Published in final edited form as:

Addict Res Theory. 2012 ; 20(3): 227–235. doi:10.3109/16066359.2011.651517.

Reducing the Harms of College Student Drinking: How Alan Marlatt Changed Approaches, Outcomes, and the Field

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Abstract

In this article, we discuss Alan Marlatt's contributions to the prevention and reduction of alcohol-related harms among college students. We consider Alan's early research that later led to the development and evaluation of college student drinking programs, and examine Alan's impact, both directly and indirectly through those he mentored and trained, as a scientist-practitioner. We review the recognition of the efficacy of Alan's programs, including the Alcohol Skills Training Program (ASTP) and Brief Alcohol Screening and Intervention for College Students (BASICS), in addition to extensions of these interventions in more recent studies. Finally, we discuss how Alan's work influences interventions with college student drinkers today, and how future directions will continue to be informed by his vision and values.

"In order to be safe, just like with driving, we should teach people about drinking..."

G. Alan Marlatt, August 19, 2010

Podcast with Jeff Wolfsberg

On March 14, 2011, we lost an advisor, a mentor, a colleague and a friend. Alan Marlatt's passion for making a difference in the lives of those around him was contagious, and it is without question that we, the authors, do what we do today because of Alan's influence, inspiration, and impact on our lives.

This tremendous personal loss is compounded by the loss that Alan's passing represents to the field of college student drinking prevention and intervention. Over the past 25 years our field has seen much advancement, resulting in reduced drinking and related consequences among emerging adults. Each of these advancements came wholly or in part from his work, creativity and vision. This work will no doubt continue, given the number of undergraduate students, graduate students, post-doctoral fellows, junior faculty and others that Alan mentored over the years. Yet, an immensely important force behind that work will be sorely

missed. Alan was an innovator, and the magnitude of his contributions to the science of college student drinking prevention is unlikely to ever be matched.

Early research and later development and evaluation of college student drinking programs

To understand the weight of Alan's contributions is to understand where the field of alcohol research was approximately 40 years ago, in the early 1970s. At the time, the prevailing model of alcohol dependence was firmly rooted in physiological disease. That is, the loss of control over drinking that is often considered the hallmark of "alcoholism" was thought to be solely mediated by physiological processes beyond the control of the individual. In contrast, Alan and his colleagues hypothesized that loss of control over drinking was mediated by operant learning processes (Marlatt, Demming, & Reid, 1973). That is, alcohol dependent individuals had experienced and learned to *expect* positive effects from alcohol consumption; loss of control, then, was the result of seeking expected positive effects that would require greater levels of consumption due to tolerance.

To test this hypothesis, Marlatt and colleagues (1973) developed a vodka beverage recipe that could not be distinguished in taste from plain tonic water. They then administered this beverage or one containing only tonic water (placebo) to a group of alcohol dependent and non-dependent men. In addition to manipulating actual beverage content, Marlatt and colleagues manipulated anticipated beverage content (instructional set) in a fully crossed design (told alcohol/got alcohol; told alcohol/got placebo; told placebo/got alcohol; told placebo/got placebo), which would latter become known as the Balanced Placebo Design (BPD; see Marlatt & Rohsenow, 1981 and Rohsenow & Marlatt, 1981). Participants were given a "primer" dose of their assigned beverage with the appropriate instructional set before being allowed free access to that beverage in a "taste test." Results showed that the *actual content* of the beverage had no effect on how much of that beverage a person consumed—only what they thought or *expected* they were drinking determined consumption. This concept of "alcohol expectancies," or beliefs about the way that alcohol affects behavior, would go on to play a vital role in a variety of different alcohol prevention and intervention programs subsequently developed by Alan and his colleagues, including the Alcohol Skills Training Program (ASTP) and the Brief Alcohol Screening and Intervention for College Students (BASICS) program, and others in the field, including experiential Alcohol Expectancy Challenge (AEC) approaches (Darkes & Goldman, 1993, 1998).

