Individually-Focused Strategies in CollegeAIM: Choosing Options and Bringing These to Campus

Jason R. Kilmer, Ph.D.
University of Washington
Associate Professor
Psychiatry & Behavioral Sciences
Assistant Director of Health & Wellness
for Alcohol & Other Drug Education
Division of Student Life

Today's presentation

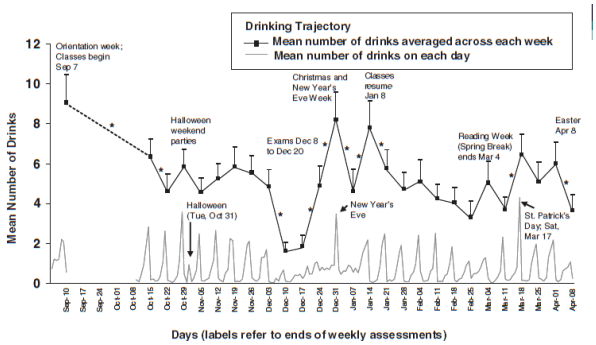
- Messaging in individually-focused interventions
- Social Norms
- Expectancy Challenge
- Alcohol Skills Training Program
- Brief Alcohol Screening and Intervention for College Students (BASICS)
- Personalized Feedback Interventions
- Other individually-focused strategies

College Student Substance Use

Substance Use Data from Monitoring the Future Study

- **Alcohol**
  - **Past year**
    - 76.1% report any alcohol use
    - 60.5% report having been drunk
  - **Past month**
    - 63.1% report any alcohol use
    - 42.6% report having been drunk

Source: Johnston, et al (2015)



Daily and weekly alcohol consumption over academic year. Error bars (95% CI) are shown above the mean only. Asterisks (*) refer to significant adjacent week differences (Bonferroni adjusted level of p<.002) (Tremblay, et al., 2010)

Alcohol-Related Consequences

n =74,438 undergraduate students at 108 institutions in sample from Spring 2015

- **Among undergraduate students who drink, within the past 12 months as a consequence of drinking…**
  - 35.5% did something they later regretted
  - 31.5% forgot where they were/what they did
  - 21.6% had unprotected sex
  - 14.6% physically injured themselves

These are "negative consequences," right?

American College Health Association, 2015

Perceptions of Consequences

Consequence	Negative	Neutral	Positive
Arrested/citation	93%	5%	3%
Received lower grade	88%	13%	0%
Regretted sex	84%	12%	4%
Vomited	77%	14%	9%
Physically embarrassed	58%	37%	5%
Socially embarrassed	51%	42%	7%
Blackout	53%	35%	12%
Late to work/class	53%	35%	12%
Hangover	47%	28%	25%
Woke up in someone else's bed	42%	42%	16%
Binge eating	17%	56%	27%
Skipped meals	16%	58%	26%

Mallett et al., 2008

Substance Use Data from Monitoring the Future Study

- Any illicit drug
  - 38.6% report past year use
- Marijuana
  - 34.4% report past year use
- Any illicit drug other than marijuana
  - 20.8% report past year use
    - 10.1% Amphetamines
    - 9.6% Adderall
    - 5.0% Ecstasy/MDMA

Source: Johnston, et al (2015)

Many students might be slipping through the cracks

- 96.1% with an alcohol use disorder do not receive services (Wu, et al., 2007)
- Only 36% who screen positive for depression receive medication or services (Eisenberg, et al., 2007)
- Of 125 suicides reported by Counseling Centers, only 14% were current or past clients (Gallagher, 2014)

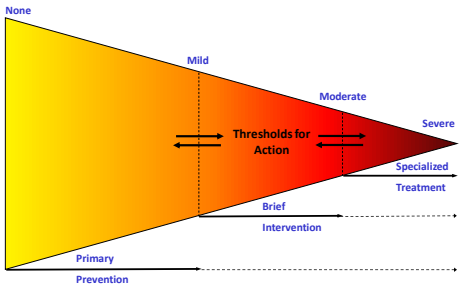
Relationship Between Alcohol Use and Academic Success

- Relationship between alcohol, sleepiness, and GPA exists in college (Singleton & Wolfson, 2009)
- Heavy drinking associated with lower GPA, and students at research universities who are heavy episodic drinkers are less likely to be engaged in interactions with faculty (Porter & Prior, 2007)
- Frequency of binge drinking associated with lower grades in college setting (Pascarella, et al., 2007)

Messaging

Prevention/Intervention Approaches

Spectrum of Intervention Response



Traditional approaches to prevention

An alternative approach:

Harm Reduction

What is Harm Reduction?

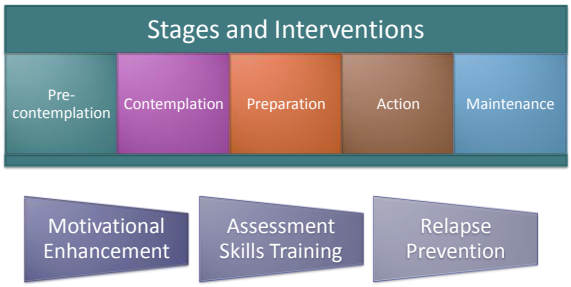
- The most harm-free or risk-free outcome after a harm reduction intervention *is* abstinence.
- However, harm reduction approaches acknowledge that *any steps toward reduced risk are steps in the right direction*

How are these principles implemented?

