).<sup>8</sup>

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

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<sup>8</sup> Binge drinking is defined as the 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. Based on National Survey on Drug Use and Health (NSDUH) data, SAMHSA defines “binge drinking” as five or more drinks on one occasion on at least 1 day in the past 30 days and “heavy drinking” as five or more drinks on at least 5 different days in the past 30 days. However, NSDUH can provide binge drinking estimates based on the NIAAA gender-specific definition. Some studies, including Wechsler, Lee, Nelson, and Kuo’s 2002 survey of college students, define “binge drinking” as five or more drinks in a row for men and four or more for women. Other sources use “frequent heavy drinking” to refer to five or more drinks on at least five occasions in the last 30 days. Appendix A discusses these differences in more detail. See Courtney and Polich (2009) for further discussion of the definition issues.

developing brain (NIAAA, 2005a). The consequences of underage alcohol use extend beyond underage drinkers: society also pays. For example, in 2013, 47 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 were people other than the drinking driver (National Center for Statistics and Analysis, 2015). 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 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. Recently, however, the national effort to prevent alcohol use by America's young people has intensified as the multifaceted consequences associated with underage drinking have become more apparent.

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 MLDA 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 MLDA between 1976 and 1984, although to different minimum ages. Some placed restrictions on the types of alcohol that could be consumed by people younger than 21. Only 22 states set an MLDA of 21 years old. 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 MLDA to 21. By 1987, all remaining states had raised their MLDA 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 Juvenile Justice and Delinquency Prevention (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.” 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, 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 two annual reports:

1. A report to Congress from the HHS Secretary (the “Annual Report to Congress”) 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 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 (the “State Report”) 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.

Chapters 1 through 3 of this document constitute the Annual Report to Congress; 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 that is called for in the STOP Act. 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* (HHS, 2007; henceforth termed *SG’s Call to Action*), the first on that subject, was issued. 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* (HHS, 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 health care system, and government.
- *Prevention and reduction of underage drinking is the collective responsibility of the nation.* “Scaffolding the nation’s youth”<sup>9</sup> is the responsibility of all people in all of the social systems with which adolescents interact: family, schools, communities, health care 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 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

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<sup>9</sup> “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.

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 health care system, juvenile justice and law enforcement, and the alcohol and entertainment industries are included in the full *SG's Call to Action*, which is available 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, which remains the case 13 years later:

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.<sup>10</sup>

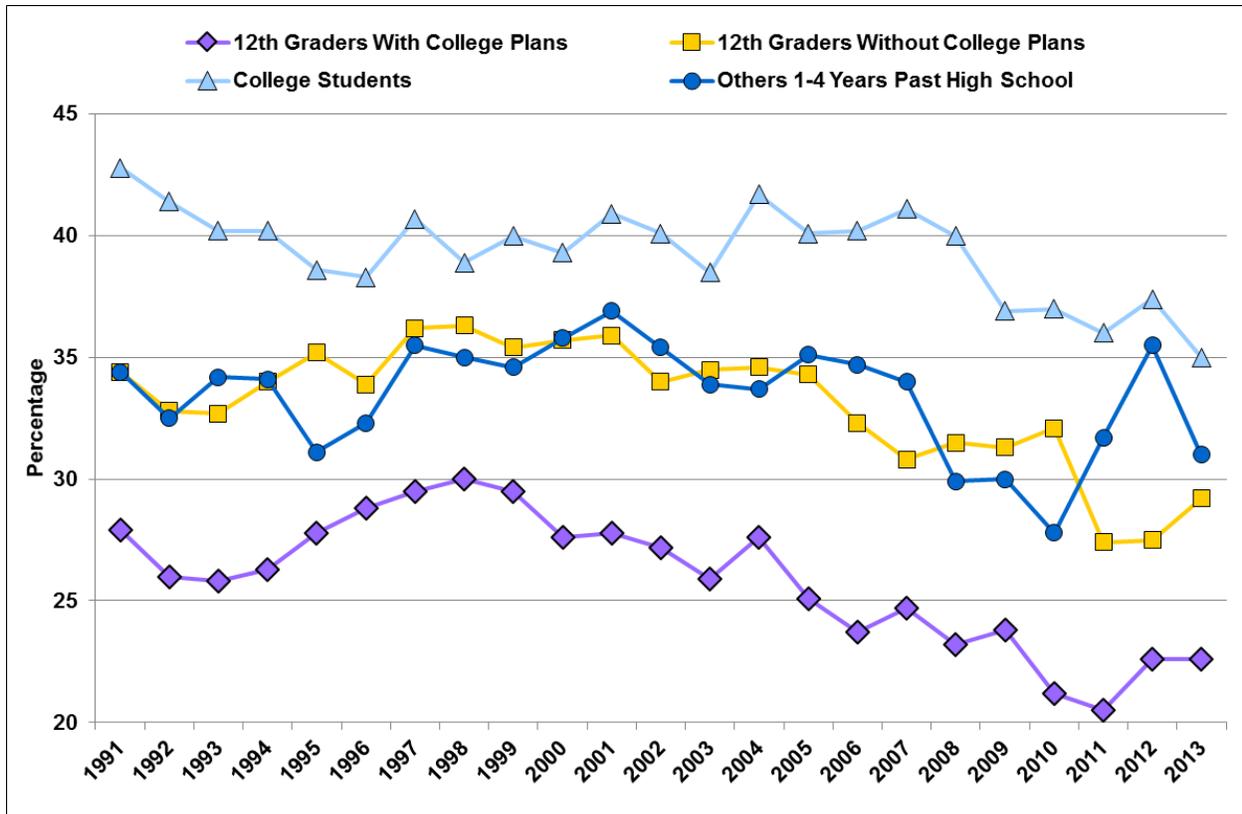
### Extent of the Problem

Although colleges and universities vary widely in their student binge drinking rates, overall rates of college student drinking and binge drinking exceed those of age peers who do not attend college (Johnston, O'Malley, Bachman, Schulenberg, & Miech, 2014c). Of college students, 78.0 percent drink, and 35.2 percent report drinking five or more drinks on an occasion in the past 2 weeks. Unlike high school students and same-age peers not in college, binge drinking rates among college students have shown little decline since 1993 (Johnston et al., 2014c). These differences are not easily attributable to differences between college attendees and nonattendees. Although college-bound 12th graders are consistently less likely than noncollege-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 et al., 2014c).

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<sup>10</sup> 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).

**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: 1991–2013 (Johnston et al., special runs January 2010; 2011a, b; 2012a, b; 2013a, b; 2014 a, c)**



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 et al., 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