Moreover, while aspects of the BPD were evident in drug research in the 1960s and an unpublished alcohol study in 1970, Alan's study in 1973 established the BPD as the gold standard for disaggregating physiological from psychological effects of alcohol. This groundbreaking work was recognized as a "Citation Classic" in 1985 by *Current Contents: Social and Behavioral Sciences* (Marlatt, 1985). Ten years later, Alan's study was further recognized as a "Seminal Article in Alcohol Research" when the National Institute on Alcohol Abuse and Alcoholism (NIAAA) published an issue of *Alcohol Health and Research World* dedicated to celebrating 25 years of alcohol research (Miller, 1995). Alan was also the first to build a simulated bar (the Behavioral Alcohol Research Laboratory, or "BARLAB") to test the effect of alcohol expectancies in a naturalistic setting. Since the

construction of the BARLAB in the Department of Psychology at the University of Washington in the early 1980s, at least eight additional bar labs have been built around the country to carry on this research. The countless laboratory studies conducted by Alan and many of his former students and colleagues have consistently demonstrated that setting (drinking environment) influences alcohol consumption and the social aspects of drinking (e.g., being talkative, flirtatious, daring) are almost entirely based on expectancies (Marlatt & Rohsenow, 1981).

Alan's early work with alcohol dependent adults in the 1970s set the stage for his work with college students in the 1980s and beyond. As it does today, college student drinking represented a risk- and liability-management concern to colleges and universities, one that had the potential to impact academic success, social functioning and health. In 1986, 92% of college students reported consuming alcohol at least once in the past year, 80% consumed alcohol at least once in the past month, and 45% indicated that they drank five or more drinks in a row in the past 2 weeks (Johnston, O'Malley, & Bachman, 1991). However, at that time, there were no controlled studies of prevention or intervention efforts that included pre- and post-assessments and behavioral outcome measures showing reductions in drinking, consequences, or both (Larimer & Currence, 2002). When programs did exist (even without efficacy data), the message accompanying the programs was one of abstinence only. First Lady Nancy Reagan told school children in October of 1982 to "just say no" if offered drugs, and by 1988 more than 12,000 "Just Say No" clubs had been formed (The Ronald Reagan Presidential Foundation & Library, n.d.).

It was bold, then, and even controversial, to suggest an alternative approach. At that time, one of the only alcohol education programs available for college students in Washington was the Alcohol Information School (AIS). The AIS focused on physiological effects of alcohol, detailed possible long-term risks associated with drinking and focused on abstinence as the only reasonable option. Alan was familiar with harm reduction principles that had been effectively implemented across Europe, and, with colleagues at the Addictive Behaviors Research Center, began considering a different approach to working with college students. This approach led to the development of the aforementioned ASTP.

The approach of the ASTP was neither "just say no," nor was it "just say yes." Instead, if a student made the choice to drink, skills and strategies for how to moderate their drinking and minimize harm were provided (see Marlatt & George, 1984). This harm reduction approach was certainly not common at that time and was associated with some misconceptions. A harm reduction approach is not "anti-abstinence." On the contrary, the most risk-free outcome of any alcohol intervention would be abstinence. However, a harm reduction approach acknowledges that any steps toward reduced risk are steps in the right direction (Kilmer & Logan, under review).

To prompt students' consideration of changing their drinking behavior, ASTP facilitators focused on eliciting personally relevant reasons for change, which for many meant considering immediate, short-term consequences or unwanted effects, such as hangovers or embarrassment (rather than the longer-term physiological or extreme effects typically emphasized in the traditional programs at that time). Ways to reduce the likelihood of these

unwanted effects could be explored during the ASTP, including discussion and practice of protective behavioral strategies (i.e., specific skills to reduce risk related to drinking).

In 1990, the first paper using skills training with college students was published (Kivlahan, Marlatt, Fromme, Coppel & Williams, 1990). The Skills Training (ST) intervention (an early version of what is now known as the ASTP) was compared to Alcohol Information School (AIS) and an assessment only (AO) condition. Although the interventions were time intensive (8 weeks of 90 minute sessions), significant changes in drinking were found in a sample of 36 students. In contrast, a reduction in alcohol-related consequences was not noted. In an effort to better assess and understand alcohol-related consequences the Rutgers Alcohol Problem Index (RAPI; White & Labouvie, 1989) was utilized in future studies.