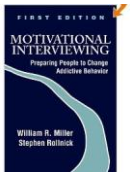
- Legal issues are acknowledged.
- Skills and strategies for abstinence are offered.
- However, if one makes the choice to drink, skills are described on ways to do so in a less dangerous and less risky way.
- A facilitator, provider, or student affairs professional must elicit personally relevant reasons for changing.
  - This is done using the Stages of Change model and Motivational Interviewing.

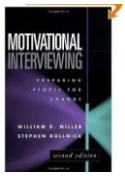
The Stages of Change Model

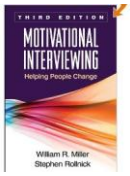
(Prochaska & DiClemente, 1982, 1984, 1985, 1986)



Motivational Interviewing







Miller & Rollnick, 1992, 2002, 2012

Brief Interventions and Motivational Interviewing

Non-judgmental	Non-confrontational	Meet people where they are
Elicit personally relevant reasons to change	Explore and resolve ambivalence	Discuss behavioral change strategies when relevant

What is resistance?

- **Resistance is verbal behaviors**
- **It is expected and normal**
- **It is a function of interpersonal communication**
- **Continued resistance is predictive of (non) change**
- **Resistance is highly responsive to our style**

Goals of a Brief Intervention

- When there are signs of potential risks and/or existing harms, provide early intervention
- If ultimately in line with what motivates the individual, prompt contemplation of change
- If ultimately in line with what motivates the individual, prompt commitment to change or even initial action
- Reduce resistance/defensiveness
- Explore behavior change strategies and discuss skills to reduce harms

OARS:
Building Blocks for a Foundation

- **Ask Open-Ended Questions**
  - Cannot be answered with yes or no
  - Professional does not know where answer will lead
    - "What do you make of this?"
    - "Where do you want to go with this now?"
    - "What ideas do you have about things that might work for you?"
    - "How are you feeling about everything?"
    - "How's the school year going for you?"
    - "Tell me more about that."
      - This is different than the closed-ended "Can you tell me more about that?" or "Could you tell me more about that?"

What open-ended questions could you ask that might prompt…

…consideration of "consequences"?

…change talk?

…consideration of strategies for making changes?

Finding potential hooks, change talk, and behavior change strategies: An Example

- "What are the good things about _____ use for you?"
- "What are the 'not-so-good' things about _____ use?"
- "What would it be like if some of those not-so-good things happened less often?"
- "What might make some of those not-so-good things happen less often?"

Norms

Social norms: Perception versus reality

- People are influenced by their subjective interpretation of a situations rather than by the actual situation (Lewin, 1943).
- We are influenced by our perception of others' attitudes, behaviors, and expectations rather than by their actual attitudes, behaviors, or expectations.
- Our perceptions and interpretations are often inaccurate.

Source: Neighbors & Kilmer (2008)

Norms Clarification

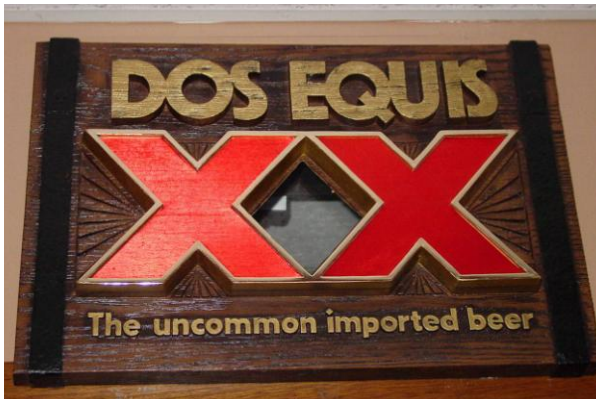
- **Examines people's perceptions about:**
  - Acceptability of excessive behavior
  - Perceptions about the prevalence of drinking by those around them
  - Perception about the rates of drinking by those around them (including the "typical" person)

Social norms mass media campaigns

Expectancies

EXPECT

GET	Alcohol	No Alcohol
Alcohol		
No Alcohol		



Alcohol Skills Training Program (ASTP)

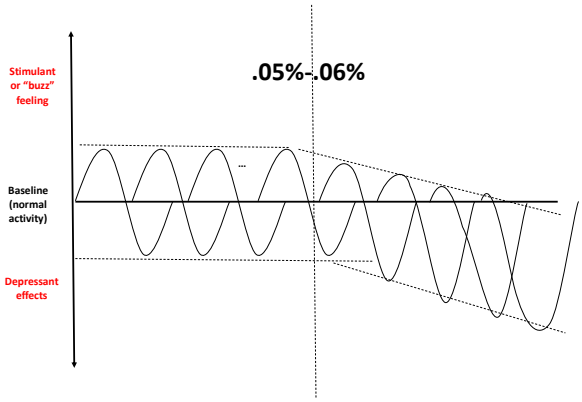
Alcohol Skills Training Program

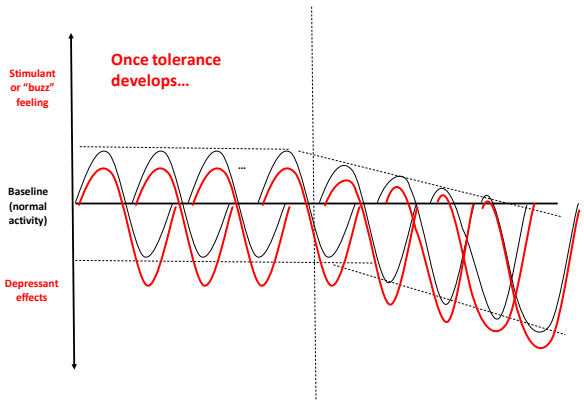
- **Fromme, Kivlahan and Marlatt (1986)**
- **Compared skills training program to an alcohol information school**

Reducing harms

Questions…

- When people start to lose their buzz, what do they usually do?
- Do they ever get that same buzz back?
- For people with tolerance, is the buzz you get now as good as the buzz you used to get when you first started drinking?





