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Inside the Physician's Black Bag: Critical Ingredients of Brief Alcohol Interventions

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ABSTRACT. Brief primary care interventions structured around patient workbooks have been shown to be effective in modifying hazardous drinking behavior. However, the critical ingredients of such interventions are not well understood, possibly contributing to their underutilization. Seventeen campus-based clinicians trained in a brief, workbook-based alcohol intervention participated in a qualitative study to identify the most promising clinician-patient interaction components within this shared approach, utilizing a focus group with the clinicians and ranking of the 24 workbook ingredients. Based on the clinicians' collective experience, consensus emerged around the perceived strength of 5 main components: (1) providing a summary of the patient's drinking level, (2) discussing drinking likes and dislikes, (3) discussing life goals, (4) encouraging a risk-reduction agreement, and (5) asking patients to track their drinking (on cards provided for this purpose). This is the first paper to examine primary care physician perspectives on potentially critical components of effective brief alcohol intervention.

KEYWORDS. Alcohol counseling, brief intervention, critical ingredients, heavy alcohol use, high-risk drinking, motivational interviewing

INTRODUCTION

Unhealthy alcohol use in the United States is a critical and well-documented public health problem, with approximately 100,000 deaths and nearly $185 billion in financial cost annually (1). The highest rates of alcohol problems and diagnosed alcohol use disorders occur

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among 18- to 29-year-olds (2). Among college students aged 18 to 24, alcohol-related unintentional injury-related deaths increased 3% per 100,000, from 1440 in 1998 to 1825 in 2005, with concomitant increases in driving-under-the-influence (2.8 million), unintentional injuries (500,000), and assaults (600,000 students) (3–5). Implementing interventions to reduce alcohol-related harm is one of the primary challenges facing university administrators and faculty, law enforcement personnel, and student health care providers.

In the clinical arena, alcohol screening, brief intervention, and referral to treatment (SBIRT) have been shown to reduce alcohol use and related harm, leading to evidence-based recommendations of the US Preventive Services Task Force (USPSTF), National Institute on Alcohol Abuse and Alcoholism (NIAAA), Institute of Medicine, World Health Organization, American Society of Addiction Medicine, and other prominent medical organizations (6, 7). In the 12 years since the first demonstration that primary care doctor-patient discussions could effect sustained reduction in drinking and related consequences (8), evidence of brief intervention's effectiveness in multiple populations has accumulated (9–17). Nevertheless, there remains a consistent lag in implementing these techniques into clinical practice.

A systematic review (18) of randomized control trials in the literature from 1992 through 2004, studying reduction of alcohol misuse in primary care in terms of clinically preventable burden and cost effectiveness, found "alcohol screening and counseling [to be] one of the highest-ranking preventive services among the 25 effective services evaluated using standardized methods." This review noted that, of these 25 services studied and given positive recommendations by the USPSTF, alcohol misuse screening and counseling was delivered at much lower rates than screening for colorectal cancer, hypertension, or immunization for influenza or pneumococcal disease. They concluded: "Since current levels of delivery are the lowest of comparably ranked services, this service deserves special attention by clinicians and care delivery systems."

Although physicians generally accept the benefits and responsibilities of addressing potential alcohol use problems among their patients, they face multiple barriers, including lack of time, inadequate training, fear of judging or stigmatizing patients, confusion about the criteria for identifying alcohol use problems, and uncertainty about how to respond to patient disclosures of risks (19, 20). Studies examining conversations with patients about alcohol use have found frequent physician discomfort (hesitancy, stuttering, inappropriate laughter), lack of clarity (vague, tentative, or ambiguous advice or statements), and avoidance of opportune moments to explore patients' candid revelations about their alcohol use (20–22). A recent primary care study of alcohol-related discussions (22) revealed infrequent use of advice (5%), reflective listening (3%), and supportive or affirming statements (5%).

