

Secondary Prevention Services for Clients Who Are Low Risk in Drug Court: A Conceptual Model

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The drug court model assumes that most drug offenders are addicts, and that drug use fuels other criminal activity. As a result, drug court clients must satisfy an intensive regimen of treatment and supervisory obligations. However, research suggests that roughly one third of drug court clients do not have a clinically significant substance use disorder. For these clients, standard drug court services may be ineffective or even contraindicated. Instead, these clients may be best suited for a secondary prevention approach directed at interrupting the acquisition of addictive behaviors. Unfortunately, there are no established secondary prevention packages for adults in criminal justice settings. This article presents a conceptual framework for developing and administering secondary prevention services in drug courts and proposes a platform of prevention techniques that can be tailored in a clinically relevant manner for the sizeable population of drug court clients who are low risk.

Keywords: drug court; prevention; drug abuse; risk assessment

A range of programs has been developed to provide substance abuse treatment to drug offenders in lieu of criminal prosecution or incarceration. These vary in intensity from pretrial diversion programs (sometimes called “probation without verdict”), to intensive supervised probation programs, to judicially supervised drug courts. The underlying assumption of these programs is that drug use fuels or exacerbates other criminal activity, and the offender has a clinically significant syndrome that could be expected to respond to treatment.

Yet research suggests that 30% to 40% of drug offenders do not have a diagnosable or clinically significant substance use disorder (Kleiman et al.,

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2003). In our studies, nearly one half of misdemeanor drug court clients (Marlowe, Festinger, & Lee, 2003), one third of felony drug court clients (Marlowe, Festinger, & Lee, 2004), and two thirds of pretrial clients in a drug treatment and monitoring program (Lee et al., 2001) produced “sub-threshold” drug composite scores on the Addiction Severity Index (ASI; McLellan et al., 1992), similar to a community sample of individuals who were not abusing substances. Despite having been screened-in as requiring drug treatment, more in-depth and confidential assessments revealed that these individuals did not have a minimally identifiable disorder. Furthermore, in one study, roughly one third of clients in misdemeanor drug court provided a virtually unbroken string of drug-negative urine specimens over nearly a 4-month period following intake (DeMatteo, Festinger, Lee, & Marlowe, 2005). If these individuals could readily abstain from drug use over such an extended interval of time, there may be little clinical justification for labeling their use as compulsive or assuming they need formal treatment.

There are several possible explanations for these findings. First, some offenders may feign substance abuse symptoms to avoid a more serious criminal disposition. It is possible, for example, that drug dealers who are not addicted might end up in diversion programs simply because they were charged with a drug possession offense and reported having a drug-use problem to avoid mandatory incarceration.

Second, many commonly used screening measures may inflate the prevalence of substance use disorders because they assume most addicts to be in “denial” or “precontemplation” about their problem, and thus likely to be underreporting drug use. Few such screening measures were normed on criminal justice clients, who could be expected to overreport symptoms. For example, research on the Substance Abuse Subtle Screening Inventory, 3rd edition (SASSI-3; Miller, Roberts, Brooks, & Lazowski, 1997) suggests it may overestimate the need for drug abuse treatment among offenders. The SASSI-3 was designed to discriminate between groups with and without drug-use problems using “subtle” items that do not inquire explicitly about substance use but are believed to reflect behavioral correlates of addiction. Although initial validation studies found that the SASSI-3 reliably identified those in need of drug abuse treatment (e.g., Lazowski, Miller, Boye, & Miller, 1998), subsequent studies revealed poor specificity (i.e., high false-positive rates) (e.g., Peters et al., 2000). For example, in one study involving

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juvenile offenders, the SASSI-3 misclassified nearly two thirds of individuals who were not abusing substances as being substance dependent (Rogers, Cashel, Johansen, Sewell, & Gonzalez, 1997), which suggests the SASSI-3 may substantially overestimate the need for substance abuse treatment among offenders.

Finally, the diagnostic criteria for substance abuse and substance dependence contained in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*; American Psychiatric Association [APA], 1994) have become so generic and overinclusive that they may have lost clinical relevance for purposes of treatment planning. For example, to receive a diagnosis of substance abuse, a client only needs one symptom recurring in a 12-month period. Legal entanglement is one such symptom, which is not difficult to satisfy for individuals involved in the criminal justice system. This can lead practitioners to the tautological conclusion that anyone arrested for drug possession is, by definition, a drug abuser.

