



Office-based intervention for adolescent substance abuse

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The importance of brief interventions

Misuse of alcohol and other drugs is a continuing problem among adolescents in the United States. According to the Centers for Disease Control and Prevention (CDC), almost one third of high school students engage in episodic heavy drinking and almost half have smoked marijuana [28]. By senior year in high school, more than half of students have used an illicit drug, and more than one fourth have used an illicit drug other than marijuana [26]. Serious health risks and problems are associated with adolescents' use of alcohol and drugs. According to the CDC, 13% of high school students drive a motor vehicle after drinking and 33% ride in cars with drivers who have been drinking [10]. Accidents are the leading cause of death among young people, and more than one third of fatalities caused by motor vehicle accidents among 15- to 20-year-olds are associated with the use of alcohol [8].

Alcohol and drug use also are associated with other types of fatal accidents, homicides, and suicides among young people and associated with nonfatal health risks and problems, such as suicide attempts, violence, weapon carrying, and

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aggressive behavior [13,14,46,51]. Almost one fourth of high school students report using alcohol or another drug at the time of last sexual intercourse, and substance use is associated with other high-risk sexual behaviors, such as failure to use contraception [5,9,48].

As with other public health problems, adolescent substance use has a multifactorial cause and likely requires a myriad of responses, including efforts at both limiting supply and reducing demand. The success of other public health campaigns, such as that to reduce smoking, suggests that multiple simultaneous interventions can produce significant results.

Routine adolescent medical visits present a unique opportunity to screen for the use of psychoactive substances and intervene before harm results. In fact, several sets of guidelines published in recent years have recommended routine screening and counseling for all adolescents as a part of preventive health care. The Maternal and Child Health Bureau *Bright Futures* guidelines [22] include specific questions and suggestions for anticipatory guidance regarding alcohol and drugs in each of its three age-based sections on adolescents. Similarly, the American Medical Association's *Guidelines for Adolescent Preventive Services* [17] recommends yearly screening for tobacco, alcohol, and drug use and anticipatory guidance for all adolescent patients.

In support of this approach, the American Academy of Pediatrics (AAP) Committee on Substance Abuse [1] recommends that pediatricians “be able to evaluate the nature and extent of tobacco, alcohol, and other drug use among their patients . . . [and] offer appropriate counseling.” Although recent changes in the health care system have placed increasing pressure on physicians to see more patients more quickly, pediatricians should not overlook the opportunity to help their adolescent patients by means of routine screening and *brief* intervention for substance abuse.

The evidence for brief interventions

Scientific evidence about the efficacy of brief interventions for alcohol problems among adults is increasing [37]. To a large extent, these interventions are aimed at moving patients along the change continuum described by Prochaska and DiClemente [11,12,40–44] and involve a set of core strategies drawn from known cognitive–behavioral and motivational enhancement approaches. The literature about brief interventions for alcohol abuse has been extensively reviewed [6,7,18,19,24,25,27,45,50]. Many studies have found that brief interventions can assist heavily drinking, nondependent adults to reduce their drinking. One recent meta-analysis of 32 studies reported that the average effect size of brief interventions used for this purpose was approximately 27% [7]. Other studies have shown that brief interventions can enhance the likelihood of success of more intensive treatments for adults with alcohol dependence [37].

Evidence about the effectiveness of brief interventions in the adolescent age group is less. Two studies have shown that brief interventions are effective among

heavily drinking college students [4,32], and several others have shown brief interventions to be effective among adolescent patients in the emergency department [36,49]. The promising results suggest that pediatricians should adapt the empirically validated techniques from the adult brief intervention literature, making them developmentally appropriate for adolescents.

Adolescence is a very complex developmental period, including profound physical and psychological changes. New cognitive abilities emerge, and social relationships are transformed [38]. Adolescents develop the capacity for abstract (versus concrete) thinking, allowing them to project the effects of current behavior, such as alcohol and drug use, on future goals [39]. Adolescents also develop the capacity for propositional logic, allowing them to imagine solutions to possible future dilemmas (e.g., “What will I do if a friend offers me drugs?”) [15]. These abilities allow middle and older adolescents to participate as full partners in cognitive-behavioral interventions and in treatment decision-making.