Specific Tips for Reducing the Risk of Alcohol Use

- Set limits
- Eat prior to or while drinking
- Keep track of how much you drink
- Space your drinks
  - Alternate alcoholic drinks w/non-alcoholic drinks
- Avoid trying to "out drink" or keep up with others
- Avoid or alter approach to drinking games
- If you choose to drink, drink slowly
- Use a designated driver
- Don't accept a drink when you don't know what's in it
- Have a friend let you know when you've had enough

What Is A Standard Drink?

- 12 oz. beer
- 10 oz. microbrew
- 10 oz. wine cooler
- 8 oz. malt liquor
- 8 oz. Canadian beer
- 8 oz. ice beer
- 6 oz. ice malt liquor
- 4.5 oz. fruit-flavored, high-ethyl alcohol content malt beverages (formerly alcoholic energy drinks…Four Loko is 4.2 oz)
- 4 oz. wine
- 2.5 oz. fortified wine
- 1.25 oz. 80 proof hard alcohol
- 1 oz. 100 proof hard alcohol

Setting a Limit

180 lb. Woman

Number of Drinks	Number of Hours					
	1	2	3	4	5	6
1	.009	0	0	0	0	0
2	.034	.018	.002	0	0	0
3	.059	.043	.027	.011	0	0
4	.084	.068	.052	.036	.020	.004
5	.109	.093	.077	.061	.045	.029
6	.134	.118	.102	.086	.070	.054
7	.159	.143	.127	.111	.095	.079
8	.184	.168	.152	.136	.120	.104
9	.209	.193	.177	.161	.145	.129
10	.234	.218	.202	.186	.170	.154
11	.259	.243	.227	.211	.195	.179
12	.284	.268	.252	.236	.220	.204

180 lb. Man

Number of Drinks	Number of Hours					
	1	2	3	4	5	6
1	.005	0	0	0	0	0
2	.026	.010	0	0	0	0
3	.047	.031	.015	0	0	0
4	.067	.051	.035	.019	.003	0
5	.088	.072	.056	.040	.024	.008
6	.109	.093	.077	.061	.045	.029
7	.130	.114	.098	.082	.066	.050
8	.151	.135	.119	.103	.087	.071
9	.172	.156	.140	.124	.108	.092
10	.192	.176	.160	.144	.128	.112
11	.213	.197	.181	.165	.149	.133
12	.234	.218	.202	.186	.170	.154

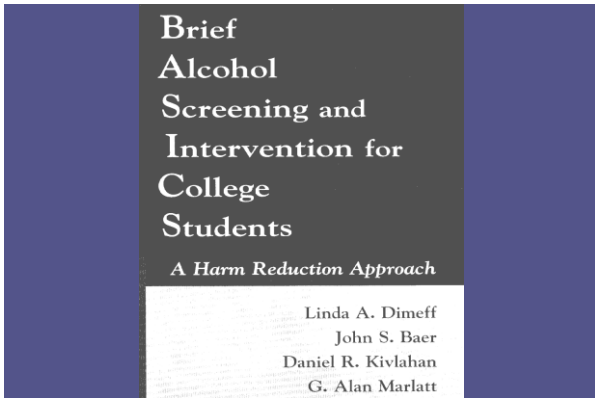
ASTP

- **Content reviewed in ASTP**
  - **Expectancies**
  - **Standard drink and norms**
  - **Absorption/Oxidation**
  - **BAC/BAL, associated effects, tolerance**
  - **Alcohol's biphasic effect**
  - **Distribution of blood alcohol charts**
  - **Consequences**
  - **Harm reduction strategies**

ASTP

- **ASTP is delivered in a group setting**
  - **Alcohol content and the skills-training information is introduced in a more structured way throughout the program**

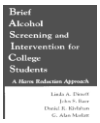
BASICS



The Basics on BASICS

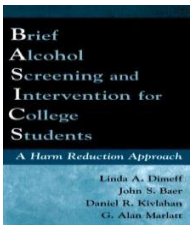
Brief Alcohol Screening and Intervention For College Students

- **Assessment**
- **Self-Monitoring**
- **Feedback Sheet**
- **Review of Information and Skills Training Content**



(Dimeff, Baer, Kivlahan, & Marlatt, 1999)

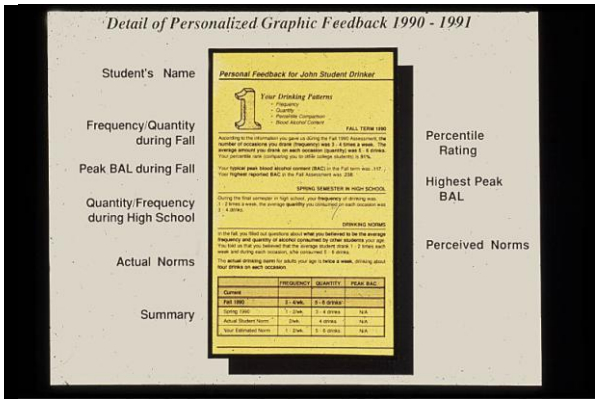
What does it mean to "do" BASICS?