Moreover, according to the *DSM-IV*, a client can be diagnosed with substance dependence without exhibiting any features ordinarily associated with addiction, such as compulsive use, cravings, or withdrawal symptoms. To be diagnosed as substance dependent, a client must have three symptoms recurring at any time during a 12-month period, with no requirement that the symptoms occur at the same time. Moreover, several diagnostic criteria are written imprecisely to the point of losing their original meaning. For example, one criterion is that "the substance is often taken in larger amounts or over a longer period than was intended" (APA, 1994, p. 181). This criterion is intended to gauge "binges" and "loss of control" but is not typically applied that way. It is often erroneously interpreted to mean the client simply failed to plan his or her usage in advance, which is a common occurrence and certainly not pathognomonic of addiction.

Another criterion is "a persistent desire or unsuccessful efforts to cut down or control substance use" (APA, 1994, p. 181). This is meant to gauge compulsivity of use, yet clients can technically meet this criterion simply by expressing a continued desire to stop using drugs or indicating that prior efforts to cut down have been unsuccessful. Neither of these patterns necessarily conveys compulsivity of use. Finally, a further criterion is "a great deal of time is spent in activities necessary to obtain the substance" (APA, 1994, p. 181). Needless to say, this is not difficult to satisfy for individuals who are engaged in drug dealing or manufacturing activities, or who simply associate with other drug abusers in their day-to-day lives.

The result of employing these overly broad inclusion criteria is that clinical programming may not be appropriately suited to the needs of many clients in drug diversion programs, and the programs may end up providing

unnecessary and costly clinical services. For the roughly one third of clients in diversion programs who do not have a diagnosable or clinically significant substance use disorder, best-practice standards in the substance abuse field suggest that a “secondary prevention” approach is most appropriate. Whereas standard drug abuse treatment is designed to ameliorate the clinical symptoms of addiction, secondary prevention strategies seek to interrupt the acquisition of addictive behaviors. Secondary prevention strategies are ideally targeted to individuals who have been exposed to known risk factors for a problematic behavior, or who have engaged to some degree in that behavior, but who have not yet developed a clinical syndrome (e.g., DeMatteo & Marczyk, 2005; Institute of Medicine, 1994; National Institute on Drug Abuse [NIDA], 2003).

Unfortunately, many drug diversion programs provide the same slate of services to all clients, regardless of drug-use severity. For example, all clients in drug courts typically must satisfy an intensive regimen of treatment and supervisory obligations, including several hours per week of drug abuse counseling, regularly scheduled status hearings in court, case management meetings, and random weekly urine testing (National Association of Drug Court Professionals [NADCP], 1997). According to a national survey of drug courts, the large majority of drug court programs reported using a standard menu of clinical services, such as psycho-educational peer groups (82% of responding programs), 12-step groups (93%), and motivational interviewing and relapse prevention (93%) (Peyton & Gossweiler, 2001). Although research suggests that some drug court programs may actually provide a low dose of these services (Taxman & Bouffard, 2003), these treatments are nonetheless typically applied to all clients. One might question whether it is clinically effective or cost-efficient to provide such high-intensity services to offenders who are subthreshold as assessed by standardized clinical assessment instruments and premorbid in the sense that they have not, as yet, exhibited clinically significant symptoms or functional impairments related to their drug use.

In this article, we provide a conceptual framework for developing and administering secondary prevention services in a drug court setting. We begin by reviewing why current practices may be clinically contraindicated for some clients, and then propose a platform of prevention interventions that can be tailored in a more clinically relevant and cost-efficient manner for low-risk drug court clients. Throughout this article, we use the term *low risk* to refer to clients who are subthreshold and premorbid for a drug-use disorder. We recognize, however, that being low risk for substance abuse is not necessarily equivalent to being low risk for criminal offending. As is discussed, clients with certain criminogenic risk factors, such as antisocial per-

sonality disorder (APD), would not be appropriate for a prevention program, even if premorbid for a drug problem. Finally, we focus here on drug courts because they represent one of the most intensive drug diversion initiatives; however, the principles and techniques we discuss could be expected to apply with equal force to other forms of diversion programs.

SUITABILITY OF STANDARD DRUG COURT PRACTICES

Research on substance abuse treatment has generally failed to identify reliable principles for matching clients to suitable treatment regimens. In nearly all studies, equivalent outcomes have been obtained using a variety of counseling methods (e.g., Project MATCH Research Group, 1997) and a range of therapeutic modalities (e.g., McKay, Cacciola, McLellan, Alterman, & Wirtz, 1997; McKay et al., 2002). Outcomes rarely diverged as a consequence of detectable interactions between the treatment regimens and various client characteristics such as demographics, motivation for change, or drug-use severity. Still, recent findings do raise serious concerns about whether a "one-size-fits-all" approach is justified among drug-using offenders.