During adolescence, family relationships must be renegotiated [23]. Adolescents must move from a relationship of dependence to one of autonomy, and parents, from one of authoritative direction to mutual respect and assistance with problem-solving. Peer relationships assume a new importance, and parents and health care providers must understand the adolescent’s need for privacy while closely monitoring his or her safety.

To be successful, brief interventions for alcohol and drug use must be crafted so that they take advantage of the adolescents’ new cognitive abilities and also accommodate their developmental need for increased autonomy. The subsequent sections describe brief intervention strategies so adapted. The authors have found these approaches useful in their clinical work in an adolescent outpatient substance abuse program.

Defining brief interventions

Within the substance abuse treatment literature, brief interventions generally are defined as a limited number of counseling sessions (e.g., 1–12) administered over a relatively brief period of time (e.g., 1–6 months). For example, clients in one very large national study (Project MATCH) were assigned to receive between 4 and 12 sessions of cognitive–behavioral therapy, motivational enhancement therapy, or 12-step facilitation therapy [2]. Other interventions, such as brief physician advice, involve even less time and fewer sessions. Whatever their intensity, virtually all brief interventions include five common elements: (1) assessment and direct feedback, (2) negotiation and goal setting, (3) behavioral modification techniques, (4) self-help directed bibliotherapy, and (5) follow-up and reinforcement [20].

The importance of assessment

Brief intervention must begin with an assessment of the patient’s level of use. Physicians may find it convenient to use a structured screening test or brief

assessment tool, such as the CRAFFT test [31], and use each positive response as a bridge to further dialogue. Ask about reasons for use and risks and problem behaviors associated with use. It is important to conceptualize the assessment interview as a part of the intervention because it is an opportunity to heighten the patient's awareness of the severity of the problem. The assessment also allows you to determine an appropriate goal for the intervention, which varies considerably with the level of problem severity. Although complete future abstinence from alcohol and drug use might be an ideal goal for someone with a diagnosis of dependence, it is not a reasonable expectation for teenagers who have engaged in experimentation only (Table 1).

A developmental model of adolescent substance abuse progression is presented in Fig. 1 [29,30]. According to this model, some adolescents pass through a phase of *experimentation* with alcohol and develop a pattern of *regular use*, defined by intermittent use with peers (e.g., binge drinking at parties). The onset of negative consequences (e.g., accident, injury, and school failure) defines the critical *problem use* stage, when individuals often first encounter health care providers. Alcohol or drug *abuse* is characterized by recurrent problems and continued use despite harm, and *dependence* by multiple problems, loss of control over use, preoccupation with use, and tolerance or withdrawal symptoms [3]. Physicians should provide an intervention for each and every one of these stages.

Few strategies are as powerful for effecting abstinence as positive reinforcement: "That's great! I'm really proud of you for not using alcohol or drugs. I know that people your age can experience a lot of pressure to use these things, and I'm very pleased that you've chosen not to. If this should ever change, I hope you'll trust me enough to come back and talk about it." Young people who defer experimentation until early adulthood are less likely to develop long-term problems of abuse and dependence than are those who begin using as early adolescents [14,16,21]. Adolescents are also prone to greater risk taking than are adults, which makes experimentation with drugs and alcohol particularly hazardous for them.

For youth who are engaging in alcohol or drug experimentation or regular use, physicians should aim their intervention toward harm reduction. Accidents are the leading cause of death among young people, and many are associated with the use of alcohol [8]. One promising intervention for this risk is promoting the

Table 1
Stage of use and appropriate intervention

Stage of use	Appropriate intervention
Abstinence	Positive reinforcement
Experimentation/regular use	Risk reduction
Problem use/abuse	Brief intervention, motivational interviewing
Dependence	Motivational interviewing, referral to treatment specialist

