

# The Report on Social Norms

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## Feature Article: An Interview with Mary Larimer, Jason Kilmer and Patricia Fabiano about MC2 – A Multi-Campus, Multi-Level, Normative Feedback Study

by Alan Berkowitz, Editor, *The Report on Social Norms*

“There is much that can be learned from this very ambitious project that will be of benefit to other social norms practitioners and to prevention specialists in general.”



**Alan.** I'm really excited about the preliminary results from your study, which are described elsewhere in this issue. There is much that can be learned from this very ambitious

project that will be of benefit to other social norms practitioners and to prevention specialists in general. What you have undertaken is very complicated and laudable. So, let's think together about what can be concluded from the work you have done so far, and what you have learned that can be shared with others.

My first question has to do with phase one of your project, the social norms marketing campaign, and the means used to disseminate the message. Do you think that for these three campuses, that newspaper ads alone were enough?

**Pat:** Not nearly enough. The central issue is that no one really knows the “dosage to campus size” question. We had three very different campuses and the newspaper ads alone were necessary but insufficient to achieve saturation.

**Jason:** If not enough, the question becomes what would be “enough”? I think that's an important research question for future studies. I think the most significant issue associated with delivering an intervention in a newspaper has to be readership—if we run an ad, will students even see it? In our study, we learned that some students never read the campus paper at all, and many are occasional readers.

**Mary:** We did engage in some minimal additional marketing of the statistic on two of our campuses, including beverage napkins with the statistic available at the student union beverage stands, some marketing of the statistic at sporting events and campus functions, use of the statistic in newspaper articles, etc. However, the ads were the

primary method of dissemination of the corrective normative information. It is impossible to know based on the design of the current study whether that was “enough”, though it is interesting that the only significant effect on perceptions of the norm occurred at our smallest campus, suggesting this was probably not an intensive enough dosage for larger schools. Also, we had a number of students who did not recall seeing the ads, suggesting we did not effectively reach many in our target audience. At the time, we felt the campaign we used was fairly typical of how this was being implemented elsewhere outside research protocols, and our goal was to conduct an effectiveness trial of the strategy as it was typically used.

**Alan:** We know that one of the requirements of a successful social norms campaign is getting the message to “stick”—i.e. having students believe and remember it. In retrospect, what else might have you done to get the message out and get it to “stick”?

**Mary:** There were several more intensive strategies that we considered, but were unable to implement in a timely and cost-effective manner, and/or felt were not able to be generalized to other campuses. Nonetheless, I think we certainly would in retrospect increase the intensity/dosage of the marketing campaign, and also work on the ways in which we assessed whether the message was received.

**Jason:** While this is an empirical question, I think we could continue to utilize existing marketing research strategies and could ask students their thoughts about message delivery and believability. You're asking essentially two questions, and I think the “stick” part of your question is the one researchers and practitioners could examine further.

*continued on page two*

## Feature Article: An Interview with Mary Larimer, Jason Kilmer and Patricia Fabiano about MC2

*continued from page one*

**Pat:** In hindsight, I wish we had done intensive posters in the residence halls, posters on the buses most heavily used by students and training of RAs to be “health opinion leaders.”

**Alan:** Is it possible that developing a standardized approach that could be applied equally to all three campuses prevented the necessary tailoring or contex-

tualizing that could have made the marketing campaigns more successful?

**Mary:** There was actually some variability across campuses. For example, newspaper circulation varied from daily to weekly, and content of the ads was personalized to each campus (including graphics, text and actual statistics utilized) based on the recommendation to tailor to campus culture. I think our market research was definitely more limited than it could have been, with respect to getting students’ feedback on the message and implementation of the message. Also, we did attempt to measure and account for campus culture, but found that within the constraints of our timeline, we could not reliably measure aspects of campus culture even within each campus, let alone across campuses. Increasing the reliability and validity of measures of campus culture would be a great advance in studying and disseminating this type of environmental intervention.