Scheduling Considerations

By design, drug court participation takes up a considerable amount of time. Clients must attend counseling sessions several times per week, meet regularly with a case manager, attend status hearings, and deliver random weekly urine samples. This may be beneficial for many clients because it fills their days with drug-incompatible activities and limits exposure to drug-related stimuli. However, these requirements may compete with clients' legitimate responsibilities, such as work, which puts them in a tough spot. On one hand, drug courts may require clients to be employed; on the other hand, program requirements may hinder their ability to maintain employment. This may be particularly true for clients who are subthreshold or premorbid, who are higher functioning and thus more likely to be employed. This suggests that interventions for these clients should, perhaps, limit requirements for on-site attendance and instead use more home-based strategies, such as brief telephone contacts.

Group Counseling

Group counseling is the most widely used format for delivering drug treatment services in drug courts (Peyton & Gossweiler, 2001; Taxman &

Bouffard, 2002). The underlying philosophy is that groups create a safe and supportive environment that promotes abstinence by helping clients resist commonly encountered pressures to use drugs (e.g., Panas, Caspi, Fournier, & McCarty, 2003). Moreover, groups provide a forum for sharing ideas and coping strategies. For programs providing services to large numbers of clients, group treatment is quite cost-efficient. Unfortunately, we know surprisingly little about the effective components or parameters of group treatment. The mechanism(s) of action of groups and their potential side effects, dose-response effects, and contraindications are largely unproven (Marlowe, Kirby, et al., 2003).

Importantly, what we do know about group treatment is that it may be contraindicated for certain populations because it can paradoxically function as “deviancy training” (e.g., Dishion & Andrews, 1995; Rice, Harris, & Cormier, 1992). Research suggests that aggregating certain offenders who are high risk in groups can produce short-term and long-term negative effects. For example, Rice et al. (1992) found that violent recidivism increased for offenders who were psychopaths receiving group treatment versus those receiving individual treatment. Some studies also found that aggregating adolescents who were high risk in group treatment led to increases in delinquency, drug use, and violence at 1-year and 3-year follow-ups (Dishion & Andrews, 1995; Poulin, Dishion, & Burraston, 2001). In particular, research suggests that mixing offenders who are high risk and offenders who are low risk has a more pronounced negative effect on offenders who are low risk. For example, Petrosino, Turpin-Petrosino, and Finckenauer (2000) found that adolescents who were low risk in Scared Straight programs often performed worse than their counterparts who were high risk. These results may be attributable to the socialization of clients who are low risk into an antisocial milieu, in which they adopt the values and attitudes of deviant peers who have relatively greater influence in the group. This suggests that clients who are low risk should either be treated on an individual basis or in separately stratified groups.

12-Step Groups

According to Peyton and Gossweiler’s (2001) national survey of drug court programs, more than 90% of drug courts required or strongly encouraged participation in 12-step groups. These self-help recovery groups typically emphasize abstinence as opposed to reduced or controlled drinking. Addiction is conceptualized as being a medical and spiritual disease, and progress toward recovery is gauged by measuring one’s progression through the “12 steps” that form the philosophical foundation of these groups (Alco-

holics Anonymous [AA], 1976). Clients receive group support, repeated reminders about the consequences of drug use, and straightforward advice about methods for maintaining abstinence.

Step 1 to recovery in 12-step groups is to acknowledge one's "powerlessness" over addiction, which is believed to open addicts up to the possibility of turning their lives over to a higher spiritual power that can relieve their suffering (AA, 1976). Arguably, however, it makes little sense to require individuals who are not addicts to admit they are powerless over their drug use when, in fact, they may not be. Such a program might feel irrelevant to these individuals, or start them on a path of paying lip service to what others want to hear. Another common practice in 12-step groups is to confront individuals as being in "denial" if they do not admit to having an addiction. Because it is assumed that clients who participate in 12-step groups are, indeed, addicted to drugs, and because denial is a common feature of addiction, the failure to acknowledge one's addiction is viewed as further evidence of an addiction. However, this sentiment may seem sorely misplaced to one who is not, in fact, an addict. For these individuals, the failure to admit to having an addiction may reflect an accurate self-appraisal.