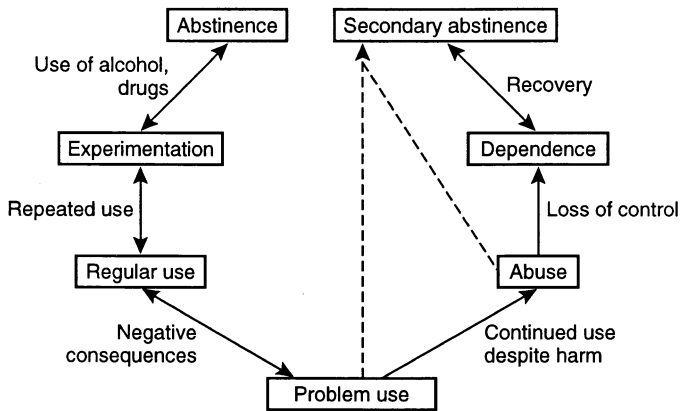


Fig. 1. Stages of use.

“Contract for Life,” through which adolescents agree to always call their parents for a ride home if they or their driver has been drinking, and parents agree to pick their son or daughter up at any time under these circumstances and defer a (calm) discussion of the exact circumstances until later [47].

For adolescents at the problem use and abuse stages of severity, the authors suggest using a brief interventions approach based on six strategies summarized by the FRAMES mnemonic: feedback, responsibility, advice, menu of alternatives, empathy, and self-efficacy [35].

Intervention strategies of frames

Feedback

After completing the assessment, give the patient feedback on your level of concern. Begin by saying “I am really worried about your use because *you told me that . . .*,” and then list all of the problems associated with alcohol and drug use given during the interview, using the patient’s own words whenever possible. Listing the problems this way is a powerful way of summarizing your concern, and it minimizes the risk for the encounter becoming an argument.

Keep in mind that many adolescents do not appreciate the connection between their own substance use and problems. For example, an adolescent’s drinking may increase family stress and discord. However, the adolescent may perceive that his or her parent is the problem, not his or her use of alcohol. To establish a connection, it is best to state your concern in the form of a question, such as, “Have you ever considered that you might not be arguing as much with your parents if you weren’t drinking?” Suggesting a link between substance use and its consequences is important, even if the patient refuses to acknowledge a cause-and-effect relationship between the two.

Responsibility

Emphasize that the responsibility for change lies with the adolescent. “You are almost an adult, and as such you have to take responsibility for your own life. Neither your parents nor I can make you change. You must make that decision. We would like to help you, though, if you will give us that chance.” This is a particularly important strategy for adolescent patients, who are typically seeking autonomy and control over their own lives. Substance-using adolescents often are brought to the pediatrician because of a parent’s desire for a change in behavior, rather than their own wish to change. It is often useful to remind parents that, although they certainly have a role to play in helping their children change their behavior, parental demands for cessation of substance use alone are unlikely to be effective.

Advice

Give clear, frank advice to the patient to make changes in his or her behavior. For adolescents, recommend discontinuing the use of alcohol and drugs completely, at least for a while: “Because I am so concerned, I recommend that you stop using alcohol and drugs altogether, at least until we can meet again.” If followed, this recommendation has both diagnostic and therapeutic value. Successful abstinence provides some assurance that the adolescent is not dependent on the substance. On the other hand, an unsuccessful abstinence trial may be a valuable learning experience for the patient, making it more likely that he or she will agree to a referral for treatment.

Menu

Offer your patient a menu of different options for change, to maximize the feeling of control over his or her own treatment. Recommend choices based on the severity of the problem as well as the patient’s attitude toward treatment. In the authors’ clinical program, they begin by offering the most appropriate treatment first. If the patient is unwilling to accept this, the authors suggest alternatives until they find a treatment course that is acceptable to the patient. For example, if the patient does not agree to stop using alcohol or drugs completely until the next visit, the authors ask whether he or she would at least be willing to cut down on use. When all else fails, the authors simply ask, “Well, will you at least agree to think about what I’ve said and come back again?” According to stages of change theory, this last resort request will at least facilitate progression from the precontemplation stage to the contemplation stage.

Empathy

Express empathy for the patient throughout the interview in both your conversation and in your overall manner. This is more than a common courtesy; it increases the effectiveness of brief interventions [34]: “I know this is hard for

you,” “You must have felt really bad when that happened,” or “I know that what I am suggesting is not what you really wanted to hear.” Although it may be tempting to lecture an adolescent patient, this approach is more likely to increase resistance to change. A nonconfrontational, sympathetic counseling style creates a feeling of safety within the therapeutic environment, which is essential to the process of change.