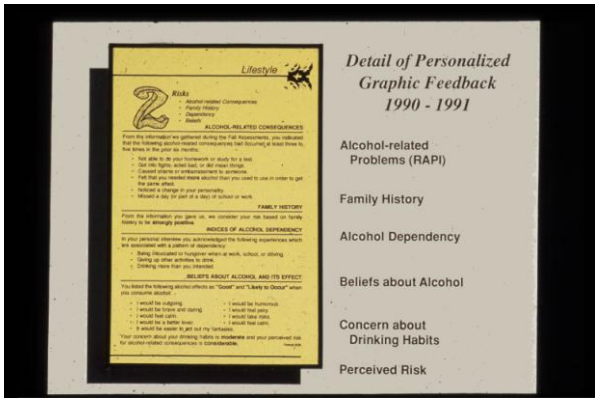


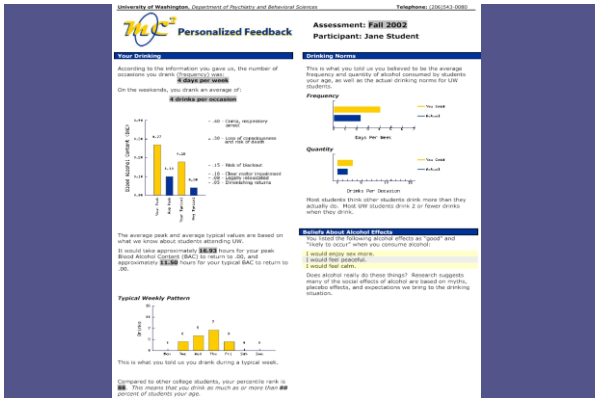
- **The "AS" is the alcohol screening**
  - Originally a separate in-person session
  - Subsequently achieved online, but BASICS does require a screening
- **The "I" is the intervention**
  - Originally a *second* in-person session guided by personalized graphic feedback
  - Personalized graphic feedback delivered online/in-print (PFI) is *not* BASICS
  - Intervention must be delivered with fidelity (meaning adherence to MI spirit, style, and strategies)

BASICS

- **BASICS is individually focused and involves the delivery of personalized feedback**
  - **Alcohol content and the skills-training information is introduced throughout the intervention when relevant, applicable, or of interest to the participant**







University of Washington, Department of Psychiatry and Behavioral Sciences — Telephone: (206)543-0080

Personalized Feedback

Assessment: Fall 2002
Participant: Jane Student

Your Drinking

According to the information you gave us, the number of occasions you drank (frequency) was:
4 days per week

On the weekends, you drank an average of:
4 drinks per occasion

The average peak and average typical values are based on what we know about students attending UW.

It would take approximately **16.93** hours for your peak Blood Alcohol Content (BAC) to return to .00, and approximately **11.50** hours for your typical BAC to return to .00.

Typical Weekly Pattern

This is what you told us you drank during a typical week.

Compared to other college students, your percentile rank is **88**. *This means that you drink as much as or more than **88** percent of students your age.*

Drinking Norms

This is what you told us you believed to be the average frequency and quantity of alcohol consumed by students your age, as well as the actual drinking norms for UW students.

Frequency

Quantity

Most students think other students drink more than they actually do. Most UW students drink 2 or fewer drinks when they drink.

Beliefs About Alcohol Effects

You listed the following alcohol effects as "good" and "likely to occur" when you consume alcohol.

I would enjoy sex more.
I would feel peaceful.
I would feel calm.

Does alcohol really do these things? Research suggests many of the social effects of alcohol are based on myths, placebo effects, and expectations we bring to the drinking situation.

Alcohol-related Problems

You indicated the following alcohol-related consequences had occurred at least 1-2 times in the prior six months:

Had a fight or argument, or bad feelings with a friend or family member.
Felt you were going crazy.
Got into fights, acted bad, or did mean things.
Not able to do your homework or study for a test.
Missed out on other things because you spent too much money on alcohol.
Experienced nausea or vomiting.
Had a hangover.
Passed out or fainted suddenly.
Missed a day or part of a day of work or school.

You can minimize the negative effects of alcohol by choosing to drink less or not at all.

Alcohol Dependence

You acknowledged the following experiences, which are associated with a pattern of dependence.

Have driven a car after drinking.
Have had blackouts.
Felt like you needed more alcohol to get the same effect.
Felt like you needed a drink first thing in the morning.

Based upon the data provided, we estimate your level of alcohol tolerance to be:

Very High Risk

Tolerance means needing more alcohol to get the same effect as you used to get at lower levels. Tolerance reduces pleasurable effects of alcohol and makes drinking more dangerous. It can also be a sign that you are becoming dependent on alcohol.

Weight

You indicated that you have the following concerns regarding your weight and/or body:

You are concerned about your weight, shape, or diet.
You feel fat sometimes.
You have used the following methods to counteract weight gain: diet pills, exercise
You have engaged in binge eating or have eaten more than you are comfortable with.

You indicated that in a typical week you are getting the following amount of calories from alcohol:

3592 calories

It would require **566 minutes** of brisk walking or **442 minutes** on the stair-master to expend this number of calories each week.