The second influential study (Baer et al., 1992) examined a 6-session ST intervention, including an expectancy challenge session in a simulated bar setting, compared to a 6-week self-help correspondence course and a 1 hour individualized feedback and advice session (what later became the model for BASICS; Dimeff, Baer, Kivlahan & Marlatt, 1999). The content of the individually-focused intervention was consistent with what was delivered to the ST group (e.g., discussion of alcohol expectancies, discussing risks of drinking and strategies to minimize them), but interviewers utilized a Motivational Interviewing (MI; Miller & Rollnick, 1991) therapeutic approach during this single feedback session. Outcomes showed significant changes in drinking were the most pronounced for the ST group condition. However, reductions noted in the feedback condition were substantial and not significantly different from those found in the ST group – both interventions evidenced a 40% reduction in alcohol use that was sustained over a 2 year period. The results of this study demonstrated how powerful a single-session brief motivational intervention (BMI) can be in reducing alcohol use while also supporting the effectiveness of the 6-session ST approach. When we consider the number of alcohol-related negative consequences avoided by those reductions, the value and importance of these interventions in bringing about clinically relevant change cannot be underestimated.

This second controlled evaluation of ST set the stage for what later became known as BASICS, and two follow-up studies from Alan's team firmly solidified the success of BASICS in reducing alcohol use and related negative consequences over the long term among high-risk, heavy drinking college students (Marlatt et al., 1998; Baer, Kivlahan, Blume, McKnight & Marlatt, 2001). Prior to entering college, students were screened and those at high-risk were randomly assigned to receive BASICS or no-treatment compared to a sample of students selected as a normative group (including all levels of alcohol use and risk). Marlatt and colleagues documented the significant reduction in consumption and consequences among students who had received BASICS at each time point (6 month, 1 year, and 2 year follow-up). In addition, Baer and colleagues continued to highlight the long-term positive effects of the BASICS intervention. Although the normative comparison group reported less frequent drinking, lower quantity and fewer negative consequences over the course of 4 years, students receiving the BASICS intervention reported significantly less frequent alcohol use, fewer drinks per drinking occasion and fewer negative consequences than students who received no intervention.

Alan the scientist-practitioner

Many of Alan's extraordinary contributions to the field of college student drinking prevention and intervention flowed from his firm belief in the importance of considering the "real world" applications of what had been tested under more controlled settings. Alan epitomized the notion of the scientist-practitioner, and he stressed the value of approaching clinical psychology through this framework. As evidence for brief motivational enhancement interventions emerged, Alan worked with University of Washington (UW) administrators to bridge the gap between research and practice. Alan's efforts resulted in dedicated funding that supports a clinical psychology graduate student to provide BASICS and ASTP on the UW campus for the duration of their first two years of graduate training. This position, identified as the Alcohol and Drug Education Coordinator, has been continually filled since the fall of 1989 and has supported 12 graduate students to date, among them three of the authors (J.K., R.P., & D.L.). For us, this position served as a tremendous introduction to graduate school and provided an immediate immersion into the application of empirically supported approaches. Consistent with the scientist-practitioner model, it also provided us with a valuable opportunity to generate new research questions and further advance the science.

Alan's programs were more than empirically supported interventions—they were unique collaborations between Alan, his colleagues and his trainees. Feedback from direct clinical work with students continued to inform and improve how the intervention was provided and helped to identify essential aspects of the intervention. As some of the many who delivered interventions that Alan developed, he reminded us that our own mindfulness and awareness within the approaches were essential to the intervention integrity as well as our clinical development. When we found ourselves thinking, "I want the students to change and use these strategies more than they seem to want to," we recognized this feeling as a cue for us to step back, emphasize the students' autonomy, and provide strategies for making changes if the student chose to do so – just as Alan taught us. He showed us that some students will be engaged, some will be defensive, and some will be indifferent. Some may even be all three at the same time. But he also helped us to see how we, as facilitators, clinicians and researchers, had an impact on their reactions. He encouraged us to identify themes, develop research questions, and most of all, to share our findings. Almost every aspect of the ongoing research we conduct has been informed by the training we received while under Alan's wing.

Recognition of the impact of Alan's interventions

In 2002, a Task Force from the National Institute of Alcohol Abuse and Alcoholism (NIAAA) issued "A Call to Action" to address college drinking (NIAAA, 2002). This report included college drinking consequences, factors affecting drinking, and challenges for colleges and communities. While many of the findings in the report were bleak, there were also bright spots as well. The Task Force identified recommended strategies for addressing risky drinking. The strategies were grouped by tiers based on the available research findings of efficacy and effectiveness. Tier 1 interventions included only strategies with demonstrated evidence of effectiveness among college students. The three strategies

included (1) the incorporation of skills training with norms clarification and motivational enhancement (the only program mentioned by name as an example was ASTP), (2) brief motivational enhancement interventions (the only program mentioned by name as an example was BASICS), and (3) challenging alcohol expectancies. In short, Alan's work formed the foundation of Tier 1, and his programs had demonstrated effectiveness a full decade before when the research was still evolving.