**Pat:** Perhaps, there is always that danger in “one size fits all,” but again with the wisdom of hindsight, I think we could have had some “standardized pieces” with a “menu of secondary options” that could have been more tailored to the culture of each campus.

**Jason:** Well, Alan, I think a standardized approach is what other colleges and universities are frequently faced with or are presuming they should do. There seems to be a standardized recommendation to be individualized, unique and different; this makes dissemination and extension elsewhere a challenge when schools often face limited resources of staff and money.

**Alan:** The data for phase two of your intervention, the individualized normative feedback component, are very promising. What would you recommend to campus practitioners who are interested in looking into this intervention?

**Jason:** Evaluate the long-term impact of such an approach, and take steps to iden-

*continued on page three*

## Editor's notes

This issue of the *Report on Social Norms* completes year four of the *Report*. Many thanks to our dedicated subscribers who have made continued publication of this *Report* possible, and greetings to those of you who are attending the North American Conference on the Social Norms Approach in Toronto, Canada. We are excited to join our colleagues from the Canadian colleges and universities that have begun implementation of the social norms approach.

One of the important developments in the field of social norms, described in the last issue, is the funding of rigorous scientific studies of social norms interventions by the National Institute of Alcoholism and Alcohol Abuse (NIAAA). The “Feature” and “From the Field” articles in this issue showcase one of these studies—the MC2 study being conducted at the University of Washington, Western Washington University and Evergreen College under the direction of Mary Larimer, Jason Kilmer and Patricia Fabiano. These well-known and very capable scientist-practitioners have designed a somewhat complex study that will test three different kinds of normative feedback on three different campuses. Much will be learned from this effort as can be gleaned from the articles in this issue and the publications that will come out of MC2.

The “Feature Article” is an interview with Mary, Jason and Pat that highlights some of the tensions and challenges inherent in conducting a social norms intervention: how much does the intervention need to be tailored to the campus to be successful; what is the best dosage for a social norms marketing message and the right amount of exposure; and, what are the minimum amount of resources necessary to conduct a successful campaign?

This issue inaugurates a new feature of the *Report* that will be offered on an occasional basis—introductions to some of the prominent academic researchers in the field. Brian Borsari, currently at Brown University, is one of these researchers. His work with Kate Carey has included the only meta-analysis of social norms studies to date, providing important empirical support for the model, and has also focused on the emerging theoretical and research challenges in the field.

Best wishes to all for a relaxing and rejuvenating summer.

Alan Berkowitz

Editor, *The Report on Social Norms*

## Feature Article: An Interview with Mary Larimer, Jason Kilmer and Patricia Fabiano about MC2

*continued from page two*

tify with and for whom this type of approach seems to work best.

**Mary:** We are currently studying the implementation of comprehensive web-based feedback with a sample of first-year students, using a similar feedback protocol to the one we used in the mail. One advantage of mailed or internet-delivered feedback as compared to mass media messages is that we have a greater degree of certainty that the information was received. I think there are lots of ways that campuses could incorporate this type of approach into their existing programming, and many of them are not overly expensive—though there is no free lunch, and doing any intervention well requires financial resources.

**Pat:** Well, if we are successful in a new grant application, we will be working with the University of Washington and Clayton Neighbors to see if we can adapt his “laboratory” intervention using computer delivered normative feedback only to a large sample of first- and second-year students living in Western Washington University residence halls. I think the research in this area is very exciting.

**Alan:** One of the unique aspects of your project is that you delivered a number of different normative feedback interventions in sequence on each campus. This leads me to wonder if there were any interaction effects between being exposed to the marketing campaign and participating in the normative feedback component, and if you are able to assess them?

**Jason:** At least on our campus, we’re still collecting data on this piece. Pat?

**Pat:** I do not know. I know that we saw an effect from the normative feedback component and I would like to think that it generalized to “adding to the mass” of the marketing campaign but I do not know if the data support that.