Family History

We consider your risk based on family history to be:

Positive Risk

Most people have heard that having a family history of alcohol problems increases your risk for alcohol problems yourself. While this is true, it's also true that being aware of your drinking and making lower-risk decisions about drinking now can lessen your risk of developing an alcohol problem in the future.

Perceived Risk

Your concern about your drinking habits is:

Low

Alcohol: Financial Costs

Based upon your typical quantity and frequency of alcohol use, you are typically spending the following, depending on your choice of alcohol:

Domestic Beer (cans): $162.00/quarter
Microbrew Beer (bottles): $280.80/quarter

Protective Factors

These are some things you are doing to avoid negative consequences from drinking:

Use a designated driver.
Keep track of how many drinks you were having.

These are some other strategies you might use to reduce negative effects of drinking:

Switch between alcoholic and non-alcoholic beverages.
Determine, in advance, not to exceed a set number of drinks.
Choose not to drink alcohol.
Eat before and/or during drinking.
Have a friend let you know when you've had enough.
Pace your drinks to 1 or fewer per hour.
Play non-drinking games.
Drink an alcohol look alike (non-alcoholic beer, punch) or juice, water.

Alcohol and Sexual Behavior

You indicated that you have had the following alcohol-related sexual experiences:

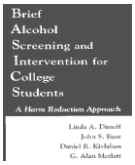
Have gotten into sexual situations you later regretted because of drinking.
Have had sex when you really didn't want to because of drinking.
Have had sex with someone you wouldn't ordinarily have sex with when drinking.
Have felt pressured or forced to have sex after drinking.

Alcohol doesn't improve sexual enjoyment or performance. You can reduce your risks of unwanted sexual experiences by being selective about whether and how much to drink, especially on first dates or at large parties. Use the buddy system to watch out for friends.

Potential Barriers Specific to BASICS

Brief Alcohol Screening and Intervention For College Students

- **Adjustments in feedback length/content without evaluation**
- **Conflicting/confusing messages about what is "effective"**
- **Best practices in training for BASICS delivery**
- **Staffing/practical needs leading to adjusting the intervention**
- **Bringing intervention to scale**
- **MI adherence & issues of fidelity**
- **Reaching students who might slip through the cracks**



In-person intervention with no graphic feedback

MI in Health Care Settings: College Health Centers

Grossberg, P., et al., (2010). Inside the physician's black bag: Critical ingredients of brief interventions, *Substance Abuse, 31,* 240-250

- **Adherence to MI is the key**!
- "The most reliable interaction components did indeed reflect underlying core principles of MI (p. 243)."
- Identified the **Top 10 Clinical Tools** and relation with MI Principles:
  - Express Empathy (EE)
  - Develop Discrepancy (DD)
  - Support Self-Efficacy (SSE)
  - Roll with Resistance (RWR)

Top 10 Clinical Tools	EE	DD	SSE	RWR
1) Drinking likes & dislikes	X			X
2) Life goals & alcohol use		X		
3) Reducing risk agreement			X	
4) Feedback on alcohol use, binges per month	X			
5) Tracking number of drinks			X	X
6) Readiness to change (1-10 scale)				X
7) Drinking consequences: Overall compared with college students nationally		X		X
8) Drinking consequences: Calories		X		X
9) Drinking consequences: BAC		X		X
10) Alcohol norms: Personal use compared with peers' use		X	X	X

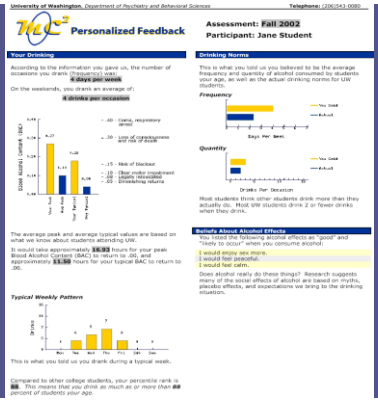
What about personalized graphic feedback for prevention with no person there at all to discuss the feedback with the person?

Motivating Campus Change (MC²)

- **1488 participants randomly assigned to feedback and tips intervention (n=737) or assessment-only control (n=751)**
  - **Tips involved weekly postcards for ten weeks**

Larimer, M.E., Lee, C.M, Kilmer, J.R., Fabiano, P., Stark, C., Geisner, I., Mallett, K., Lostutter, T.W., Cronce, J.M., Feeney, M., & Neighbors, C. (2007). Personalized mailed feedback for college drinking prevention: A randomized clinical trial. *Journal of Consulting and Clinical Psychology, 75,* 285-293

Source: Larimer, et al. (2007)



University of Washington, Department of Psychiatry and Behavioral Sciences Telephone: (206)543-0080

MC² Personalized Feedback

Assessment: Fall 2002
Participant: Jane Student

Your Drinking

According to the information you gave us, the number of occasions you drank (frequency) was:

4 days per week

On the weekends, you drank an average of:

4 drinks per occasion

Blood Alcohol Content (BAC)

.40 - Coma, respiratory arrest
.30 - Loss of consciousness and risk of death
.15 - Risk of blackout
.10 - Clear motor impairment
.08 - Legally intoxicated
.05 - Diminishing returns

.27 .28 .11 .18

You Feel Per Occasion Per Week

The average peak and average typical values are based on what we know about students attending UW.

It would take approximately 10.33 hours for your peak Blood Alcohol Content (BAC) to return to .00, and approximately 11.58 hours for your typical BAC to return to .00.

Typical Weekly Pattern

Drinks

1 4 3 7 5 0 2

Mon Tue Wed Thu Fri Sat Sun

This is what you told us you drank during a typical week.