Motivational Interviewing

Motivational interviewing (MI; Miller & Rollnick, 2002) and motivational enhancement therapy (MET; Miller, Zweben, DiClemente, & Rychtarik, 1992) are also commonly used in drug courts (Peyton & Gossweiler, 2001). These interventions seek to enhance motivation for change by creating cognitive discrepancies between clients' current level of functioning and their desired goals (Rollnick, Heather, & Bell, 1992). The aim is to have clients realize they have not accomplished their goals because of their drug use, and to renew their efforts to attain those goals. Through open-ended questioning, clients are led to verbalize the negative effects that drugs have had on their lives. In this way, it is believed they will come to realize how drugs have created a multitude of problems for them, such as broken relationships, loss of employment, and health problems. However, for those who have not experienced serious problems related to drugs, these techniques may not be clinically effective. In fact, having such individuals verbalize the effects of drugs on their lives could highlight the fact that drugs have not had much negative effect yet, possibly leading the intervention to fall flat or even backfire.

A related strategy often used in MET is showing clients their own test results related to their biopsychosocial functioning. An example is the Drinker's Checkup (Miller, Sovereign, & Krege, 1988), which involves

reviewing with clients the results of their liver-enzyme tests and other biological markers. It is important to note, however, if the test results are, in fact, relatively normal, there is a risk the client could conclude that drugs are not a problem for him or her. This could have the paradoxical effect of delaying consideration about stopping drug use.

For such clients, a better strategy might be to show anonymous test results of other clients who were not so fortunate as to stop their drug use in time. One could display examples of test results at various stages in the addictive process, from early use, to acceleration of use, to addiction, to medical and psychiatric decline. Then, the client could see that his or her own “normal” results are thankfully premorbid; however, more serious illness could await. Paradoxically, for clients who are already addicted, this latter approach tends not to work because it is often perceived as confrontational and preachy, and it raises clients’ anxiety and defensiveness.

Relapse Prevention

Relapse prevention is another commonly administered intervention in drug courts (Peyton & Gossweiler, 2001). Relapse prevention strategies are designed to help drug abusers identify the antecedents and consequences of their drug use. One important goal is to assist clients to recognize the “people, places, and things” that precipitate their drug use. The belief is they will be more able to avoid using drugs if they sidestep the precipitants of drug use.

According to relapse prevention theory, these precipitants are referred to as “triggers.” For addicts, triggers are conceptualized as the automatic thoughts or autonomic hyper-arousal engendered by exposure to classically conditioned stimuli for drug use (Marlatt & Gordon, 1985). These triggers may include the people with whom they use drugs, the places in which they use drugs, or emotional states (e.g., depression) that lead to drug use. For addicts, encountering these triggers leads to visceral and autonomic responses, such as sweating, increased heart rate and blood pressure, and cravings. The indicated interventions for such classically conditioned responses include extinction, desensitization, response stopping, and escape planning (e.g., Martin & Pear, 1999). For example, clients may be taught to use progressive muscle relaxation, meditation, or mental imagery to interfere with their cravings.

Although it may also be prudent to help clients who are low severity avoid the people, places, and things that occasion their drug use, these precipitants are not properly conceptualized as “triggers” in the classical sense. This is not merely semantics because if the stimuli do not precipitate hyper-arousal or cravings, then the interventions commonly used in relapse prevention

approaches would not be indicated. For example, it would make little sense to teach a client skills for managing cravings when he or she does not experience cravings. Rather, the indicated intervention would be to help the client plan his or her day in advance to avoid situations that make drug use more likely to occur, and to arrange for the client's day to be taken up with drug-incompatible activities that are, themselves, naturally reinforcing. These goals may be accomplished by using the technique of daily activity scheduling (e.g., Beck, Wright, Newman, & Liese, 1993), in which clients are assisted to schedule drug-incompatible and prosocial activities ahead of time on a weekly basis. Then, brief checkup phone calls are used to gauge their compliance with the scheduled activities and troubleshoot unanticipated deviations.

A related aim of relapse prevention is to assist clients to identify the negative consequences of drug use. Typically, clients are asked to discuss how drugs have negatively affected their relationships, employment, health, and so on. The belief is that increasing clients' awareness of the damaging effects of drugs will make them more likely to think about those effects before using. As with MI and MET, having individuals who are low severity verbalize the effects of drugs in this way may highlight the fact that drugs have not had much negative effects. Accordingly, the indicated strategy would be to assist clients to imagine the types of negative effects that could develop in the future, and to bring those effects to consciousness before engaging in new drug use.