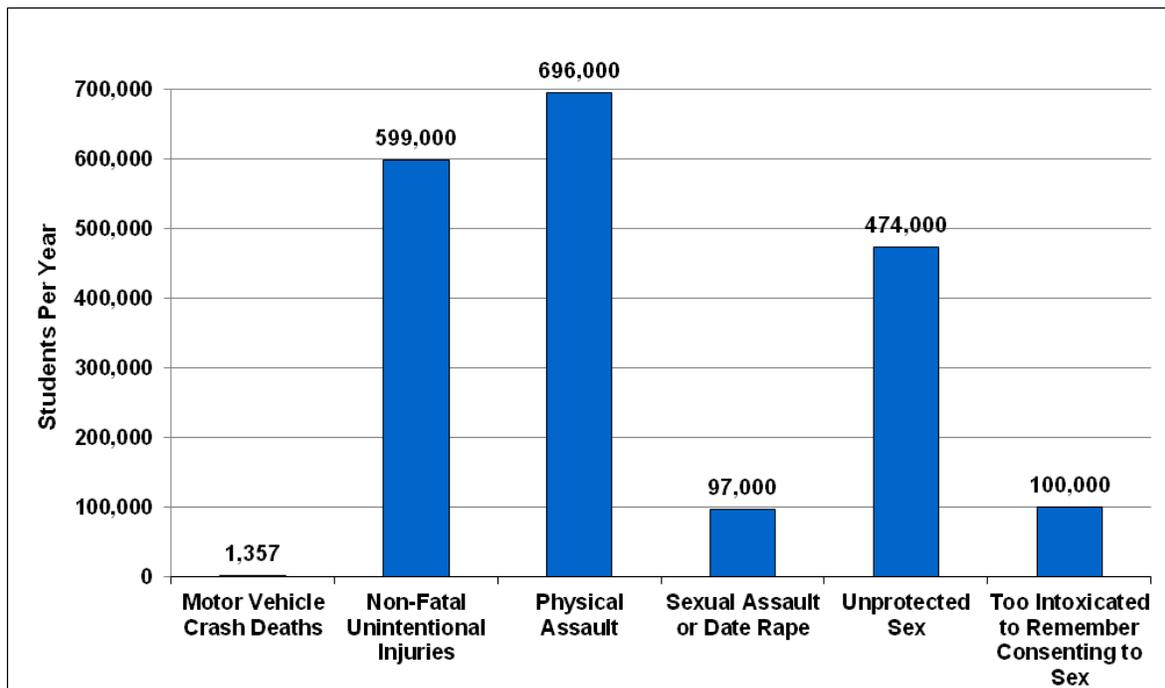
The consequences of underage drinking in college are widespread and serious (White & Hingson, 2014). A study of roughly 5,500 college women on two campuses revealed that nearly 20 percent experienced some form of sexual assault while at college (Krebs, Lindquist, Warner, Fisher, & Martin, 2009). However, the incidence of college sexual assaults is difficult to measure, and different studies report different rates. A review by Abbey (2011) of three relevant studies (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004; Seto & Barbaree, 1995; Testa, 2002) concluded that approximately half of all reported and unreported sexual assaults involve alcohol consumption by the perpetrator, victim, or both. Abbey et al. (2004) 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 and Zha (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. Research suggests that roughly 474,000 students ages 18 to 24 have unprotected sex while under the influence of alcohol, and each year more than 100,000 students ages 18 to 24 report having been too intoxicated to know if they consented to having sex (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. About 11 percent of college student drinkers report having damaged property while under the influence of alcohol (Hingson, Heeren, Winter, & Wechsler, 2005).

### College Drinking Prevention Best Practices

In 1998, NIAAA convened a Task Force on College Drinking, composed of college presidents, students, and alcohol research experts on college drinking. During a 3-year research and outreach project, the Task Force produced the above-mentioned *NIAAA Call to Action*, which highlighted the magnitude of the problem and made specific recommendations for addressing the problem based on existing research evidence.

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



The Task Force encouraged school administrators to address college drinking issues in a broad and comprehensive fashion. The report recommended that schools use a “3-in-1 Framework” to develop comprehensive programs that integrate multiple complementary strategies. Such programs focus simultaneously on (1) individuals, including at-risk or alcohol-dependent drinkers; (2) the student population as a whole; and (3) the college and surrounding community.

Specific recommendations were grouped into four tiers based on the degree of research evidence to support or refute them. At the time, the strongest research evidence showing effectiveness among college students supported strategies that targeted individual students. A number of environmental strategies showed evidence of effectiveness with similar populations, whereas other strategies were listed as either promising or ineffective. Exhibit 1.3 outlines the strategies examined by the NIAAA Task Force, grouped according to the supporting evidence for them and the levels at which they operate.

**Exhibit 1.3: 3-in-1 Framework**

<b>3-IN-1 FRAMEWORK</b>				
Tier	Strategy	Level of Operation		
		Individuals, including At-Risk and Dependent Drinkers	Student Population as Whole	Community
<b>1: Effective among college students</b>	Combining cognitive-behavioral skills with norms clarification & motivational enhancement intervention	Yes	No	No
	Offering brief motivational enhancement interventions in student health centers and emergency rooms	Yes	No	No
	Challenging alcohol expectancies	Yes	No	No
<b>2: Effective with general populations</b>	Increased enforcement of minimum drinking age laws	No	Yes	Yes
	Implementation, increased publicity, and enforcement of other laws to reduce alcohol-impaired driving	No	Yes	Yes
	Restrictions on alcohol retail density	No	No	Yes
	Increased price and excise taxes on alcoholic beverages	No	No	Yes
	Responsible beverage service policies in social & commercial settings	No	Yes	Yes
	The formation of a campus/community coalition	No	Yes	Yes
<b>3: Promising</b>	Adopting campus-based policies to reduce high-risk use (e.g., reinstating Friday classes, eliminating keg parties, establishing alcohol-free activities & dorms)	No	Yes	No
	Increasing enforcement at campus-based events that promote excessive drinking	No	Yes	No
	Increasing publicity about enforcement of underage drinking laws/eliminating “mixed” messages	No	Yes	Yes
	Consistently enforcing disciplinary actions associated with policy violations	No	Yes	No
	Conducting marketing campaigns to correct student misperceptions about alcohol use on campus	No	Yes	No
	Provision of “safe rides” programs	No	Yes	Yes
	Regulation of happy hours and sales	No	Yes	Yes
	Enhancing awareness of personal liability	Yes	Yes	No
	Informing new students and parents about alcohol policies and penalties	Yes	Yes	No
<b>4: Ineffective</b>	Informational, knowledge-based or values clarification interventions when used alone	N/A	N/A	N/A