Compared to other college students, your percentile rank is 88. This means that you drink as much as or more than 88 percent of students your age.

Drinking Norms

This is what you told us you believed to be the average frequency and quantity of alcohol consumed by students your age, as well as the actual drinking norms for UW students.

Frequency

You Think Actual

Days Per Week

Quantity

You Think Actual

Drinks Per Occasion

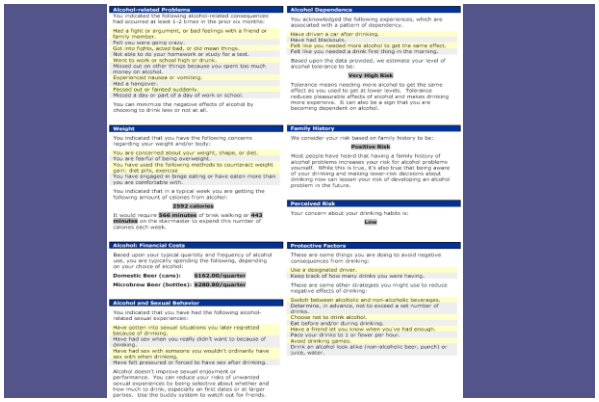
Most students think other students drink more than they actually do. Most UW students drink 2 or fewer drinks when they drink.

Beliefs About Alcohol Effects

*You rated the following alcohol effects as "good" and "likely to occur" when you consume alcohol:

I would enjoy sex more.
I would be powerful.
I would feel calm.

Does alcohol really do these things? Research suggests many of the social effects of alcohol are based on myths, placebo effects, and expectations we bring to the drinking occasion.



Alcohol-related Problems

You indicated that the following alcohol-related consequences had occurred at least 1-2 times in the prior six months:

Had a fight or argument, or bad feelings with a friend or family member.
Got into trouble in class.
Got into fights, acted bad, or did mean things.
Not able to do your homework or study for a test.
Went to work or school high or drunk.
Missed out on other things because you spent too much time drinking.
Experienced nausea or vomiting.
Had a hangover.
Passed out or fainted suddenly.
Missed a day or part of a day of work or school.

You can minimize the negative effects of alcohol by choosing to drink less or not at all.

Alcohol Dependence

You acknowledged the following experiences, which are associated with a pattern of dependency.

Have driven a car after drinking.
Have had blackouts.
Felt like you needed more alcohol to get the same effect.
Felt like you needed a drink first thing in the morning.

Based upon the data provided, we estimate your level of alcohol tolerance to be:

Very High Risk

Tolerance means needing more alcohol to get the same effect as you used to get at lower levels. Tolerance reduces pleasurable effects of alcohol and makes drinking more expensive. It can also be a sign that you are becoming dependent on alcohol.

Weight

You indicated that you have the following concerns regarding your weight and/or body:

You are concerned about your weight, shape, or diet.
You are fearful of being overweight.
You have used the following methods to counteract weight gain: diet pills, exercise
You have engaged in binge eating or have eaten more than you are comfortable with.

You indicated that in a typical week you are getting the following amount of calories from alcohol:

2992 calories

It would require **566 minutes** of brisk walking or **442 minutes** on the stairmaster to expend this number of calories each week.

Family History

We consider your risk based on family history to be:

Positive Risk

Most people have heard that having a family history of alcohol problems increases your risk for alcohol problems yourself. While this is true, it's also true that being aware of your drinking and making lower-risk decisions about drinking now can lessen your risk of developing an alcohol problem in the future.

Perceived Risk

Your concern about your drinking habits is:

Low

Alcohol: Financial Costs

Based upon your typical quantity and frequency of alcohol use, you are typically spending the following, depending on your choice of alcohol:

Domestic Beer (cans): $162.00/quarter
Microbrew Beer (bottles): $280.80/quarter

Protective Factors

These are some things you are doing to avoid negative consequences from drinking:

Use a designated driver.
Keep track of how many drinks you were having.

These are some other strategies you might use to reduce negative effects of drinking:

Switch between alcoholic and non-alcoholic beverages.
Determine, in advance, not to exceed a set number of drinks.
Choose not to drink alcohol.
Eat before and during drinking.
Have a friend let you know when you've had enough.
Pace your drinks to 1 or fewer per hour.
Avoid drinking games.
Drink an alcohol look alike (non-alcoholic beer, punch) or soda, water.

Alcohol and Sexual Behavior

You indicated that you have had the following alcohol-related sexual experiences:

Have gotten into sexual situations you later regretted because of drinking.
Have had sex when you really didn't want to because of drinking.
Have had sex with someone you wouldn't ordinarily have sex with when drinking.
Have felt pressured or forced to have sex after drinking.

Alcohol doesn't improve sexual enjoyment or performance. You can reduce your risks of unwanted sexual experiences by being selective about whether and how much to drink, especially on first dates or at larger parties. Use the buddy system to watch out for friends.