It would seem that one necessary step to increasing effective use of brief alcohol interventions in primary care settings is to identify best practice components of the clinician-patient interaction underlying the intervention process. In general terms, there is evidence that alcohol brief interventions following the style of motivational interviewing can help patients to reduce use (23–25). These interventions involve patient-centered, clinician-directed interactions with patients designed to elicit intrinsic motivation to change their behavior. However, the specific critical ingredients of primary care clinician-delivered brief interventions are still not well understood.

This paper reports on a collaborative project undertaken with 17 campus-based clinicians (including 4 of the authors) experienced in the delivery of brief interventions with college students. The objective was to identify the most promising clinician-patient interaction components among a repertoire of 24 workbook modules. In addition to working from a common template with similar populations, the participating clinicians (13 physicians, 3 nurse practitioners, and 1 physician assistant) were able to draw on extensive clinical experience, augmented by their participation in a large randomized controlled trial testing the efficacy

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of clinician-delivered brief intervention in 986 high-risk drinking college students from 5 universities in the United States and Canada (The College Health Intervention Projects, or CHIPs, study) (26). Taken together, these clinicians delivered nearly 1000 brief alcohol interventions in sessions with 488 patients at 5 campus health centers over 2 years.

METHODS

In order to learn from the collective clinical experience of these 17 primary care providers, the authors undertook a 15-month qualitative study, culminating in the critical ingredients summaries described in this paper. The primary steps in the study included (1) a focus group over two days with clinician interventionists and other research staff; (2) reviews of the focus group transcripts, intervention tracking sheets, and intervention conversation notes; (3) follow-up conference calls with participating clinicians to validate summaries of the focus group discussion; (4) a brief survey of the 17 providers' ranking the 24 identified clinician-patient interaction components; and (5) a two-day authors' conference to discuss and reach consensus on emerging qualitative patterns.

The 17 participating primary care providers practiced in 5 different university student health clinics (University of Wisconsin–Madison, University of Wisconsin–Stevens Point, University of Wisconsin–Oshkosh, University of Washington–Seattle, and University of British Columbia–Vancouver). All had the common background of serving as interventionists in the above-referenced randomized trial (the CHIPs study), which had positive results in reducing drinking and related harms. As such, each of these clinicians had the same training, worked with similar populations, and made use of the same intervention tools, including a patient workbook that guided the intervention process.

The 17 clinicians were trained through identical full-day workshops consisting of (1) didactic information on the evidence, effectiveness, and practice of screening and brief intervention, based on NIAAA guidelines (27, 28); (2) case descriptions and demonstration of interview techniques to facilitate patient engagement in behavior change; (3) specific guidelines for the selective use of a repertoire of clinician-patient interaction components, each guided by different parts of a patient workbook, and (4) 90 minutes of practice using role-playing with college students trained for that purpose. The patient workbook (available at www.fammed.wisc.edu/files/webfm-uploads/documents/research/workbook_chips_v6.pdf), adapted from one used in Project TrEAT (8), had been modified for use with college populations.

The 17 participating clinicians delivered two office-based brief alcohol intervention sessions with each of the 488 students who had been randomized into the treatment arm of the CHIPs trial. Each of the students had been surveyed while seeking routine care from a campus health clinic (or, at one site, in the context of a health class) and had screened positive for at-risk drinking at the point of randomization. Clinicians followed a common approach as interventionists with these patients, using the patient workbook as a guide, not a script, while at the same time using their clinical judgment to determine the most appropriate conversations, content and direction of the intervention with each high-risk-drinking student.

The research described here was conducted as a line of inquiry subsequent to the successful CHIPs trial, with the purpose of gathering data from these interventionists on potential best practices underlying their common brief intervention processes.

The initial two-day focus group, held in Madison, Wisconsin, included 12 of the 17 clinician interventionists (10 in person and 2 via teleconference) along with other study researchers associated with the CHIPs trial. The focus group led the clinicians through a process of identifying insights based on their delivery of the brief alcohol intervention, including differences in experiences as well as commonalities. The central focus, from the clinicians' perspectives, was on evaluating how well each of the 24 specific clinician-interaction components within the overall brief intervention process seemed to stimulate positive behavioral change with their patients.