Self-efficacy (optimism)

Promote the adolescent patient’s feelings of self-efficacy during the brief intervention. Review strengths that will help the patient to modify his or her behavior. These may include support from family or friends, a willingness to change, and positive plans for the future. Express optimism: “While I know that these changes will be difficult, I believe you can do it,” “You know, you really have a lot of positive things going for you,” and “I sense within you a real openness to change. That’s great.” Adolescents who are involved with alcohol and drug use too often hear the opposite from their parents, teachers, and other important adults: “You’ll never amount to anything,” “You’re going to end up in jail,” and “You’re going to flunk out of school. You’ll never make it into college.” Caution parents to avoid making these negative statements because they may become self-fulfilling prophecies.

Although the FRAMES strategies may be used in any order, try to save affirmative statements for the end of the session so that the patient leaves on a positive note. Encouraging self-reliance is useful in all brief interventions and is particularly consistent with adolescent developmental needs.

Follow-up

Every patient should be seen for a follow-up visit within a month or two of the initial consultation, and usually within just a few weeks. The focus of this visit is to review the patient’s success with the agreed-on plan. Patients who have been successful in abstaining from drugs and alcohol often need no further treatment. Offer positive reinforcement and conclude the visit by asking them to list events that would indicate a need to seek treatment in the future (e.g., being involved in a car accident, legal problems, or school problems).

Patients who were successful with a more modest plan, such as decreased use, and who are not interested in further intervention also should list reasons to seek treatment in the future: “It sounds to me that you aren’t ready right now to have any further treatment. What future problems would indicate to you that your problem was in fact quite serious, and should be treated further?”

The clinician should make it clear that she or he will be available to discuss substance use at any time at the patient’s request, although a specific return appointment may not be set. Patients who have been unsuccessful with the initial plan should be referred for more intensive treatment if at all possible.

Motivational interviewing

Motivational interviewing (MI) is a counseling style that seeks to create conditions necessary for positive change [34]. It is particularly well suited for brief therapeutic encounters, either as a primary method for assisting patients to change their alcohol or drug use or as a means of encouraging them to accept a referral to more intensive treatment. MI is based on a set of core assumptions.

The first is that motivation is a product of interpersonal interaction and not an innate character trait. What a clinician does or says in counseling sessions can either help or hinder a patient in changing his or her behavior. Confrontation leads to resistance, whereas empathy and understanding lead to change.

A second assumption is that ambivalence toward change is normal and acceptable. According to this view, adolescents who use alcohol and drugs are in constant conflict, simultaneously experiencing both positive and negative feelings about their use. Their “decisional balance” can be viewed as an old-fashioned pan scale, with the pros and cons of substance use represented by the relative weights on the two sides. The role of the counselor is to tip the balance of the scale in favor of the positive behavioral change. A complete discussion of MI strategies can be found in the textbook by Miller and Rollnick [34]. Briefly stated, its five main strategies, which partially overlap with FRAMES (discussed earlier), are (1) express empathy, (2) develop discrepancy, (3) avoid argumentation, (4) roll with resistance, and (5) support self-efficacy.

An empathetic counseling style or unconditional positive regard of the patient may be the most important therapeutic ingredient in any clinical encounter [33]. Try to understand the adolescent’s feelings and perspective without judging, labeling, criticizing, or blaming. Understanding and acceptance are not the same as approval. Statements such as, “I understand why you see things that way,” or “Many kids who come to this clinic also believe...” express empathy without implying agreement.

On occasion, it may be helpful to explain, “While I disapprove of what you did (or are doing), I want you to know that I still approve of you as a person.” This is one way of developing a discrepancy; in this case, it is between the individual and his or her behavior. Another way is to create a discrepancy in the adolescent’s mind between his or her current behavior and goals. For example, the authors have interviewed many teenagers who value their participation in sports and who set specific goals for themselves in athletic ability. Yet it is not uncommon for them to report an increase in wheezing since beginning to smoke marijuana. This provides an opportunity to develop a discrepancy between goals (better sports performance) and behavior (smoking causing wheezing).