Motivating Campus Change (MC²)

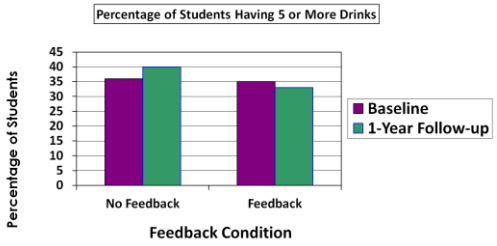
- **Participants in the feedback condition drank less at follow-up than controls** (F(1,872) = 7.18, p<.01)
  - **Composite score consisting of peak BAC, past month frequency, past year frequency, and total drinks per week**

Source: Larimer, et al. (2007)

Motivating Campus Change (MC²)

- **Feedback participants were more likely to refrain from heavy episodic drinking (defined as five or more drinks in a row at least once in the past two weeks)**
  (odds ratio = 1.43)
  (*B* = -0.36, $X^2(1, N=983) = 5.23$, p<.05)

Source: Larimer, et al. (2007)

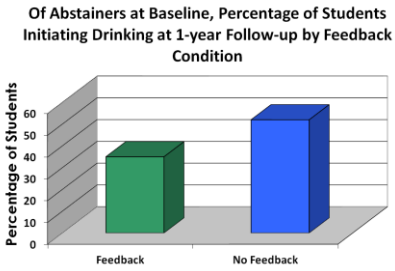


Source: Larimer, et al. (2007)

Motivating Campus Change (MC²)

- **Abstainers in the feedback condition were twice as likely to remain abstinent at follow-up compared to controls**
  (odds ratio = 2.02)
  (*B* = 0.70, $X^2(1, N=234) = 6.88, p<.01$)

Source: Larimer, et al. (2007)



Source: Larimer, et al. (2007)

Motivating Campus Change (MC^2)

- Protective behaviors mediated intervention efficacy ($F(1,854) = 8.17$, $p<.01$)
- Participants who received the intervention increased the frequency of protective behaviors relative to the control group

Source: Larimer, et al. (2007)

Web-based graphic feedback

A sample of findings of web-based personalized feedback interventions (PFI)

- 21st birthdays – reduced BAC levels on day of 21st birthday (Neighbors, et al., 2009)
- Alcohol-related risky sexual behaviors (Lewis, et al., 2014)
- Recently published study reviewed 32 electronic/web-based interventions, including several commercially available products (Cronce, Bittinger, Liu, & Kilmer , 2014):

http://www.arcr.niaaa.nih.gov/arcr/arcr361/article05.pdf

Source: Larimer, et al. (2007)

Screening

Many of these conversations may not be happening

- Hingson, et al., (2012) identified respondents who ever drank alcohol and had seen a physician in the past year
- Only 14% of those exceeding low risk drinking guidelines were asked and advised about risky drinking by their physician
- 18-25 year olds were most likely to exceed guidelines but were least often asked about drinking

Hingson, et al (2012)

Early identification of students and coordination of care

- **Alcohol:**
  - Efficacy of screening and brief motivational interventions in health centers has been established (Fleming et al., 2010; Schaus et al., 2009)
  - Hingson (2010) suggests that increased screening and intervention in health services could ultimately achieve population level benefits.

Potential barriers related to screening

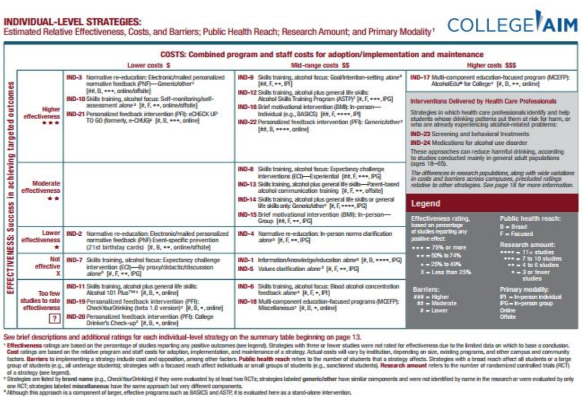
- Selecting screening measures with adequate sensitivity/specificity
- Training
- Resistance toward conducting screenings
  - Concern about more work for providers
  - Concern about what to do when there's a positive screen and/or where to refer
- "Real world" issues related to resources
- Still requires that a student come to a Health Center or Counseling Center

Application to groups

Motivational Enhancement Techniques: Group Settings

- Non-judgmental, non-confrontational
- Cast a wide net to be inclusive of audience
- Ask open-ended questions as much as possible
- Reflect when possible – this remains key
- Consider "hooks" for the group
- Elicit personally relevant reasons for change
- Let group generate protective behavioral strategies, then fill in what they miss

Collectively, they can all be a part of the mix of strategies considered through CollegeAIM



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

COLLEGE AIM

EFFECTIVENESS: Success in achieving targeted outcomes	COSTS: Combined program and staff costs for adoption/implementation and maintenance — Lower costs $	Mid-range costs $$	Higher costs $$$
Higher effectiveness ★★★	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]
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]	

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.

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.

Possible Barriers to Implementing Effective Interventions on College Campuses

- **Barriers can exist to dissemination, adoption, implementation, and maintenance** **(Rogers, 1995)**

Source: Larimer, Kilmer, and Lee, 2005

Possible Barriers to Dissemination in Implementing Effective Interventions

- **Published findings appear in journals not oriented to clinicians** (Sobell, 1996)
  - Often, little description of steps needed to apply a treatment or intervention
- **Some publications or evaluations are not "user friendly"** (Backer, 2000)

Source: Larimer, Kilmer, and Lee, 2005

Possible Barriers to Adoption in Implementing Effective Interventions

- **Reactions from key individuals involved in the process** (DeJong and Langenbahn, 1996)
- **Diversity of opinion around how to proceed**
  - Could lead to difficulty in committing