Judicial Status Hearings

One of the "key components" of drug court is to have clients attend regularly scheduled status hearings in court (NADCP, 1997). At these hearings, the judge reviews each client's progress in the program and applies sanctions for infractions and rewards for achievements. In most drug courts, status hearings are held on a biweekly or monthly basis.

There is a debate in the drug policy field regarding the importance of judicial status hearings in drug courts (e.g., Marlowe et al., 2004). On one hand, some commentators have argued that status hearings are among the most costly elements of drug court (e.g., Cooper, 1997), which means less money is available for counselors' salaries. Some commentators also have argued that the intrusion of the judge into the treatment process may be disruptive or harmful because clients may be hesitant to convey clinically relevant information to their counselors for fear the information will be disclosed to the judge and used against them (e.g., Schottenfeld, 1989). On the other hand, proponents of drug court have argued that offenders who abuse drugs often

fail to meet their obligations and pose a continuing threat to public safety if they are not closely monitored and do not receive immediate and consistent sanctions for their noncompliance in treatment (e.g., Hora, Schma, & Rosenthal, 1999). In fact, status hearings may be equally therapeutic, or more therapeutic than treatment, because they instill a sense of accountability and apply basic principles of behavior modification in the most effective manner (Marlowe & Kirby, 1999).

Research suggests that both of these positions may be correct, but with reference to different clients. Our own program of experimental research in several adult drug courts found that high-dose, biweekly status hearings were most effective for drug court clients who were high risk (i.e., had APD or a history of failed experiences in drug treatment) (Marlowe, Festinger, & Lee, 2003, 2004). In contrast, fewer status hearings produced similar or superior results for drug court clients who were low risk and did not have these characteristics. In these studies, the clients who were low risk performed equally well, or better, when they were not scheduled in advance to attend status hearings, but rather only attended hearings if their case managers determined there was a need because of serious noncompliance in treatment or rule violations (we termed these “as-needed” hearings). Based on these experimental findings, it would appear that as-needed status hearings might be most appropriately suited to the needs of many clients who are subthreshold or pre-morbid and are naïve to treatment and to the criminal justice system.

SECONDARY PREVENTION STRATEGIES FOR LOW-RISK DRUG OFFENDERS

As the foregoing suggests, many interventions that are typically used in drug courts may be ineffective or contraindicated for clients who are subthreshold or pre-morbid. The dominant service model assumes it is desirable to place substantial time demands on all clients, immerse them in a milieu populated by other drug abusers, require their verbal commitment to the self-label of “addict,” and require them to commit to interventions targeted at symptoms they might not, in fact, have. Instead, these clients may require a diametrically opposed intervention scheme. Best-practice standards in the substance abuse field dictate they would be better suited to a secondary prevention approach directed at interrupting the initial acquisition of addictive behaviors.

Prevention strategies are typically classified into three categories according to how the target group is selected and the anticipated impact of the inter-

vention (DeMatteo & Marczyk, 2005; Institute of Medicine, 1994; NIDA, 2003).

- Primary (or universal) prevention strategies target the general population with the goal of preventing substance involvement from emerging in the first place.
- Secondary (or selective) prevention strategies target individuals who have an elevated risk for developing a substance use problem with the goal of forestalling the development of a clinical substance use disorder.
- Tertiary (or indicated) prevention strategies target individuals who are high risk and already experiencing a substance-use disorder with the goal of reducing further harm from drug use.

Drug court clients who are low risk are an example of a population for which secondary prevention strategies would be most appropriate. These clients have engaged in problematic behavior (i.e., drug use) but have not yet developed a clinical syndrome. Compared to clients who are addicted, these clients have engaged in minimal drug use and are, therefore, less likely to experience the problems associated with drug dependence. Unfortunately, the existing secondary prevention literature is not particularly instructive for intervening with adult drug court clients. Virtually all of the research on secondary prevention of drug use has focused on children or adolescents and evaluated interventions delivered at the school, family, or community level. These interventions are not suited for adult offenders in drug court. Few clients in drug court are enrolled in school, and many come from unstable families or are estranged from their family and friends (Belenko, 2002). This makes school-based or family-based interventions impractical to implement.

To our knowledge, the only published studies of secondary prevention strategies for adult substance abusers have been conducted with college binge drinkers (e.g., Baer, Kivlahan, Blume, McKnight, & Marlatt, 2001; Marlatt et al., 1998; Marlatt & Witkiewitz, 2002). Baer et al. (2001) reported on a 4-year follow-up study of 2,041 college freshman who received the Brief Alcohol Screening and Intervention for College Students (BASICS; Dimeff, Baer, Kivlahan, & Marlatt, 1999). The BASICS protocol consisted of education about social norms, education about the effects of alcohol on physical health and social behavior, drug-refusal skills training, self-monitoring, and motivational interviewing. The results indicated that the BASICS intervention brought about a significant reduction in the quantity of alcohol consumed and negative consequences of alcohol over 4 years compared to an at-risk college control sample.