Since the NIAAA Task Force report was issued in 2002, research on college drinking has continued to yield important information about the potential effectiveness of these and additional intervention strategies. In 2007, after an updated review of the college intervention literature, NIAAA issued *What Colleges Need to Know Now: An Update on College Drinking Research*.

Current research confirms that interventions targeting individual students, including those at risk for alcohol problems, are effective. In addition, research now more clearly supports the use of environmental interventions, particularly campus–community partnerships, as part of a comprehensive program to address harmful college drinking.

The 2007 *SG's Call to Action* also provided best practices recommendations for college drinking prevention, including fostering a culture in which alcohol does not play a central role in college life or the college experience. About a quarter of the recommendations of the *SG's Call to Action* specifically overlap the NIAAA 3-in-1 framework. The *SG's Call to Action* also recommends:

- Providing frequent alcohol-free late-night events, extending hours of student centers and athletics facilities, and increasing public service opportunities.
- Offering alcohol-free dormitories that promote healthy lifestyles.
- Restricting or eliminating alcohol sales at concerts and at athletic and other campus events.
- Reinstating Friday classes to shorten the extended weekend.

The Task Force on Community Preventive Services (2010) and NRC/IOM (2004), although not specifically focused on college drinking, both support the 3-in-1 framework strategies of aggressive enforcement of underage drinking laws, increasing alcohol prices, and excise tax. Exhibit 4.1.1, “Underage Drinking Prevention Policies – Best Practices,” presented in Chapter 4.1 lists additional policies that may contribute to a reduction in college drinking, especially drinking that occurs in the surrounding community. The policies include dram shop and social host liability; bans on direct sales (internet/mail order); keg registration; minimum age for servers, sellers, and bartenders; internal possession laws; and restrictions on alcohol advertising. Much of this information is still very helpful today.

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. A few highlights follow:

1. At the individual level, screening and brief intervention in the college student health center can be effective in reducing high-risk drinking and alcohol-related consequences (Fleming et al., 2010; Schaus, Sole, McCoy, Mullett, & O'Brien, 2009; Scott-Sheldon, 2014).
2. At the environmental level, a large-scale trial showed the effectiveness of community–college partnerships in reducing alcohol problems in off-campus settings through heavily publicized and highly visible alcohol policy and enforcement activities (Saltz, Paschall, McGaffigan, & Nygaard, 2010; also see Wolfson et al., 2012). The activities included nuisance party enforcement operations, minor decoy operations, driving-under-the-influence checkpoints, social host ordinances, and use of campus and local media to increase the visibility of environmental strategies.
3. An online alcohol education course for incoming freshmen showed benefits through the first semester in reducing binge drinking and alcohol-related problems (Paschall, Antin, Ringwalt, & Saltz, 2011).

These results reinforce the findings in the 2002 *NIAAA Call to Action* and NIAAA's 2007 *What Colleges Need to Know Now: An Update on College Drinking Research*, that intervening with problem drinking and its associated consequences can occur at different levels and times during college and that implementing a combination of interventions may be especially helpful.

## College Learning Collaborative on High-Risk Drinking

The National College Health Improvement Project (NCHIP) was founded in 2010 by Dr. Jim Yong Kim, then President of Dartmouth College. Its mission is to improve the health of college students through the application of population health solutions coupled with a quality improvement framework in bringing evidence into practice and measuring outcomes.