Source: Larimer, Kilmer, and Lee, 2005

Possible Barriers to Adoption in Implementing Effective Interventions

- **Unreasonable expectations** (Liddle, et al., 2002)
- **Insufficient "buy-in"** (Liddle, et al., 2002)
- **Not enough time working with directors, administrators, staff, or students**

Source: Larimer, Kilmer, and Lee, 2005

Possible Barriers to Implementation in Implementing Effective Interventions

- **Proper training of those delivering a program**
- **A tendency to "reinvent" innovations** (Rohrbach, D'Onofrio, Backer, & Montgomery, 1996)

Source: Larimer, Kilmer, and Lee, 2005

Possible Barriers to Implementation in Implementing Effective Interventions

- **Organizational factors** (Simpson, 2002)
  - Resources, issues impacting effective delivery, attitudes among leaders, etc.
- **Resistance among staff familiar and comfortable with a prior approach** (Liddle, et al., 2002)

Source: Larimer, Kilmer, and Lee, 2005

Possible Barriers to Maintenance in Implementing Effective Interventions

- **Therapist drift (i.e., issues of fidelity)**
- **Need for ongoing assessment and continued training**

Source: Larimer, Kilmer, and Lee, 2005

Possible Administrative Barriers in Implementing Effective Interventions

- Tendency to move toward "next best thing"
  - One approach being pursued at the expense of another
- Concern that directing attention or funds toward a behavior indicates that "problem" exists

Source: Larimer, Kilmer, and Lee, 2005

Wrapping up

Support for policies and enforcement is there!

- A small group students may be quite vocal on campus to the point administrators withhold policy changes assumed to be unsupported by the student body (Lavigne, et al., 2008)
- Among students, Saltz (2007) found a "universal tendency" to underestimate student support for policies

Saltz (2007) conclusions (p. 459)

- "…campuses would actually have more incipient support for a variety of alcohol prevention policies than is likely to be perceived by the students themselves, and, by extension, administrators and others belonging to the campus community. "
- "…Unless students are persuaded that such support is not limited to a fringe element, new policies are likely to be met with at least passive, if not active, resistance."

Saltz (2007) conclusions (p. 459)

- "…This then, suggests that today's campus prevention interventions, which now often comprise campaigns to correct students' perception of peer alcohol consumption, may want to incorporate a parallel effort to correct their perception of peer support for policies as well."
- "This information may prove revelatory to some, and critical to the chances of having a significant impact on alcohol-related problems on campus, which is the ultimate target."

A mix of strategies is best

Future directions

- Consider the audience/targets for and of various prevention/intervention efforts
  - Abstainers
  - Returning veterans
  - Study abroad programs
  - Students in recovery
  - Fraternity and sorority members
  - Student athletes
  - High-risk events

- Recognize and utilize expertise within your community
- Add to the science on "what works" for impacting alcohol use, drug use, violence, and the overlap of these issues
  - Prescription drugs
  - Marijuana

A quick word about spring break, 21 runs, students studying abroad, and new students

Tolerance

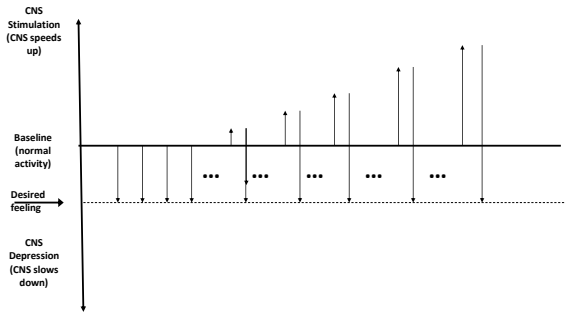
Applying Laboratory Research:
Drug Anticipation and the Treatment of Drug Addiction

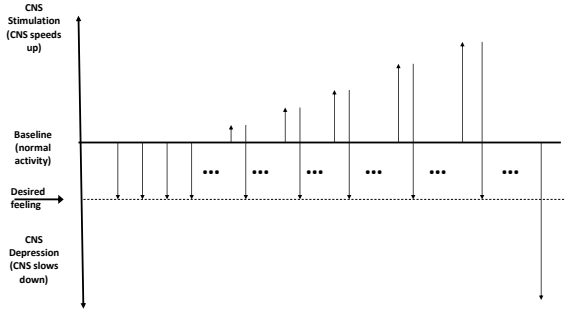
Shepard Siegel and Barbara M. C. Ramos
McMaster University

Siegel, S. & Ramos, B.M.C. (2002) Applying laboratory research: Drug anticipation and the treatment of drug addiction. ***Experimental and Clinical Psychopharmacology, 10,*** 162-183.

Types of learning

- **Classical Conditioning**
  - Pavlov
    - Association of two events such that one event acquires the ability to elicit responses formerly associated with the other event





Considering cues

- **Even taste can be a cue**
  - Siegel (2011) noted that college students who consume alcohol in the presence of usual taste cues (e.g., a beer flavored beverage) display greater tolerance to intoxicating effects than when consumed in a novel blue, peppermint-flavored beverage of the same strength.

Conclusion

- **"The situational specificity of tolerance"**
  - If alcohol is presented "in a manner divorced from the usual alcohol-associated stimuli, the effects of the alcohol are enhanced (Siegel, 2011, p. 358)."

Special thanks to:
Mary Larimer
Jessica Cronce
Vivian Faden
Megan Hopkins
Toben Nelson
Amelia Kilmer ☺

Jason Kilmer
jkilmer@uw.edu