**Mary:** Because the marketing campaign was administered campus-wide,

and the mailed feedback intervention was then administered to a random half of participants on the campus, it is hard to state with any certainty that the marketing campaign increased, decreased or didn’t change the effectiveness of the feedback. We would need a different design to test that. However, in our third intervention stage, we do hope to be able to evaluate whether receiving the mailed feedback increases the efficacy of the group skills-training program. In addition, we will look at the data for those who did and did not recall having seen the ads, and evaluate their response to the feedback intervention in stage II. The results we have now are preliminary, and only one piece of what we ultimately hope to be able to learn from this study.

**Alan:** Is there anything that you have learned about implementing and evaluating social norms campaigns from this project that you would like to share with practitioners in the field?

**Pat:** Three things. First, study the culture of multi-campus sites. Second, decide what kinds of pieces can be standardized and what can be individualized. Third, take care (time, money, people, resources) to test every word of the normative message itself to see if it “plays in Peoria.”

And then of course, all the Koreen Johannessen steps but I think when you have a multi-campus site, an ethnography of each campus going in would be extraordinarily important in determining what can be standardized and what needs to be individualized.

**Mary:** I think any time you do a study, you learn what to do as well as something about “what not to do,” based on things you wish you’d done differently. I think what I have learned is that this is not a simple or straightforward intervention strategy, as I think it is often perceived to be, and as Pat indicates, it takes time, planning, money and personnel to implement. I think our implementation and dosage was probably comparable to

or exceeded what many (if not most) campuses were doing when we started the study, but is not comparable to how the most successful campuses have implemented this strategy. I also think there is a lot of basic research that is still needed to establish the limits and most effective uses of normative influence, and it is also important to evaluate how other intervention components active on the most successful campuses interact with the marketing campaign to produce good outcomes. Ultimately, we want to use the limited resources available to do what is most likely to be effective for the most number of people, and we need to carefully evaluate what strategies and in what combination will meet these objectives, across different campuses and segments of the campus population.

**Jason:** Great question, Alan, and at least the data analysis part of this related to evaluation is something Jessica Cronce and I discussed in an earlier article for *The Report on Social Norms* (“Do your data do you justice? Evaluating social norms interventions,” Vol 2, #7, p. 1, 8.). I think it’s important to ask the questions that will help you understand what you see. I’m glad we assessed, for example, even things like how often students reported reading the campus paper. Think critically about your findings, and take what steps you can to understand and account for what you see in your data. It is very important to have a plan for evaluating your intervention that will allow you to evaluate its impact.

**Alan:** Well, if we had more time and the *Report* had more space, I would continue this conversation for a few more hours. I am sure that there will be many more important lessons and findings that you will be sharing with us as you analyze your data and finish the final phases of the project. Thank you all for the very important work that you are doing, and keep us posted.

(See page 7 for interviewee contact information.)

## Recent Research

*This issue's Recent Research section provides reviews of studies examining the relative influence of norms versus fear of punishment, perceptions of sexual health and sexual activity, and an instrument developed to assess norms of tobacco use.*

### **Perceived Risks and Normative Beliefs as Explanatory Models for College Student Alcohol Involvement: An Assessment of a Campus with Conventional Alcohol Control Policies and Enforcement Practices (2005).**

**Todd Lewis and Dennis Thombs.** *NASPA Journal*, 42(2):202-222. This study was designed address one of the critical questions facing the prevention field—the extent to which student drinking practices are influenced by perceived norms on the one hand, and fear of punishment due to violating policies on the other. This question is critical to the discussion of the relative efficacy of social norms interventions and interventions based on strengthening policies and their enforcement. The authors found that “alcohol involvement was best explained by normative beliefs about the drinking practices of one’s closest friends. Perceptions of drinking risk were less important to the explanation of alcohol involvement, and some of these measures unexpectedly had positive associations with indicators of alcohol risk behavior. *These findings call into question the conventional deterrence strategies used in many university communities*” (p. 203, italics added).