Developing discrepancy is the key to motivational interviewing. Adolescents have inevitably internalized some of society’s negative messages about drugs and alcohol, even though these messages may be suppressed to allow use of substances to continue. The clinician who listens carefully will usually find hints of this discordance during the interview.

To cite another example, a patient interviewed in our clinic staunchly denied that moderate, “sensible” use of marijuana could cause any problems. However, when speaking about his family, he told the interviewer that he was working hard to keep his younger siblings away from drugs. The interviewer asked why this was so important. At this point, the young man became momentarily speechless. He initially gave a superficial answer to this question, but by the end of the session he was willing to accept a trial of decreased marijuana use.

Avoid arguing with patients because it will only heighten resistance to change. Newton’s third law states that every force applied to a stationary body is met by an equal and opposite force, and a similar principle applies to behavioral change. The more demands that others make to stop using alcohol and drugs, the less likely the adolescent is to change. Instead, try asking questions that elicit self-motivational statements: “How would you feel if your little brother found out you were using drugs?” “Why?” and “How do you think that would affect him?” These questions are designed to heighten the patient’s awareness of risks and problems and to develop a discrepancy between his hopes for his brother and his own current behavior. This approach minimizes the likelihood of angry confrontation.

Resistance should be an expected part of the process of change, and it may be particularly marked with adolescents. One way of dealing with it is by asking the patient to solve the problem on his or her own. For example, some adolescents refuse to even cut down their use of drugs or alcohol. A confrontational clinician might end the session by saying that she or he cannot help someone who is unwilling to cooperate. By contrast, a clinician using motivational interviewing techniques would roll with the patient’s resistance: “I understand that you don’t think your use of alcohol is a problem. You say that you are sure that you could cut down at any time, even though you are not interested in cutting down right now. Can you work with me to create a list of situations that would indicate to you that your drinking has really become a problem?”

Note that in this example the clinician has met with resistance empathetically, avoided confrontation, and asked the patient to define for himself or herself what makes drinking problematic. The clinician has also left open the possibility for future treatment by asking the patient to monitor his or her own behavior and return if he or she identifies a problem.

Self-efficacy, or the belief that one will be able to meet a challenge, is crucial to making a change in behavior. Note that self-efficacy is also a specific step in the FRAMES model of brief intervention. Adolescents may resist treatment because they are afraid that they will not be successful in making and maintaining a change in their behavior. Offer encouragement, make affirmative statements, and always try to end the interview on a positive note.

Developing an action plan

The authors have found MI to be an effective approach to counseling in their clinical work. In addition, they frequently propose specific action plans. They

subsequently describe three “menu items” most frequently offered in their program: (1) the abstinence challenge, (2) the controlled use trial (CUT), and (3) the contingency plan. These treatments are most well suited to outpatients whose severity of use ranges from experimentation to abuse; patients who are diagnosed with substance dependence generally are referred to more intensive treatment. However, the authors often recommend one of the following plans as an intermediate step for those who initially refuse a referral to such treatment.

Abstinence challenge

We discourage adolescents from using drugs or alcohol at all because the risks of drinking even occasionally are higher for teenagers than for adults and because early drinking increases the risk for a disorder later in life. This recommendation is different for adolescents than for adults. Adults who are heavy social drinkers or even problem drinkers generally are counseled to cut down on their drinking.

Many adolescents maintain that it would be easy for them to stop using substances if they wanted to, and the authors offer an abstinence challenge as a diagnostic test to determine how significant the patient’s “problem” with drinking really is. In addition, some adolescents agree to see the physician only to “get my parents off my back.” The abstinence challenge presents an opportunity to prove to everyone involved that the adolescent has not lost control over his or her use.

To implement an abstinence challenge, the authors ask the patient not to use any alcohol, drugs, or anyone else’s prescription medications for a period of time, generally 4 to 8 weeks. They give longer challenges to teens who have been using drugs infrequently. If the patient agrees, she or he is asked to sign a contract (Fig. 2). One copy is placed in the medical record, and a second copy is given to the patient as a reminder. The phone number of the clinic is printed on the bottom for easy reference should the patient have questions later.