In addition to being included in the recommendations by the NIAAA Task Force, BASICS is recognized in SAMHSA's National Registry of Evidence-based Programs and Practices (NREPP, 2008). Furthermore, as noted in qualitative (Cronce & Larimer, in press; Larimer & Cronce, 2002, 2007) and quantitative (Carey, Scott-Sheldon, Carey, & DeMartini, 2007) studies, most efficacious individual-focused prevention programs are patterned after, or draw intervention components from, the BASICS program. These distinctions clearly underline the continued relevance and importance of the programs Alan developed.

In an effort to assess how far we have come in utilizing NIAAA's guidelines for prevention and interventions on college campuses across the US, Nelson and colleagues (2010) surveyed a sample of college administrators. Although 20% of administrators were not aware of the recommendations, the majority of administrators was aware and reported providing Tier 1 interventions to heavy or problem drinkers. In total, approximately half of the campuses had implemented one of the empirically supported Tier 1 interventions. Tier 2 strategies, those with evidence of success with general populations but not yet researched in college settings, were largely unaddressed on the surveyed campuses. However, 98% of administrators indicated the use of Tier 4 strategies, those with evidence of ineffectiveness, involving education based approaches to provide information about alcohol.

The work by Nelson and colleagues (2010) demonstrates how far we have come but also how much more we can do to impact alcohol use on college campuses. These findings suggest that almost all campuses are using interventions that have been shown to be ineffective. In times of budget shortfalls and unprecedented cuts, it is our responsibility to ensure the redirection of available funds toward effective efforts. There are also competing interests for effective interventions: do we focus on students who have been identified as problem drinkers or focus on primary prevention to try to minimize the number of students needing intervention? The answer is both.

Consistent with Alan's work 25 years ago, we need to combine clinical experience with rigorous research and disseminate the findings to other researchers as well as college administrators. Perhaps we can find ways to incorporate Tier 1 interventions into primary prevention, targeting a much broader group of students at an earlier trajectory. While this research can prove quite challenging given that students have varying patterns of alcohol use, which can be associated with substantial harms while not bringing them to the attention of administrators, we are committed to reducing harms on all levels and refusing to shy away from research simply because it is complicated. We will continue Alan's work through our own efforts to minimize drinking harms in a manner that respects the autonomy and inherent strengths of our students. As well, we will follow Alan's example and NIAAA's

guidelines and strive to secure additional resources, support and greater community collaboration as ways to deal with the problem of heavy alcohol use on campus.

Beyond ASTP and BASICS: Other applications or extensions of Alan's work

Given the success of Alan's interventions for the targeted high-risk college student drinker, a myriad of Brief Motivational Interventions (BMIs) patterned after BASICS and the ASTP have been subsequently developed and evaluated. Between 2007 and 2010 alone, Cronce and Larimer (in press) identified 36 randomized controlled trials evaluating 56 unique individual-focused alcohol interventions for college students. Of these 36 studies, approximately half ($n = 17$) evaluated in-person facilitated BMIs (individual and group). Of the 20 unique interventions tested, 13 were associated with reductions in alcohol consumption, alcohol-related negative consequences or alcohol-related psychopathology, and an additional 3 interventions evidenced a protective effect against the onset of or increased drinking. Moreover, the cumulative evidence gathered through randomized controlled trials of BMIs dating back to 1984 strongly supports the efficacy of this approach (i.e., 34 of the 42 unique BMIs detailed in Cronce & Larimer, in press and Larimer & Cronce, 2002; 2007 showed positive effects of the intervention on drinking behavior and/or consequences).