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The authors, with the assistance of research staff, then reviewed and thematically organized the written transcript of the focus group session. At this stage, they also examined intervention tracking forms and clinical notations from the actual patient intervention visits. Two follow-up telephone conference calls with the focus group interventionists were then used to validate emerging themes. These themes encompassed the techniques within the overall brief intervention process that seemed to most saliently impact patients' behavioral change, from the perspective of different clinicians.

In order to gather collaborative quantitative data, a brief standardized survey instrument was subsequently sent to all 17 clinicians in the trial asking them to score each of the 24 clinician-patient interaction components comprising their brief intervention approach. Clinicians rated each component on a 1 to 10 scale of clinical usefulness (i.e., the components they felt were most helpful during those visits in motivating their students for behavior change). They were also asked to explain the basis for their ratings, give examples of how they used each of the tools, and provide illustrations (in the form of quotes or descriptions) of patient responses. Of the 17 clinicians surveyed, 13 (76%) responded, including 10 clinicians, 2 nurse practitioners, and 1 physician assistant; the remaining 4 had moved or were otherwise unavailable to respond.

The authors then met for 2 final days to synthesize the qualitative themes and ranking data submitted by the clinicians in order to identify the interaction components with the strongest support from the evidence gathered.

RESULTS

Table 1 lists and describes each of 24 clinician-patient interaction components included in the repertoire of strategies available to the clinicians within the overall brief intervention approach used. Mean clinician numerical rating scores for each item are reported for the 13 clinicians who provided ranking data, along with the ranges of responses.

The 5 uppermost components ranked on a scale of 1 to 10 included discussing drinking likes and dislikes (8.4), discussing life goals (8.4), encouraging a risk-reduction agreement (8.4), providing a summary of the student's drinking level (8.3), and asking students to fill out drink tracking cards (8.0). The lowest quartile of components included explaining the alcohol biphasic response continuum (5.4), encouraging use of a blood alcohol content calculator (5.4), providing a follow-up telephone call after each of the 2 office visits (5.3), discussing potential co-occurring personal or mental health concerns (4.5), and asking students to review take home work sheets (4.4). The lowest ranked components also tended to have the least consensus (i.e., widest range in rankings).

Table 2 lists the 10 components that clinicians scored highest, in decreasing ranked order, along with the core principle(s) of motivational interviewing reflected by each (express empathy, develop discrepancy, roll with resistance, and support self-efficacy).

Qualitative data revealed a consensus that the most reliable interaction components did indeed reflect underlying core principles of motivational interviewing: Asking about drinking likes and dislikes provided a powerful means to "express empathy," as did giving feedback on alcohol use and binges. Assessing life goals and alcohol use was an effective way to "develop discrepancy" between patients' goals and behaviors. Signing a reducing risk agreement and tracking numbers of drinks highlighted the need to "support self-efficacy" as well as "roll with resistance." Discussing behavioral consequences of drinking enabled physicians to "express empathy," "develop discrepancy," and "roll with resistance." Assessing readiness to change (on a 1 to 10 scale) provided a visual, practical approach to "rolling with resistance."

Focus group discussions underscored that the more clinicians used these components, the more effective and efficient they became at motivating patients to modify their alcohol use. A key observation made by the clinicians was that students often seemed surprised by, and genuinely appreciative of, talking with a health care professional about what they liked as well as disliked about their drinking, and they did so with ease and candor. In general, clinicians agreed that as they refined their skills in talking with