In February 2011, NCHIP convened a panel of experts on drinking to discuss the current evidence on how to best address the problem, along with the measurement strategies that could be used to track outcomes and effectiveness of campus efforts. Two months later, NCHIP formally launched the Learning Collaborative on High-Risk Drinking.

The 32 participating members of the Learning Collaborative worked together over a 2-year period to reduce high-risk underage drinking and its associated harms on their campuses. The results of their collaborative effort are summarized in a report released in March 2014, available at [http://webapp.dartmouth.edu/nchip/uploads/NCHIP\\_whitepaper\\_5.8.14\\_FINAL.pdf](http://webapp.dartmouth.edu/nchip/uploads/NCHIP_whitepaper_5.8.14_FINAL.pdf).

## Moving Forward—NIAAA’s CollegeAIM

NIAAA-supported research has resulted in evidence-based practices that can be used to address harmful drinking and related consequences on college campuses, several of which are mentioned above. To foster the implementation of these strategies, NIAAA convened a new College Presidents Working Group in 2011. Its goals are to bring renewed, vigorous national attention to college drinking; encourage the translation of college prevention research findings into practice; and provide a platform for sharing and disseminating evidence-based information. NIAAA continues to work with this working group of college presidents to address the issue of college drinking. Among the many practical recommendations the presidents made to NIAAA, one stood out: the need for a clear, easy-to-understand tool to help them evaluate and select interventions that are effective, best fit their schools, and are feasible to implement. In response, NIAAA is developing a matrix-based decision tool that organizes what is known about college drinking interventions by important parameters, such as the strength of the research evidence and ease of implementation. NIAAA enlisted a team of six college drinking research experts to develop the matrix. Next, 10 additional scientific experts reviewed the draft matrix. Their comments were collated and shared with the developers, who have revised the matrix in response. The matrix will form the centerpiece of a guide for college administrators on intervening to prevent harmful drinking on campus. A searchable online decision tool is envisioned as well.

## 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, its popularity 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.

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, FDA issued warning letters to four companies that the caffeine added to their alcoholic malt beverages is an "unsafe food additive." The letters stated that further action, including seizure and injunction, was possible.<sup>11</sup> 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.<sup>12</sup> 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 days over seven semesters, starting in their freshman year. 30.5 percent of the sample reported combined use at least once, and respondents consumed energy drinks on 9.6 percent of the days in which 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 U.S. Alcohol Tax and Trade Bureau (TTB), which approves alcohol labeling, issued label approvals for Palcohol, a powdered product. A container of Palcohol contains 3.4 ounces of powder, which, when water is added, contains the equivalent of one shot of distilled spirits. The company has approval to market four versions: vodka, rum, cosmopolitan, 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. They also argued that the product raises safety issues: drinks made from powdered alcohol could intentionally or unintentionally be made much

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<sup>11</sup> 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).

<sup>12</sup> 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](http://www.stopalcoholabuse.gov/media/ReportToCongress/2012/report_main/report_to_congress_2012.pdf)), Appendix E.

stronger than standard drinks and could be consumed in other ways that may prove harmful.<sup>13</sup> The states have the 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.<sup>14</sup> As of June 2015, 21 other states have enacted a permanent or temporary ban on powdered alcohol. Alabama<sup>15</sup>, Connecticut<sup>16</sup>, Georgia<sup>17</sup>, Indiana<sup>18</sup>, Kansas<sup>19</sup>, Louisiana<sup>20</sup>, Maine<sup>21</sup>, Nebraska<sup>22</sup>, Nevada<sup>23</sup>, North Carolina<sup>24</sup>, North Dakota<sup>25</sup>, Ohio<sup>26</sup>, Oregon<sup>27</sup>, South Carolina<sup>28</sup>, Tennessee<sup>29</sup>, Utah<sup>30</sup>, Vermont<sup>31</sup>, Virginia<sup>32</sup> and Washington<sup>33</sup> statutorily prohibit the sale of powdered alcohol. Maryland<sup>34</sup> and Minnesota<sup>35</sup> have enacted temporary 13-month statutory bans. Four states—Colorado<sup>36</sup>, Delaware<sup>37</sup>, Michigan<sup>38</sup> and New Mexico<sup>39</sup>—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 14 state legislatures (Hawaii, Illinois, Iowa, Massachusetts, Michigan, Missouri, New Jersey, New York, Oklahoma, Pennsylvania, Rhode Island, Texas,

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<sup>13</sup> <http://www.cbsnews.com/news/palcohol-powdered-alcohol-may-present-serious-health-risks/> (accessed 9/23/2014); <http://www.house.leg.state.mn.us/members/pressrelease.asp?pressid=8577&party=1&memid=10753> (accessed 9/23/2014)

<sup>14</sup> AS § 04.16.110.