Needless to say, the context of a college campus is substantially different from that of a drug court. Individuals in these two environments could be expected to differ substantially in terms of educational attainment, socioeco-

conomic status, and degree of functional success or impairment. In addition, one of the most effective elements of the BASICS package was the use of “social norming,” in which college students were shown that they significantly overestimated how much drugs and alcohol their peers typically consume. For clients in drug court, there is a serious concern that many of their peers do, in fact, abuse a lot of drugs and alcohol (e.g., Belenko & Peugh, 1998), which could cause a social-norming intervention to backfire or fall flat.

Finally, many secondary prevention packages for adolescents and college students utilize a harm reduction approach, which may include explicit goals for controlled alcohol use, as opposed to a zero-tolerance policy (e.g., Marlatt & Witkiewitz, 2002). Bearing in mind that clients in drug court are under the jurisdiction of judges and other criminal justice authorities, it would not be acceptable to make controlled use of illicit substances an explicit goal of the program. The public and policy makers would not tolerate allowing criminal offenders—who are only out on the street because of a diversionary opportunity—to continue to use intoxicating substances.

A CONCEPTUAL MODEL FOR PROVIDING SECONDARY PREVENTION SERVICES IN DRUG COURT

There are many ways to conceptualize the onset of drug use and its subsequent progression to abuse and addiction, and we present one such conceptual model in Figure 1. This model is not intended to serve as a universal framework for explaining the process of addiction. Rather, the purpose is to suggest, in broad strokes, how prevention strategies should vary according to where a client is in the process of acquiring addictive behaviors. Moreover, this conceptual model points to concrete strategies that may be used to interrupt the development of addictive behavior at various stages in the acquisition process.

The onset of drug use is, of course, determined by multiple factors, including genetic predisposition, learning history, situational variables, and the environment. For example, individuals who have a first-degree relative with a history of drug dependence may have a genetic predisposition to prefer the effects of drugs, tolerate relatively higher doses, and withstand hangover symptoms. Moreover, those who have a genetic propensity toward experiencing symptoms of anxiety or depression may be more likely to experiment with drugs in an effort to “self-medicate” these symptoms. The availability of drugs and norms of social behavior in one’s environment will also influence initial experimentation with drugs. Individuals will be more likely to experi-