In addition to the wealth of research on BMIs, the use and evaluation of mailed or Web-based feedback and skills-training interventions based largely on Alan's work has grown exponentially. Such interventions include stand-alone Personalized Normative Feedback (PNF) focused solely on correction of normative drinking misperceptions or Personalized Feedback Interventions (PFIs) incorporating PNF and other content consistent with the graphic feedback used in BASICS (i.e., a description of personal drinking behavior, presentation of personally-held positive expectancies about drinking juxtaposed with negative consequences experienced as a result of drinking, and protective behavioral strategies to reduce drinking and/or consequences if the student chooses to change their behavior). In the 22 years between 1984 and 2006, only about 15 studies had evaluated stand-alone PFI approaches or PNF interventions (Larimer & Cronce, 2002; 2007). In the three subsequent years (2007–2010), 17 studies evaluated 18 different PFI or PNF conditions. PFI and PNF approaches are inherently non-confrontational as students can choose to use what is relevant and ignore anything else. They also obviate the need for a facilitator trained in use of motivational enhancement strategies, thus reducing barriers to implementation on campus. Although findings regarding PFIs and PNF interventions are not uniformly positive, the preponderance of the evidence supports their efficacy (i.e., 20 out of 25 PFI and 7 out of 8 PNF interventions evaluated between 1984 and 2010 showed positive effects on one or more alcohol-related outcome; see Cronce & Larimer, in press and Larimer & Cronce, 2002; 2007).

Another emerging area of study stemming from Alan's work evaluates interventions for mandated students, or those who violated campus alcohol policy and were referred for an intervention. These students tend to be more defensive than volunteers, and generally have less positive outcomes and effects following an intervention than general college students.

Many studies are now evaluating the impact of different conditions on mandated students, including individual in-person interventions (e.g. Barnett et al., 2004; Borsari & Carey, 2005), in-person versus computer or written interventions (e.g. White, Mun, Pugh, & Morgan, 2007; Carey, Carey, Henson, Malsto, & DeMartini, 2011), group interventions (e.g. Fromme & Corbin, 2004; Labrie, Cail, Pedersen, Migliuri, 2011), and moderators of effects (e.g. Barnett, Goldstein, Murphy, Colby, & Monti, 2006; Mastroleo, Murphy, Colby, Monti, & Barnett, 2011).

Further, at least two studies evaluating interventions for this high-risk subpopulation have come directly from Alan's work as well as his efforts to make a positive clinical impact on campus through the Alcohol and Drug Education Coordinator position. The first study is Palmer, Kilmer, Ball and Larimer (2010). Students mandated for violating campus alcohol policies received the ASTP (2 session format; Miller et al., 2000) compared to a sample of heavy drinking volunteers who were randomized to receive either the ASTP or assessment only. No differences between heavy drinkers in the ASTP versus control group were noted for drinking or negative consequences at the 3 month follow-up. However, given the importance of MI in the BASICS and ASTP interventions and the emphasis on respecting students' autonomy, we hypothesized that defensiveness due to the mandate would impact the effectiveness of the ASTP in reducing drinking and negative consequences. And, indeed, we found that defensiveness moderated the effect of the ASTP among mandated students—those high in defensiveness consumed more on a peak drinking occasion at the follow-up than voluntary heavy drinkers whereas at baseline the voluntary group reported greater peak consumption.

The second study is an ongoing dissertation project, Alcohol Interventions for Mandated Students (Project AIMS) led by one author (D.L.) and mentored by another (J.K.). Project AIMS evaluates ASTP, BASICS, and a treatment-as-usual condition for mandated students at a collaborating university. Seeking to not only extend research but dissemination and clinical importance as well, this study added Tier 1 interventions to a program using a Tier 4 approach for these students. While we will not speculate on any outcome data, we are proud that this project at least introduced an institution to evidence-based interventions for a high-risk population.

Intervening with college student drinking today and in the future

The most recent Monitoring the Future study (2011) reported rates of any drinking in the past 30 days and past year totaling 65% and 79%, respectively, among college students. College student rates of being drunk on at least one occasion in the past 30 days and past year were also high, equaling 44% and 64%, respectively. These findings highlight that college student drinking still takes place; however, we have many more options to reduce the harm associated with it at this time than we did 25 years ago.

So what are the next steps for the harm-reduction-focused alcohol interventions on campuses? First, researchers continue to evaluate the generalizability of the established interventions. Recent findings support the effectiveness of ASTP among diverse populations

including multicultural and international college students (Hernandez et al., 2006; Stahlbrandt, Johnsson, & Berglund, 2007).