<sup>15</sup> Ala.Code 1975 § 28-1-8.

<sup>16</sup> 2015 CT S.B. 386.

<sup>17</sup> Ga. Code Ann., § 3-3-34.

<sup>18</sup> IC 7.1-5-8-11.

<sup>19</sup> 2015 KS H.B. 2208.

<sup>20</sup> LSA-R.S. 2014 §26:351.

<sup>21</sup> 28-A MRSA §2089.

<sup>22</sup> Neb.Rev.St. LB 330, § 8.

<sup>23</sup> N.R.S. SB 464, § 1.

<sup>24</sup> N.C.G.S.A. § 18B-102.

<sup>25</sup> 2015 North Dakota Laws Ch. 76 (H.B. 1464).

<sup>26</sup> R.C. § 4301.71.

<sup>27</sup> 2015 OR S.B. 937.

<sup>28</sup> SC Code 1976 §61-6-4157.

<sup>29</sup> T. C. A. § 57-3-414.

<sup>30</sup> U.C.A. 1953 § 32B-4-424.

<sup>31</sup> 7 V.S.A. §69.

<sup>32</sup> 2015 Virginia Laws No. 202 (S.B. 299).

<sup>33</sup> West's RCWA 66.44.0001.

<sup>34</sup> MD Code, Art. 2B, § 16-505.3.

<sup>35</sup> 2013 MN H.F. 3364.

<sup>36</sup> C.R.S.A. § 12-47-103.

<sup>37</sup> 4 Del.C. § 101.

<sup>38</sup> M.C.L.A. 436.1105.

<sup>39</sup> N. M. S. A. 1978, § 60-3A-3.

Wisconsin and Wyoming)<sup>40</sup> and the District of Columbia<sup>41</sup> to ban the sale of powdered alcohol and in 2 state legislatures (Kentucky and New Hampshire)<sup>42</sup> to expand the statutory definition of alcohol to include powdered alcohol. Additionally, two control states—Massachusetts<sup>43</sup> and Pennsylvania<sup>44</sup>— will not sell powdered alcohol in their state stores.

## 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. The following exhibits provide estimates of past-year alcohol use from 2004 through 2013 based on NSDUH data.<sup>45</sup> All age groups showed a statistically significant decline in both past-month alcohol use and binge alcohol use in 2013 compared with 2004.

As shown in the last columns in Exhibits 1.4 and 1.5, 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 percent change among 12- to 20-year-olds compared with 12- to 17-year olds. As shown in Exhibit 1.6, there was a statistically significant increase in average age at first use over the same time period (SAMHSA, 2014c).

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<sup>40</sup> Hawaii Bill No. 281 (introduced 1/23/15 and sent to governor on 4/28/15); Illinois Senate Bill No. 0067 (introduced 1/15/2015 and sent to the governor on 6/12/15); Iowa House Bill No. 494 (introduced 3/4/15); Massachusetts House Bill No. 243 (introduced 1/16/15); Michigan House Bill No. 4416 (introduced 3/26/15); Missouri House Bill No. 1325 (introduced 3/12/15); New Jersey Assembly Bill No. 3580 (introduced 9/11/2014); New York Senate Bill No. 7217 (introduced 5/16/2014) and Assembly Bill No. 9615 (introduced 5/13/2014); Oklahoma Senate Bill No. 720 (introduced 1/23/15); Pennsylvania Senate Bill No. 588 (introduced 3/19/15) and Pennsylvania House Bill No. 847 (introduced 3/25/15); Rhode Island House Bill No. 5189 (introduced 1/21/15 but only banning powdered alcohol for those under the age of 21) and Rhode Island Senate Bill No. 175 (introduced 2/5/15); Texas House Bill No. 1018 (introduced 1/28/15); Wisconsin Senate Bill No. 10 (introduced 1/23/15) and 2015 Wisconsin Assembly Bill No. 72; and, Wyoming Senate Bill No. 106 (introduced 1/21/15).