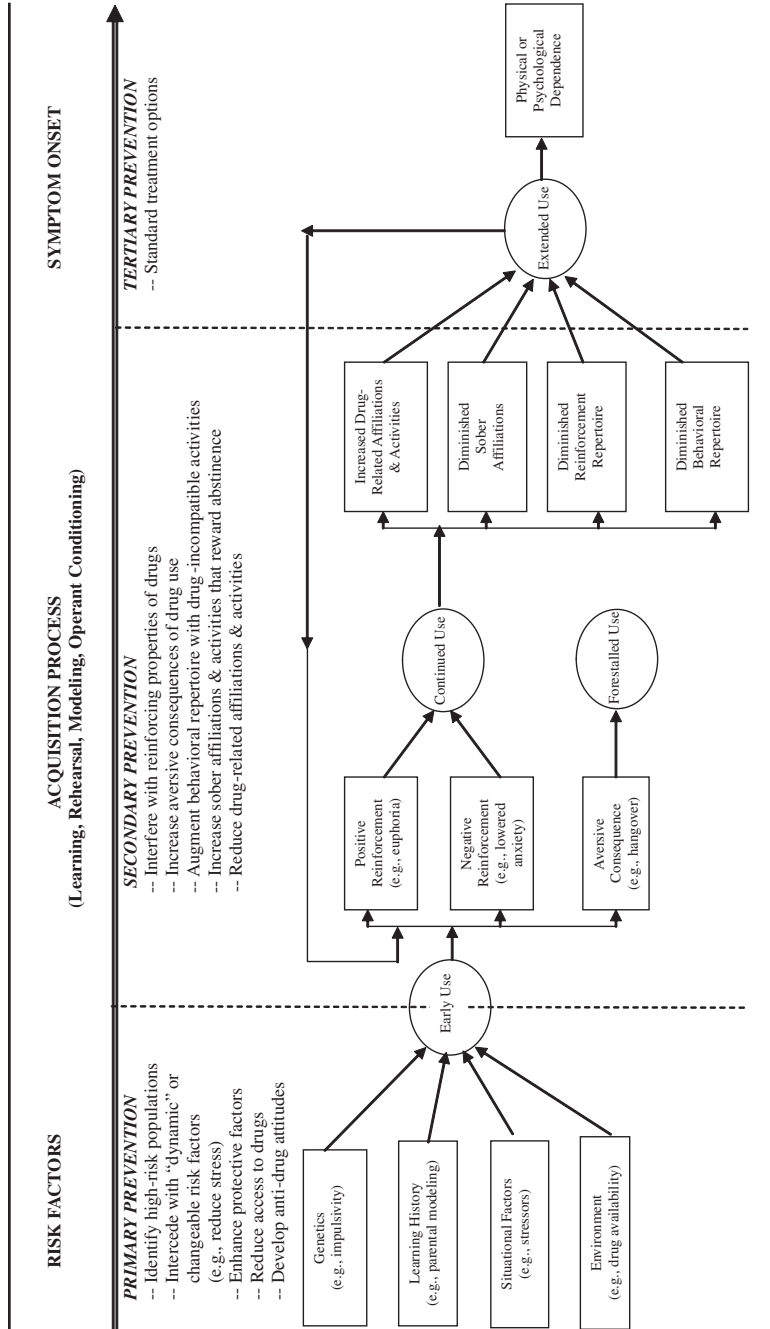


Figure 1: A Conceptual Model of Drug Addiction and Relevant Prevention Strategies

ment with drugs if drugs are readily obtainable in their community or if drug use has become an accepted activity in their immediate subculture.

Whether an individual continues to use drugs after initial experimentation is contingent, in part, on his or her subjective experiences. For example, if the initial drug use results in euphoria or decreased anxiety, it is more likely that drug use will escalate. This is a straightforward application of the laws of operant conditioning, in which pleasurable events are known to be repeated with greater frequency (i.e., “positive reinforcement”), as are events that lead to reductions in negative affects (i.e., “negative reinforcement”; e.g., Skinner, 1938). Euphoria is a prime example of positive reinforcement, and decreased anxiety is a prime example of negative reinforcement. Of course, for some individuals, initial drug use will lead to aversive consequences, such as a hangover or “bad trip.” However, they may still continue to use drugs if these aversive effects are “outflanked” or “outnumbered” by the sheer density of social rewards that ensue, such as fitting in with peers, becoming popular, or receiving secondary gains such as sex.

Over time, as individuals continue using drugs, they begin to augment their involvement with drug-related peers and activities and attenuate their involvement in constructive activities. They may, for example, associate more with the “druggies” at school and spend less time in the classroom or in recreational activities or hobbies. As a result, they decrease their involvement in pleasurable activities that could compete naturally with drug use. Continued drug use may also diminish the enjoyment they previously derived from nondrug activities and behaviors. This is because, relatively speaking, the “dopamine surge” from drugs often outpaces anything comparable that is obtained from the exhilaration of a job or project well done. In the last stages, drug use progresses to drug dependence, which is characterized by compulsivity and withdrawal.

The choice of prevention strategies differs according to where an individual is in the process of acquiring an addiction. Primary prevention strategies are directed at individuals who are in the left-most sections of the model. These strategies seek to interrupt initial access to and experimentation with drugs. Common strategies at this juncture include restricting the availability of drugs (i.e., supply-side interventions), developing antidrug attitudes (e.g., “Just Say No”), and altering dynamic risk factors for drug use (e.g., reducing stress, improving parenting practices). At the other end of the continuum, tertiary prevention strategies are aimed at individuals who are already experiencing the addictive effects of drugs, and the goal is to ameliorate the clinical symptoms of addiction through standard treatment services.

Secondary prevention strategies are targeted to individuals in the midsections of the model. These individuals have engaged in some drug use but are

not yet exhibiting clinically significant symptoms. Nevertheless, they may already be steeped in the process of acquiring an addictive behavioral pattern. It, therefore, follows that secondary prevention strategies at these junctures should focus on interrupting further acquisition of addictive behaviors.

Interfering with the reinforcing properties of drugs. As noted previously, repetitively experiencing the reinforcing properties of drugs will lead to escalated use. It follows that interventions should be directed at interfering with these reinforcing reactions. Helping clients to avoid the "people, places, and things" that occasion their drug use is one obvious method to accomplish this task. If they do not use drugs, they cannot experience drugs' reinforcing effects. One technique is to assist clients to plan their days in advance to minimize the likelihood they will encounter circumstances that historically led to drug use.