TABLE 1. Workbook Components

Component (tool)	Description of component (Components are listed in the order presented in the Workbook)	Average rank (range)
1. Current Overall Health Habits	Clinicians presented feedback on students' self-reported exercise patterns, tobacco use, and nutrition, including body mass index (BMI), and asked students whether they had any weight concerns.	7.1 (4–10)
2. Alcohol Use Totals	Clinicians reviewed students' alcohol use in past 28 days: no. of days drinking any alcohol; no. of times drinking 5 or more drinks; total number of drinks; and family history of alcohol problems.	8.3 (6–10)
3. Cofactors screen	Students were shown their top 3 alcohol-related problems, gathered from responses to the Rutgers Alcohol Problems Index (RAPI), with a discussion about these concerns. Using student results from the standardized 7-question Beck Depression Inventory (BDI), clinicians discussed depression level and risks, and provided referrals if indicated, specifically with regard to any suicidality. Also, frequency of condom use and alcohol use, and whether there were correlations in those behaviors in the past 6 months was discussed.	4.5 (1–8)
4. Alcohol Use "Norms" Among Peers	Using pie charts depicting weekly consumption of alcohol by 18–25-year-old men and women, the student's own alcohol use was compared to peer norms	7.6 (5–10)
5. Drinking Consequences	Reviewed a list of commonly reported behavioral consequences from alcohol use in the past month based on large national data samples (Hingson and Wechsler). Students were asked to reflect on their own consequences.	7.6 (5–10)
6. Alcohol Biphasic Response/Feelings continuum	Students were shown the biphasic nature of alcohol-induced moods/feelings, varying with the number of drinks from euphoria to dysphoria, and were asked to reflect on their own experiences.	5.4 (1–10)
7. Drinking Likes and Dislikes	Students were asked what they usually drink and what they like and dislike about drinking.	8.4 (6–10)
8. Drinking Consequences: BAC	Students were shown their computer-calculated highest Blood Alcohol Concentration (BAC) during the past 28 days, based on their self-reported drinking. They were shown a BAC chart depicting various behavioral effects and risks at increasing BACs and were asked to comment on their own experiences.	7.5 (2–10)
9. Drinking Consequences: Calories	Students' alcohol-related caloric intake over the past 28 days was estimated (calculated from their baseline interview data) and presented to them as total number of calories as well as in "cheeseburger equivalents" (computed at 330 calories per cheeseburger).	7.7 (5–10)
10. Drinking Consequences: Financial Costs	Students were asked to estimate the amount of money they spend on alcohol in an average month and what they thought of that expenditure. This total was also compared with an average cost per drink multiplied by their total number of drinks in the past 28 days.	6.9 (3–10)
11. Life Goals and Alcohol Use	Students were asked to think about and then list their important life goals for the next few months and the next few years. They were then asked to comment on whether achieving each of these goals would be "harder, easier, or no effect" if their alcohol use continued at current levels.	8.4 (6–10)

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TABLE 1 (continued)