Another promising extension of Alan's work is altering these alcohol interventions for use with other substances. For marijuana in particular, there is certainly a demonstrated need for intervention on campuses as almost one third (32.7%) of students report past year use (Johnston et al., 2011) and college student drinkers are much more likely to use marijuana than non-drinkers (30% versus 2%; O'Malley & Johnston, 2003). Recent studies at Brown University have extended the balanced placebo design to the experimental manipulation of marijuana in studies with college students (Metrik et al., 2009). One of our colleagues at the University of Washington, Christine Lee, is currently completing an evaluation of the effectiveness of a BASICS-inspired personalized feedback intervention for marijuana users. This intervention provides data on the use, costs, and benefits of marijuana (as reported by the student), as well as calculating other factors such as time spent high and financial cost of use. Consistent with the BASICS framework, facilitators use MI strategies to elicit personally relevant reasons for change, and provide strategies and suggestions to reduce use and/or associated consequences.

Interventions to address the use of other illicit substances are also needed on college campuses, with endorsement of past year use reaching 9.0% for Adderall, 9.0% for amphetamines, and 7.2% for narcotics other than heroin (Johnston et al., 2011). Recent research has also begun to examine the feasibility of brief interventions for use of other illicit substances among college students. Negative consequences, personal concerns about use, and level of interest in different types of interventions were examined among students for a range of different substances, including marijuana, cocaine, amphetamines, hallucinogens, opiates, inhalants, designer drugs, steroids, PCP, and the misuse of medications (Palmer, McMahon, Moreggi, Rounsaville & Ball, in press). A majority of students who reported lifetime illicit and prescription drug misuse indicated lifetime (69%) and past year (63%) negative consequences due to their use. The type of negative consequences reported (e.g., felt guilty or ashamed, felt bad physically, said or done something embarrassing) support the idea that problematic use of substances does not always come to the attention of college administrators – especially when the negative consequences only affect the individual student. Although students reported low levels of concern regarding their substance use, they expressed the greatest amount of interest in interventions which were brief and included feedback and counseling regarding their use of alcohol, illicit or prescription drugs. These findings highlight the value of identifying students who may be in need of brief interventions to reduce or minimize the harm of their use but they also support the extension of the BASICS model to other more controversial substances. Given the prevalence of prescription and medication misuse, future studies utilizing the BASICS model with other substances could be promising.

In addition to extending brief interventions to individual substances other than alcohol, the use of multiple substances also represents substantial risk to college students. The risks to students using multiple substances is notably greater than either alone: past month marijuana use was associated with greater likelihood of receiving an alcohol abuse and alcohol dependence diagnosis than among those with no marijuana use (Knight et al., 2002).

Further, combining these two substances leads to an increase in the frequency and severity of unwanted consequences including hangovers and day after effect, academic problems, regrettable decisions, trouble with police, and general deviant behavior (Hedden et al., 2010; Shillington & Clapp, 2001, 2006). Future studies could evaluate the impact of skills training and/or BASICS-style personalized feedback for multiple substances where alcohol and marijuana are both discussed.

Along with targeting the use of multiple substances, brief interventions should also be extended to the simultaneous use of alcohol and other drugs. For example, it is quite common for young adults to use both marijuana and alcohol at the same time, with prevalence estimates ranging from 15%–28% (Earleywine & Newcomb, 1997; Martin, Clifford, & Clapper, 1992; Midnak et al., 2007). The risks of simultaneous use are particularly concerning given the possibility of potentiation effects where one observes a more pronounced depressant effect, as well as through effects on decision-making and subjective intoxication estimates (Chesher, Dauncey, Crawford, & Horn, 1986). Simultaneous use of other substances with alcohol is also on the rise, most notably the recent increase in availability of energy drinks. The risks compound here as well, supporting the need for brief interventions that also target simultaneous drug use.

Mental health concerns represent another growing concern on college campuses that might benefit from the harm reduction approaches and brief interventions that were initially developed for alcohol use. Blanco and colleagues (2008) highlighted the many mental health needs of college students when documenting that almost half (45.8%) of college student met past year prevalence of any Axis I psychiatric disorder, personality disorder, or substance use disorder (see Kilmer & Bailie, in press, for additional information on other health and wellness challenges on college campuses). Serras and colleagues (2010) demonstrated that 14.3% of college students engaged in non-suicidal self-injurious behavior (e.g., cutting) in the past year. All forms of self-injury were related to drug use, and frequent “binge drinking” was a significant predictor of self-harm (Serras, et al., 2010). It is clear that these issues can overlap, and it is also clear that a health or mental health concern can have implications for or be impacted by alcohol use.

