

Studies Linking College Student Binge Drinking and Poor Academic Performance

- Parada et al., *Alcohol Clin Exp Res*, in press.
(poorer performance on memory tests)
- Thombs et al., *JSAD* 70(5): 776-785, 2009.
(Mean BAC of 0.05% vs. 0.0% linked to 1/5 letter grade lower.) (prospective study)
- Singleton & Wolfson, *JSAD* 70(3): 355-363, 2009.
(prospective study on negative effects on GPA)
- Singleton, *JSAD* 68(4): 548-555, 2007.
(survey negative effects on GPA)

Studies Linking College Student Binge Drinking and Poor Academic Performance (cont.)

- Presley & Pimental, *JSA* 67(2): 324-331, 2006.
(missed class, poor test performance)
- Jennison, *Am J Drug Alcohol Abuse* 30(3): 659-684, 2004.
(Binge drinkers in college were more likely to drop out, work in less prestigious jobs, and experience alcohol dependence 10 years later.)
(national prospective study)
- Powell et al., *Edu Econ* 12(2): 135-149, 2004.
(missed class, got behind in school)

Conclusion

In the U.S. there is an urgent need to:

- Expand and improve prevention, screening and treatment programs and policies to reduce alcohol related harm
 - Persons under 21
 - Among college students
 - Persons of similar ages not in college
- Improve surveillance of alcohol-attributable mortality
 - Mortality data need college identifiers
 - All injury and poisoning deaths should be tested for alcohol

Alcohol Related Behaviors and Consequences of 18-24 Year Olds in the U.S. 2012 (Estimates)

	College	Non College	Total
■ Drank 5+ on an occasion past month	5.5 million (40%)	8.0 million (41%)	13.2 million
■ Past year drove under the influence of alcohol	2.63 million (19%)	2.7 million (19%)	5.3 million
■ Died of alcohol-related unintentional injury (2013)	1,590	3,070	4,078

Interventions

- Individually-oriented screening and brief intervention
- Social norms
- Web-Based
- Mandated web-based (AlcoholEdu)
- Family
- Environmental
- Comprehensive community interventions

Planning
Alcohol
Interventions
Using NIAAA's

COLLEGE!AIM
ALCOHOL INTERVENTION MATRIX



National Institute
on Alcohol Abuse
and Alcoholism

<http://www.collegedrinkingprevention.gov/CollegeAIM/>

INDIVIDUAL-LEVEL STRATEGIES:

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

		COSTS: Combined program and staff costs for adoption/implementation and maintenance		
		Lower costs \$	Mid-range costs \$\$	Higher costs \$\$\$
EFFECTIVENESS: Success in achieving targeted outcomes	Higher effectiveness ★★★	IND-3 Normative re-education: Electronic/mailed personalized normative feedback (PNF)—Generic/other ² [#], B, ●●●, online/offsite IND-10 Skills training, alcohol focus: Self-monitoring/self-assessment 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, ●●, IP] 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, ●●●●, IP] 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). <i>The differences in research populations, along with wide variations in costs and barriers across campuses, precluded ratings relative to other strategies. See page 18 for more information.</i>
	Moderate effectiveness ★★		IND-8 Skills training, alcohol focus: Expectancy challenge interventions (EC)—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, ●, IP] 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:
 IP = In-person individual
 IPG = In-person group
 Online
 Offsite

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

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.

ENVIRONMENTAL-LEVEL STRATEGIES:

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

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

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.

Literature Reviews Indicating Effectiveness of Screening and Brief Counseling Intervention Regarding Alcohol

- U.S. Preventive Services Task Force, 2012 (adults in primary care)
- Tripodi et al., Arch Pediatr Adolesc Med, 2010 (adolescents ages 12-19)
- Jensen et al., J Consulting Clin Psychol, 2011 (adolescents)
- Larimer, Addict Behav, 2007 (college students)
- Carey et al., Addict Behav, 2007 (college students)
- Cronic & Larimer, Alcohol Res & Health, 2011 (college students)
- Seigers and Carey, J Am College Health, 2010 (college students at university health services)