Component (tool)	Description of component (Components are listed in the order presented in the Workbook)	Average rank (range)
12. Readiness to Change Scale	Students were asked to estimate, on a 1–10 scale, how willing (10) or unwilling (1) they were to make any changes in their current drinking. They were asked why their "willingness number" was not at a lower level; this facilitated their own verbalizing reasons to make some changes.	8.0 (6–10)
13. Reducing Risk Agreement	Students were asked to list specific ways to modify their drinking, whether by setting a limit on total number of drinks per day, or total number of drinking days, or via use of nonalcoholic beverages, slower consumption, or other specific methods. The student was asked to sign the agreement, and the clinician signed it as well, indicating support for the student's plan.	8.4 (6–10)
14. Drinking Tracking Cards	Students were asked to track, on pocket-sized cards, the types of drinks and the amounts each day, for 4 weeks.	8.0 (3–10)
15. BAC Calculator	Students were shown how to use a BAC calculator "wheel" and given one. They were encouraged to use it individually as well as with their friends to help keep their "community of friends" drinking within reasonable limits.	5.4 (1–7)
16. "Take-Home" worksheets	Students were asked to take home and review 3 handouts to individualize their drinking plans: (1) "Identify Reasons to Make Drinking Changes"; (2) "Strategies for Success"; and (3) "Alcohol and Decision-Making." They were asked to complete these worksheets and bring them back with the workbook to discuss at their second visit.	4.4 (1–7)
17. Follow-Up Phone Call No. 1	Clinicians were asked to call students at about 2 weeks after their first visit to (1) give them encouragement and support; (2) check in with them on progress on their drinking goals; (3) discuss any specific problems in following their plans; and (4) remind them to come in for their follow-up visit 2.	6.8 (2–10)
18. Visit No. 2: Review of Agreement; What Worked? What Didn't?	Students were asked about their drinking in the past month, and how that compared with their reducing risk agreement. Students were asked specifically what worked and what didn't work focusing on behaviors, events, friends, and other correlations. They were asked to consider what they could do when they get in "didn't work" situations.	7.1 (5–10)
19. Review of Consequences	Clinicians reviewed past consequences (number 5, above) from drinking and asked about any similar consequences over the preceding 4 weeks, since the last visit and discussion.	5.6 (1–7)
20. Alternatives to Drinking	For situations that "didn't work", the students were asked what they could do or say when offered a drink, or when they were tempted to drink more than they had planned. They were asked to think of and use, if helpful, a specific phrase or wording when encouraged by friends to drink.	6.0 (1–9)
21. Reward Yourself	Students were credited with doing hard and meaningful work in reducing their drinking. Since drinking less would result in more time and more money, they were asked to list specifics of what they would like to do if they had more time and more money.	6.1 (4–9)
22. Support	Students were asked who among friends and family could support and help them meet their goals, avoid negative consequences, and be healthier. They were asked to specifically list the first name(s) of supporter(s).	5.6 (3–9)
23. Follow-Up Call No. 2	Clinicians called students approximately 1 month after the second visit to offer support and encouragement.	5.3 (3–9)
24. Intervention Tracking Sheet	This 4-ply worksheet for clinicians provided a simple way to track and record individual student characteristics, demographics, specific agreement goals or obstacles, and other factors in order to facilitate personal responses and follow-up.	7.0 (3–10)

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TABLE 2. Top 10 Clinical Tools

Black Bag Tool [*MI Core Principle*]	Case example	MD questions/statements [*Patient responses*]
1. Drinking Likes and Dislikes [*Express Empathy and Roll with Resistance*]	"*Michael*," a 20-year-old college junior, often drinks >15 drinks per night on weekends, recent break up with girlfriend.	"What do you like about drinking?" [*"It's fun, social, relaxing. . .takes my mind off the stress of school."*] "What don't you like about drinking?" [*"Hangovers, and I get a little nasty when I'm drunk. . . I don't think that helped things with my girlfriend."*] "On the one hand you enjoy the social aspects of drinking, but on the downside, it often causes troubles for you in relationships and in what you say to people." [*"Yeah, exactly."*]
2. Life Goals and Alcohol Use [*Develop Discrepancy*]	"*Melinda*," 18-year-old freshman, with fatigue and history of 15–20 drinks per week.	"What are your goals for the next few months?" [*"Feel better, improve grades, save money for travel."*] ". . .and the next few years?" [*". . .graduate with a 3.5, get a good marketing job."*] "If you kept drinking at these current amounts, do you think those goals would be 'easier, harder, or no effect'?" [*"Harder. . ."*]
3. Reducing Risk Agreement [*Support Self-Efficacy*]	"*Justin*," 24-year-old MBA student with a DUI and a car accident last year.	"So what do you think you can do to prevent this in the future?" [*"I should really cut down. . . And I will never drink and drive, or drive with anyone else who's been drinking (my friend Ben thought he was fine to drive, but totaled my car)."*] "I agree completely. What's a realistic amount you can cut down to when you drink?" [*"Maybe 5 or 6 drinks max, over several hours, no more than twice a week."*] "That sounds good. Who will support you in these healthier goals?" [*"My girlfriend, Sarah, and George. . .I'm afraid Ben is a bit of a lost cause."*] "When will you talk with them about this?" [*"Tonight."*]
4. Feedback on Alcohol Use, Binges per Month [*Express Empathy*]	"*Tina*," a 21-year-old sorority junior, return visit for routine annual exam.	"From your health history it looks like you're staying fit and eating well, but you seem to drink quite a bit, and I wonder if this might be a risk for you. . .what do you think about this?" [*"Yeah, I sometimes think I should cut down a little. . ."*] "Why?" [*"Well, I've been trying to work out more, but it's hard when I've been drinking the night before."*]
5. Tracking Numbers of Drinks [*Roll with Resistance and Support Self-Efficacy*]	"*Brianna*," a 19-year-old, recent ankle sprain, enjoys her sorority and her partying, resistant to change.	"Sounds like you're not really interested in changing your drinking at the moment. Would you be willing to keep track of your alcohol drinks using these pocket-sized cards over the next month?" [*"Sure. . .that's fine."*] (Follow-up visit 1 month later) "How'd it go?" [*"When I wrote it down, I was really surprised at how much I was actually drinking. I still like going out, but I've cut way down from before."*]