Physical health is also of concern: risky sexual behaviors including casual and/or unprotected sex are associated with alcohol use (Cooper, 2002), and put students at risk for sexual assault, contracting infections, and experiencing unwanted pregnancies (American College Health Association, 2008; Hingson, Heeren, Zakocs, Kopstein, & Wechsler, 2002). While studies are supporting the impact of alcohol interventions on various outcomes (e.g. sex-related consequences: Lewis, Rees, Logan, Kaysen, & Kilmer, 2010), many avenues remain to implement and evaluate extensions of the motivational enhancement, skills-training based approaches that Alan developed for alcohol to consider their impact on other health and wellness issues on campus.

Alan’s vision and values

While working at the Addictive Behaviors Research Center, when we were stuck about where to turn or where to go, when we needed to elaborate or refine our ideas, or when we

just needed a sense of direction or vision, we went to Alan. Writing an article that tries to capture Alan's contributions to the college student drinking field has been an intimidating and daunting task – one where we normally would have turned to him for his insight and input. In the year before his passing, Alan conducted interviews and podcasts in which he was asked about his thoughts on college student drinking and where the field could and should go. Alan was proud of these efforts to bring science to the public, and their availability provides a chance to hear from Alan, one last time, about his thoughts on college student drinking.

In August of 2010, Alan did a podcast with Jeff Wolfsberg (Wolfsberg & Marlatt, 2010). During the podcast, Alan talked about the importance of skills training in our work with college students:

“People wonder, ‘How can I resist the temptation if somebody wants me to be in a drinking game, because I don’t really want to get intoxicated? But, if I say no, they’ll think I’m socially rejecting them.’ There are so many issues that are going on, that we really need to talk about alcohol as a major factor. We have courses in everything else, and I think we should be teaching people about drinking, about drinking more safely if you choose to drink...otherwise, if all we can say is, ‘just say no until you’re 21, and then you can say yes,’ it’s just a very strange issue that way. Lots of problems come up.”

Alan was asked what advice he would give to parents who are about to send their son or daughter to college. Alan replied:

“You’re still leaving the decision in their hands – you can’t tell people that ‘you can’t drink;’ well, we can have the ‘just say no’ programs, but they don’t really get the message through. They don’t say anything more about why. Young people want to know, ‘why I should remain abstinent?’ or, ‘why should I maybe look at some moderate drinking as an option?’ Motivation is critical, and if you get a good relationship with your student or in your family talking about this, it keeps the door open, so if problems do come up or if questions arise during the freshman year, you’re there to talk about it...”

Alan always recognized that any one thing we did was part of an overall puzzle. Approaches like BASICS and ASTP succeed best when they are in an environment conducive to their success. We have many tools in our toolbox to allow us to work with college students, but the influence that parents have (as our colleague Rob Turrise has demonstrated through his research), as Alan pointed out, keeps the door open for very meaningful conversations and sets the stage for discussions about health outside of the hours of a counseling center, wellness center, or health center.

We do what we do today because of Alan. His kindness, generosity, dedication, and loyalty to the people around him are the standard that we try to model in our work and relationships with colleagues and students. In Alan's life, his influence and renown were only outstripped by his humility and his desire to help others succeed. He was quick to highlight the accomplishments of others, especially those he worked with and trained, and he opened doors and blazed trails that launched each of our careers and those of countless others. He

had a way of making those around him feel confident and optimistic, that no matter how difficult the road ahead, all things were possible. To us, he was an advisor, mentor, colleague, and friend, and we are so appreciative to have had the chance to know him and work with him for as long as we did. His contributions to college student drinking prevention and intervention strategies are immeasurable, and it is our hope that his work will continue through those he trained and those whose lives he touched. Considering the field in which we work, we also believe that his work will continue through those who are thoughtfully and creatively examining cost- and time-effective strategies for reducing alcohol-related harm through using peers, web-based approaches, emerging technologies, and other strategies. It was this very creativity and willingness to go beyond what was already there that set the stage for the many successes we have from Alan; it is these same characteristics that will allow the field to grow in future years.

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