It is important to note that the authors of this study only examined one aspect of comprehensive environmental management—fear of punishment. Other environmental management strategies that are designed to impact availability and foster safe use were not addressed. The authors also noted in their literature review that “there is little evidence to

support either institutional policies or minimum legal drinking age laws as effective strategies for reducing alcohol consumption and alcohol problems in college student populations.” (p. 204).

“... alcohol involvement was best explained by normative beliefs about the drinking practices of one’s closest friends. Perceptions of drinking risk were less important to the explanation of alcohol involvement, and some of these measures unexpectedly had positive associations with indicators of alcohol risk behavior. *These findings call into question the conventional deterrence strategies used in many university communities*” (p. 203).

The study was conducted at a large public university that has a full range of alcohol control policies and frequent enforcement of them. Yet in the subsample of student who drink (n = 1,322), most students perceived there to be “no risk” of experiencing potential policy consequences of drinking. Instead, higher levels of alcohol use were most strongly associated with: 1) perceiving that close friends also drink a lot, 2) spending large amounts of time socializing with friends, 3) beginning alcohol use at an early age and 4) the perception of being at higher risk of receiving a sanction of some kind. The latter finding was surprising and seems initially counter-intuitive as it would make sense to assume that students who drink more would not be worried about being sanctioned because if they were they would drink less. In their analysis the author’s suggested that the perception of higher risk of punishment was instead an artifact of high-risk drinking. In other words, students who already drink a lot assume that they are more at risk of punishment because of their drinking but drink a lot anyway in spite of this risk.

This finding suggests that policies may be ineffective in impacting the drinking of students who are most in need of them.

Thus, this study, though limited in scope, seems to suggest that the normative influence of close friends serves as a more powerful lever for impacting drinking than creating fear of punishment, especially among heavy drinkers.

### **Risky Business: Misperceived Norms of Sexual Behavior Among College Students (2004).** Joseph Lynch, Rebecca Mowrey, Gordon Nesbitt and Daniel O’Neil. *NASPA Journal*, 42(1):21-35.

This study examined student perceptions of the sexual behavior of other students and found that “students tend to overestimate the potentially risky sexual behavior of their peers,” thus supporting the findings of previous research on this question (see for example, the study “Using Social Norms Theory to Explain Perceptions and Sexual Health Behaviors of Undergraduate College Students” reviewed in the April 2005 issue of the *Report*.)

Participants were 662 students at a medium-sized public university. One potential flaw in the study is that it assessed perceptions of the behavior of “most students” without including the customary phrase “on this campus.” Thus, although the perceptions measured may be for the larger cohort of college students in general rather than for a specific campus, the findings nonetheless support previous research on this topic documenting extensive misperceptions of sexual health behaviors. For example, while 49% of respondents reported that they had sexual intercourse in the last 30 days, the perception was that only 6% of students had not had intercourse in the last 30 days. Similarly, while only 46% reported having sex two or more times in the last 30 days, 81% of students perceived that having sex two or more times in the last 30 days was normative. These misperceptions were even greater

*continued on page five*

**Recent Research** *continued from page four*

for female Greeks and female athletes, who assumed that all of their peers had been sexually active in the last 30 days. Similar misperceptions were documented for number of sexual partners.

The study also examined perceptions of condom use and found that students perceived more safe sex practices than were normative. Greek males “were the group with the highest reported rate of safer sexual practices.”

This study adds to a growing literature that suggests the applicability of the social norms approach to issues of sexual activity and healthy sexual behaviors.