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6. Readiness to Change 1–10 Scale [*Roll with Resistance*]	"*Kevin*," a 22-year-old senior, with recent treatment for a wound infection; has 30 drinks weekly, hangovers, occasional blackouts.	"So, given what we've talked about, how willing, on a scale of 1–10, would you be to make a change in your drinking?" [*"About a 5 or a 6, I guess."*] "Good. Well, how come you're not at a 1 or 2?" [*"Well, I really don't like the hangovers or blackouts, and I need to improve my grades this semester. . ."*]
7. Drinking Consequences: Overall Compared With College Students Nationally [*Roll with Resistance and Develop Discrepancy*]	"*Steven*," 25-year-old biology grad student, with allergies and recurrent sinusitis, occasional cigarette smoker (when drinking), 20 drinks weekly.	"Have you regretted something you did or has anything bad happened to you as a result of your drinking?" [*"Yeah, I have a set of twins in Texas. . ."*] "What do you think about these infections with your current drinking and smoking?" [*"Well, I can tell they're not good for me. . .my throat and lungs feel sore afterwards, and it's probably pretty bad for my immune system."*] "What do you think you could do about that?" [*"I should really stop smoking, then I would drink a lot less, too. . ."*]
8. Drinking Consequences: Calories [*Roll with Resistance and Develop Discrepancy*]	"*Rosalie*," 20-year-old junior, moderately overweight, rarely exercises, 18 drinks a week.	"In a month, if you have 72 drinks, you are consuming about 10,000 calories, just from alcohol; that's the equivalent of about 30 cheeseburgers, or one a day. What are your thoughts about that?" [*"Ugh. That's gross. I knew some of my weight was from drinking, but not that much. . .I think I better cut down."*]
9. Drinking Consequences: BAC [*Roll with Resistance and Develop Discrepancy*]	"*Clayton*," a 23-year-old senior, drinking 10–12 drinks twice a week, admits to hangovers, but denies needing to change anything.	"You know, you told me you really like that 'relaxed buzz' you get from a few drinks, but then it seems you continue to drink until you not only lose that pleasant feeling, but pass out and "feel like crap" the next day. What do you make of that?" [*"Well, I don't know. . .guess I'd rather not blow off the next day. . ."*] "What could you do differently?" [*"I could stop at 8 beers and leave out the shots and I'd feel better the next day. . ."*]
10. Alcohol Norms: Personal Use Compared with Peers' Use [*Roll with Resistance, Develop Discrepancy, and Support Self-Efficacy*]	"*Victoria*," an 18-year-old sophomore, drinking about 7–8 shots on weekend nights, relationship problems, mild depression.	"As you can see from these charts, compared with other young adults (aged 18–25), your 15 drinks a week is in the 8th percentile; that means you drink more than 92% of your peers. . .What do you think about that?" [*"Whoa. That's hard to believe."*] "What do you notice about your moods or energy level after you've been drinking?" [*"Well, it starts out fun and all, but after partying I kind of feel down and wiped out."*] "What do you think about that?" [*"You know, it seems kinda fake, the good feeling you get when you're drunk. . . I think I'd feel better about myself if I didn't get to that point"*]

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students about drinking, there was improved patient rapport, a renewed engagement in broader health concerns, a better understanding of patients' behavioral risks and future goals, and an enhancement of clinicians' own satisfaction and confidence with brief intervention. Indeed, the clinicians found these skills to be broadly applicable in general medical practice, well beyond alcohol intervention.