The authors ask patients to brainstorm about what they will do to avoid using substances when they are in familiar settings (e.g., at a party where peers are using alcohol or drugs). Some of them have asked their friends to join the abstinence challenge with them. Others have simply explained to their friends why they are remaining clean and sober. Still others avoid all situations that could trigger substance use, although the authors generally ask teens who choose this solution to consider whether or not it is practical for the long term.

In some cases, patients are offered urine testing to confirm their abstinence. This may be particularly useful for marijuana use because of its long urine half-life. Testing generally is performed when a patient’s report may be less than reliable or when documentation of abstinence is needed for outside authorities, such as school or criminal justice officials. Testing, however, is done only with the adolescent’s full knowledge and consent and when all parties agree in advance about who will have access to the results.

ABSTINENCE CHALLENGE CONTRACT

Date: _____

I, _____, agree to not drink alcohol, use drugs, or take anyone else's medication for the next _____ days. I also will not provide drugs, alcohol, or prescription medications for anyone else during this time. In addition, I agree to not drive a motor vehicle while under the influence of drugs or alcohol, nor will I ride with a driver who has been drinking or using drugs.

I will come to my follow-up appointment with (the Adolescent Substance Abuse Program) on _____.

Signed _____

Fig. 2. Abstinence challenge contract.

The authors make a follow-up appointment at the end of the abstinence challenge for all patients. At this visit, the authors ask the patient whether she or he has been successful in remaining abstinent. The patients who have been successful are asked about strategies they used to avoid use and how they might continue to apply those strategies. In general, these patients do not need further treatment. The authors do, however, ask them to make a list of problems that would indicate the need for treatment in the future. Patients who fail an abstinence challenge generally are referred for more long-term substance abuse treatment.

Controlled use trial

A CUT is similar to an abstinence challenge, except that the patient is asked to reduce substance use instead of stopping completely. A CUT is recom-

mended for adolescents who refuse an abstinence challenge. The parameters of a CUT are determined based on the patient's history. In general, the authors ask teens not to use substances on weeknights and to avoid particularly dangerous situations, such as driving a car after using substances or riding in a car with an intoxicated driver. As with the abstinence challenge, the conditions of the CUT are noted in writing and the patient is asked to sign the document. The authors also may offer urine testing in some situations. As with the abstinence challenge, the authors see patients for a follow-up visit at the end of the CUT.

Contingency plan

Patients who refuse to even decrease their use of substances create a difficult challenge for the clinician. Treatment is a process. Accept any progress toward reduced substance use as at least a partial success. When the authors encounter a patient who refuses to attempt even a CUT, the authors ask the patient to create a list of contingencies that would indicate to him or her that a problem exists. The authors then ask the patient to agree to further treatment should one of these contingencies occur. Note that this strategy uses the principles of motivational interviewing.

Empathy is expressed by accepting (although not approving of) the patient's choices. The authors attempt to continue to develop discrepancies by having the patient list contingencies that would indicate a problem with substance use, when in fact some of these events may have already occurred. Arguments are avoided by following the patient's lead for treatment. The authors roll with resistance by accepting the patient's refusal of treatment while encouraging them to continue thinking about the problem and to continue self-monitoring. The authors support self-efficacy by acknowledging that clinicians, parents, or friends cannot make them do anything that they do not want to do.

Summary

Because substance use is highly prevalent among teens, primary care clinicians may not be able to refer all adolescents to drug counselors or mental health care professionals. Pediatricians may therefore find it useful to use the basic principles of office intervention and reserve referral for those patients with the most significant drug and alcohol problems. Brief interventions have proven effective in reducing problematic drinking among adults, and early work among adolescents is promising. Effective interventions include feedback on risks and problems, an emphasis on personal responsibility, a menu of alternatives for change, an empathetic approach, and reinforcement of patient self-efficacy. Motivational interviewing is an effective means of enhancing success in counseling. When a referral is necessary, motivational interviewing can be used to maximize adherence.

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