**Development and Validation of the College Tobacco Survey (2005).** Carol Ott, Susan Cashin, and Michael Altekruze. *Journal of American College Health*, 53(5):231-238. The authors of this study “report on the development and assessment of an instrument to measure baseline campus cigarette use and outcomes from prevention programs, including those using a social norms approach combined with environmental policy change.” (p. 231). The survey was administered to a sample of 1,279 college students and misperceptions were documented for perceptions of tobacco use in the last 30 days and in the last seven days. In addition, students underestimated the motivation of smokers to quit smoking before graduation—while 89% of smokers indicated a desire to quit before graduation the perception was that only 53% wanted to quit before graduation. The “College Tobacco Survey” (CTS) was developed from a number of different tobacco instruments in consultation with a panel of experts and was found to be reliable and valid. It is a potentially useful tool for use in collecting baseline data for social norms and environmental management prevention programs and can be used to evaluate the effectiveness of these programs following implementation.

**Researcher Profile: Brian Borsari**

*This issue of the Report inaugurates a new feature titled “Researcher Profile.” It will acquaint social norms practitioners with some of the prominent researchers in the field, who have been invited to provide an overview of their work and its implications for the practice of social norms.*

My research has examined two types of norms: injunctive and descriptive. Descriptive norms refer to the students’ perception of other’s quantity and frequency of drinking, and are based largely on behavioral observations of how people consume alcohol in discrete drinking situations. On the other hand, Injunctive norms refer to the perceived approval of alcohol use, and represent perceived moral rules of the peer group. In my research, I have examined the factors that influence norm perception, and have also incorporated norms in interventions with college student drinkers. In this way, I have been able to address both the theoretical and practical aspects of this phenomenon.

**Impacts of Individual Normative Feedback.** My graduate mentor, Dr. Kate Carey, and I initially started working with norms at Syracuse University in 1999. In our first project, we implemented a brief motivational intervention for at-risk college drinkers, randomly assigning students reporting two or more high-risk episodes in the past 30 days into a brief intervention or no-treatment control group (Borsari & Carey, 2000). Students in the intervention group showed significant reductions in alcohol use at six-week follow-up. During the interventions, we noticed that students consistently overestimated the amount of drinking on campus and were very surprised when they were informed of the actual campus drinking norm. This phenomenon had been reported in earli-

er research (e.g., Baer, Stacy & Larimer, 1991; Perkins & Berkowitz, 1986).

Analyses revealed that post-intervention perceived norms mediated the relationship between group membership and alcohol use. Therefore, it appeared that correcting perceived norms of other’s drinking during the intervention influenced personal alcohol use.

**Reviewing the Social Norms Literature.** These findings led to a further exploration of the published literature on the many ways that peers influence students’ alcohol use, both directly and indirectly through perceived norms. These efforts resulted in a narrative literature review of norms in the context of peer influences on alcohol use in college (Borsari & Carey, 2001). This review confirmed that students tend to overestimate both injunctive and descriptive norms, viewing peer reference groups as drinking more and being more approving of alcohol use than they are. However, we found that norms had been assessed in a variety of ways and with a large number of reference groups. To systematically examine the degree to which students misperceive descriptive and injunctive norms, we conducted a meta-analysis on the difference between personal alcohol use and the perceptions of other’s use, labeled self-other differences (SODs). This meta-analytic combination of 23 studies confirmed the frequently reported finding that the average student perceives that others drink more heavily and hold more favorable attitudes towards drinking than s/he does (Borsari & Carey, 2003). In addition, we also identified several factors that predicted the size of SODs in perceived norms. For example, larger SODs were observed for injunctive norms compared to descriptive norms. Personal characteristics also influenced the magnitude of SODs: women reported larger SODs

*continued on page seven*

# from *the* field

## The Motivating Campus Change (MC2) Project: Overview and Preliminary Results

Mary E. Larimer, PhD, University of Washington; Jason R. Kilmer, PhD, The Evergreen State College; Patricia M. Fabiano, PhD, Western Washington University