The clinicians in this study noted 3 particularly useful themes in utilizing these Brief Intervention tools in clinical practice: (1) express nonjudgmental concern ("As your physician, I am concerned about your drinking . . ."); (2) use open questions ("What do you think about that?" or "Tell me more about that . . ."); and (3) build bridges to alcohol and substance use when possible ("You mentioned that getting good grades is important to you. How do you think drinking and the memory blackouts you've had affect your brain function and ability to do well in school?"). Extrapolating to clinical care beyond the study, the interventionists noted that a simple "prescription bridge" to alcohol and substance use is often available when a clinician writes a prescription ("I'm giving you a prescription for ____, and since medications can interact with alcohol, I ask all my patients about drinking . . . How is that for you?").

These key components reflect the core principles of motivational interviewing, and also corroborate the findings of similar, effective techniques reported in the literature, such as the Brief Negotiated Interview (10), Brief Motivational Interviewing (29), Project CHAT in adolescents (30), and others. The representative clinician-patient conversations provided in Table 2 comprise a useful overview of the motivational interviewing style of conversation that physicians and other health care providers can adapt to their individual practices.

DISCUSSION

The clinicians in this study certainly encountered some patients with serious health behavior risks who were difficult to motivate and unlikely to change. But in general, students were quite receptive to drinking change agreements, and the interventionists were able to elicit some plan for risk reduction in even very resistant drinkers. The positive outcomes of the broader CHIPs trial indicate that at least some components of the brief intervention resulted in significant behavior change in the students (26). The focus group discussions and ratings of the components reported here point to specific potential critical ingredients or best practices for conducting brief alcohol interventions. Until more definitive research is conducted, clinicians may be well advised to focus on the components showing most promise in the study reported here. By taking a few minutes to use some of these techniques, clinicians are more likely to be able to leverage behavioral change, even within the highly time-constrained environment of primary care practice. Distilling the essence of this study's 15-minute brief intervention into 1- to 2-minute "pearls" and testing each component in a clinical practice setting is a recommendation for future research.

Strengths of this qualitative study include making use of the pooled perceptions of experienced clinicians concerning the most promising brief intervention components for motivating their patients to reduce alcohol use. A further strength was the common background of the participating clinicians: all of them completed the same training, worked with similar populations, and made use of the same intervention tools. Moreover, the clinicians drew their experience from delivering treatment to subjects in the experimental arm of a major positive trial of brief alcohol intervention with college students. The fact that the CHIPs trial found significant evidence of behavior change means that the insights of these interventionists are based on a strategy that appears to be effective. Finally, the potential transferability of the component skills suggests that these preliminary findings may have relevance for other clinical situations beyond those concerned with alcohol use.

One limitation of this study is its use of a small, non-randomized sample of providers participating in a single clinical trial. Future studies might examine the components discussed here more systematically and with more broadly representative clinician samples. Additionally, the clinical usefulness ratings reported here

were based on the experience of trained, highly motivated interventionists in a study where 15 minutes of clinician time was dedicated to an alcohol intervention. This does not reflect the reality of many clinical settings, where clinicians are more pressed for time. However, this study points to particularly promising components of brief intervention that can be used alone or in subsets that only require a few minutes, when that is all the clinical visit time will permit.

We are optimistic that the practiced application of the clinical tools discussed in this paper will add to the growing body of evidence in the literature that brief intervention with high-risk-drinking college students is effective and a wise use of resources. The potential for improved patient outcomes, cost savings, and reduced morbidity and mortality is substantial.

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