<sup>41</sup> District of Columbia Legislative Bill No. 253 (introduced 6/12/15).

<sup>42</sup> Kentucky Senate Bill No. 81 (introduced 1/9/15) and New Hampshire Senate Bill No. 99 (introduced 6/3/15).

<sup>43</sup> “Alcoholic Beverages Control Commission (ABCC) Advisory Regarding Powdered Alcohol.” (March 12, 2015). Retrieved from: <http://www.mass.gov/abcc/pdf/ABCCAdvisoryPowderedAlcohol2015.pdf>

<sup>44</sup> Pennsylvania Liquor Control Board. (Feb. 11, 2015). The Pennsylvania Liquor Control Board Will Not Sell Powdered Alcohol Products in Fine Wine & Good Spirits Stores. Retrieved from: <http://www.prnewswire.com/news-releases/the-pennsylvania-liquor-control-board-will-not-sell-powdered-alcohol-products-in-fine-wine--good-spirits-stores-300034645.html>

<sup>45</sup> The 2006–2010 estimates are based on data files revised in March 2012.

**Exhibit 1.4: Past-Month Alcohol Use for 12- to 20-Year-Olds, 2004–2013**

Age	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	% Change 2004 to 2013
12-13	4.3%	4.2%	3.9%	3.5%*	3.4%*	3.5%*	3.2%*	2.5%*	2.2%*	2.1%*	-51.2%
14-15	16.4%	15.1%	15.6%	14.7%*	13.3%*	13.1%*	12.4%*	11.3%*	11.1%*	9.5%*	-42.0%
16-17	32.5%	30.1%*	29.8%*	29.2%*	26.3%*	26.5%*	24.6%*	25.3%*	24.8%*	22.7%*	-30.1%
18-20	51.1%	51.1%	51.6%	50.8%	48.6%*	49.5%	48.5%*	46.8%*	45.8%*	48.8%*	-14.3%
12-17	17.6%	16.5%*	16.7%*	16.0%*	14.7%*	14.8%*	13.6%*	13.3%*	12.9%*	11.6%*	-34.0%
12-20	28.7%	28.2%	28.4%	28.0%	26.5%*	27.2%*	26.2%*	25.1%*	24.3%*	22.7%*	-20.9%

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

**Exhibit 1.5: Past-Month Binge Alcohol Use for 12- to 20-Year-Olds, 2004–2013**

Age	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	% Change 2004 to 2013
12-13	2.0%	2.0%	1.5%	1.5%	1.5%	1.6%	1.0%*	1.1%*	0.9%*	0.8%*	-60.0%
14-15	9.1%	8.0%	9.0%	7.8%*	7.0%*	7.0%*	6.7%*	5.7%*	5.4%*	4.5%*	-50.5%
16-17	22.4%	19.7%*	20.1%*	19.5%*	17.2%*	17.1%*	15.3%*	15.0%*	15.0%*	13.1%*	-41.5%
18-20	36.8%	36.1%	36.2%	35.9%	33.9%*	34.9%	33.1%*	31.2%*	30.5%*	29.1%*	-20.9%
12-17	11.1%	9.9%*	10.3%	9.7%*	8.9%*	8.9%*	7.9%*	7.4%*	7.2%*	6.2%*	-44.1%
12-20	19.6%	18.8%	19.0%	18.7%	17.5%*	18.2%*	16.9%*	15.8†	15.3%*	14.2%*	-27.7%

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

†Difference between 2011 and 2012 estimate is statistically significant at the 0.05 level.

**Exhibit 1.6: Average Age at First Use Among Past-Year Initiates of Alcohol Use Who Initiated Before Age 21, 2004–2013**

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

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

Data from the Monitoring the Future (MTF) survey and Youth Risk Behavior Survey also suggest positive movement.<sup>46</sup> 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

<sup>46</sup> For comparability with the 2013 NSDUH data, the latest MTF data included in the report are also from 2013. The 2014 MTF data, which became available in December 2014, will be included in the next report.

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 the State Report and survey responses, is part of that sustained effort to reduce underage drinking in America.