“Motivating Campus Change” (MC2) is an NIAAA-funded project that is evaluating three stepped-care interventions for the prevention of high-risk college student drinking. The project has a total cost of \$2,010,790 and was funded for a period of six years, from 1999-2005. Each intervention “phase” has been sequentially implemented within a multiple-baseline design across three college campuses in Western Washington. This research design provides three different campuses with a three-phase social norms intervention, with the campaigns being implemented sequentially during different time frames. This sequential research design provides for multiple control groups—students on each campus are compared to randomly selected same-campus control groups and the research design also allows for the campuses that receive the intervention at a later point in time to serve as controls for those that receive it at an earlier point in time. The principal investigators for the project are Drs. Mary Larimer from the University of Washington, Jason Kilmer from The Evergreen State College and Patricia Fabiano from Western Washington University.

The three intervention phases include 1) a social norms-based social marketing campaign; 2) a direct mail

norms and skill-training campaign (personalized motivational feedback); and 3) a peer-led, brief group motivational enhancement/skills training intervention for high-risk drinkers. To date, 13,797 participants across the three campuses have participated in the study. Both longitudinal participants and a random cross-sectional sample on each campus have been assessed annually, via web-based or mailed surveys.

**Phase One Results—Social Norms Marketing Campaign.** Preliminary results of phase one have been evaluated through comparison of survey data from stratified random samples of students on each campus, analyzed cross-sectionally prior to and one-year following implementation of a social norms marketing campaign on each campus. The social norms campaign consisted of newspaper advertisements highlighting the descriptive norm for lower-risk drinking, using self-report data of the amount of alcohol consumed on a typical weekend drinking occasion over the past month. Content of the ads consisted of slight variations of the theme “Most (xx%) of (campus name) students drink 0, 1, 2, 3 or at the most 4 drinks when they party”. Minimal other marketing of the social norms statistic was undertaken on two of the campuses. Analysis of Covariance (ANCOVA) was used to analyze campus-wide changes in descriptive norms for drinking and for abstinence, as well as actual drinking behavior and consequences of students on these three campuses.

Results of analyses were mixed, and provided weak support for the social norms marketing campaign as implemented in this study. Perceptions of the norm for percentage of students who engaged in heavy episodic drinking (consumption of 5 or more drinks per

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... low exposure to the ad campaign may be a plausible explanation for weak findings. This explanation is consistent with other research suggesting that adequate ‘dosing’ of a normative message may be needed to impact a college campus. Thus, future studies could evaluate exactly what constitutes an ‘adequate’ dose.”

occasion) decreased on one campus post-intervention, but did not change for the other two. Similarly, perceptions of the norm for abstinence increased on this campus, but did not change on the other two. There were no effects of the intervention on drinking behavior or consequences.

An important variable of interest in measuring potential impact of a social norms intervention involves whether or not students see the normative information. On the two campuses on which this was measured, 27% of students on one campus and 71% of students on another reported never seeing ads, and on average, students on these campuses read the newspaper less than once per week (for daily circulation) and approximately once per month (for weekly circulation). Consequently, low exposure to the ad campaign may be a plausible explanation for weak findings. This explanation is consistent with other research suggesting that adequate “dosing” of a normative message may be needed to impact a college campus. Thus, future studies could evaluate exactly what constitutes an “adequate” dose.

An additional potential challenge to the impact of the norms campaign could be students’ perception of the believability of the message. The majority of students who recalled seeing the ads indicated that they were somewhat or

*continued on page seven*

## From the Field

very believable, but approximately 30% felt they were not believable.

Additional analyses for the longitudinal sample are underway, evaluating whether baseline drinking levels, exposure to the ad campaign, believability and changes in normative perception moderate the effectiveness of the intervention on individual drinking behavior. This will help us determine if the campaign was differentially effective for some students even though we did not find overall campus impacts, and it will also allow us to identify variables that may be associated with campaign effectiveness or failure.

**Phase Two Results—Mailed Motivational Feedback.** Phase two (mailed motivational feedback) results are more promising. Participants were randomly assigned to an intervention condition or assessment-only control. Intervention participants received mailed feedback from their baseline assessment, patterned after the feedback utilized in the Brief Alcohol Screening and Intervention for College Students (BASICS) intervention (Dimeff, et al., 1999), including personalized normative feedback as one component. Participants also received a series of postcards with additional information including standard drink calculations, BAC information and skills training tips for reducing alcohol-related negative consequences.

Results are currently available for the first campus, with a sample of 1,488 students participating. Results indicate participants who received the intervention reported less alcohol use, were less likely to report consumption of five or more drinks per occasion, and abstaining students were more likely to remain abstainers at one year follow-up compared to those students in the assessment only group. In addition, use of protective strategies mediated these results, such that students in the inter-

*continued from page six*

vention condition were more likely to report use of the protective behaviors than those in the control group, and use of these strategies was related to less alcohol use.

### Implications of the Study.

Additional analyses are ongoing, and phase three follow-up is currently being completed. Though results are preliminary, overall they support the view that low-intensity social norms marketing campaigns are not sufficient to produce drinking reductions. Additional research is needed to evaluate whether increasing dosage and exposure would improve outcomes of these campaigns. Direct-mail strategies which increase likelihood of exposure to the information may be more successful with relatively small incremental costs.

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**Research Profile** *continued from page five*

than men, and non-Greeks reported larger SODs than members of the Greek system. Finally, the reference group influences the magnitude of the SODs: comparing him/herself to more distal reference groups (e.g., all college students) resulted in greater SODs than when the student compared him/herself to more proximal reference groups (e.g., close friends). Therefore, people differ in the degree to which they misperceive descriptive and injunctive norms.

**Normative Feedback for Policy Violators.** This research has practical applications. I am currently implementing brief motivational interventions with students who have been referred to the administration for violating campus alcohol policy (Borsari & Carey, in press). Many of these students are heavy drinkers, and spend a large amount of time socializing with other students who drink. As a result, they often greatly overestimate injunctive and descriptive norms. Therefore, I feel that correcting misperceived norms remains an important component of these interventions, and provides the student with a new perspective on the risk associated with his or her drinking.

Although addressing norms has emerged as an integral part of our interventions, I do not feel that simply providing the student with accurate campus drinking levels is always enough to facilitate changes in drinking behaviors. Instead, interventions could adopt a systematic challenge of the student's perception that "most people drink more than I do." For example, in addition to providing accurate rates of alcohol use on campus, we also provided feedback regarding the number of adverse consequences typically experienced by students at their school (Borsari & Carey, in press). In this way, we were able to challenge the perception held by many students that

*continued on page eight*

## Research Profile

*continued from page seven*

experiencing consequences from drinking is a common experience (e.g., “everyone has hangovers after drinking”). In the future, by providing normative feedback in a variety of areas, I hope to clearly demonstrate to the student that his or her drinking is not typical.

### Future Directions.

Ongoing research will provide guidance on how to maximize the potency of normative feedback for students participating in mandated interventions. Many questions remain unanswered regarding precisely how perceived norms influence personal alcohol use. For example, what types of norms are most influential, descriptive or injunctive? Is the belief that others drink more than oneself a more potent influence on personal alcohol use than the perceptions that others are more approving of drinking? What influence does the source of the perceived norm have on its potency—does the perception of

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close friends’ drinking influence personal use more than the perceived drinking of the typical student at the university? What type of student is most influenced by norms—are desire for conformity, social belonging and/or self-esteem relevant? Other researchers and I are beginning to systematically answer these theoretical questions. However, this work will have immediate relevance to our continued development and implementation of normative interventions with college students engaging in risky alcohol use.

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“Many questions remain unanswered regarding precisely how perceived norms influence personal alcohol use.”

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