More to the point, however, pharmacological blockades can be very helpful in preventing positive reinforcement from occurring. For example, naltrexone is a nonaddictive, nonintoxicating medication that is capable of completely blocking the pleasurable effects of opiates and partially blocking the pleasurable effects of alcohol. It has been used quite successfully in reducing drug use among probationers with minimal side effects (Cornish et al., 1997). Medications such as these, which are inexpensive, safe, and effective, are grossly underutilized in the criminal justice system (e.g., Cornish & Marlowe, 2003; Marlowe, 2003).

We recognize that suggesting the use of a pharmacological blockade for drug users who are low severity runs counter to traditional thinking. Pharmacological treatments have typically been reserved for the individuals who are most seriously drug addicted. However, we believe these medications are, perhaps, best suited for drug users who are low severity. These medications were not designed to treat the features of addiction, such as withdrawal or compulsions. Instead, they were designed to interfere with drugs' pleasure-inducing properties, which is a critical aspect of any prevention approach.

Increasing the aversive consequences of drug use. Logically, drug use should decrease if it is followed by aversive consequences. As noted, however, aversive effects can be "outnumbered" by the large density of social rewards that may follow drug use. In drug courts, clients receive graduated sanctions for positive urine specimens, which offers a powerful opportunity to reliably pair drug use with discomfort. Moreover, drugs like disulfiram (Antabuse) can provoke uncomfortable feelings in response to substance use that can compete in magnitude against the pleasurable effects. These phar-

macological effects may be “too little, too late” for clients who are already addicted but may be quite potent for those who are early in the addictive process. Clients can also be taught to anticipate the negative effects that may ensue as a consequence of continued drug use (e.g., declining health, employment difficulties, criminal arrests), which may serve to augment the magnitude of aversive cognitions paired with drug use.

Increasing involvement with drug-incompatible peers and activities. The more time clients spend with drug-incompatible peers and activities, the less likely it is they will use drugs. This is an important consideration, because in a “vicious cycle,” continued drug use results in decreased involvement in adaptive activities that would normally compete with drug use. Assisting clients to “pencil-in” prosocial, drug-incompatible activities to their daily schedules is a promising and inexpensive technique for clients who are low risk, and it is consistent with the restorative justice concepts of building prosocial attachments, increasing commitment to the community through prosocial activities and involvement, and helping individuals to be better citizens (e.g., Bazemore, 1998, 2001). Through daily activity scheduling, clients can be assisted to increase their involvement with non-drug-using peers and non-drug-related activities. This is consistent with the community reinforcement approach (CRA), which rearranges the drug user’s environment such that healthy, nondrug behaviors are naturally reinforced and unhealthy, drug-related behaviors are not reinforced (e.g., Sisson & Azrin, 1989). Importantly, CRA has achieved favorable long-term results in several empirical studies (e.g., Higgins et al., 1995).

The techniques of daily activity scheduling and self-monitoring would appear to serve as a promising platform for a secondary prevention regimen. Activity schedules are blank grids containing the 7 days of the week divided into 1-hour blocks. Either in person or on the telephone, clients are assisted to plan their weekly activities, focusing on avoiding drug-related peers and events and increasing involvement in drug-incompatible activities. Counselors may need to help some clients distinguish between acceptable and unacceptable social behaviors. Research suggests that delivering such services by telephone can be effective at reducing substance use in a variety of populations while avoiding the expense and time of in-person sessions (e.g., McKay, Lynch, Shepard, & Pettinati, 2005). During the week, clients keep a “real-time” record of their compliance with the schedules and identify antecedents and consequences of noncompliance (e.g., thoughts, affects, situational events). During each phone session, clients and their counselors review the previous week’s events to assess compliance with their schedule,

determine which strategies were successful, “troubleshoot” deviations from their planned routine, and craft new strategies to avoid a recurrence of problems in the future.

IMPORTANT CAVEATS

As noted earlier, we recognize that a low risk for drug use is not necessarily equivalent to a low risk for criminal reoffending or absconding from treatment. This can have significant implications for public safety. For example, it is possible that offenders who are seriously antisocial may be erroneously assigned to drug court despite being premorbid for a drug problem. Placing such individuals into a low-intensity prevention regimen would not be appropriate and could present a serious threat to program integrity and public safety. Of course, such individuals do not belong in drug court at all. On being identified, they should be transferred out of any drug diversion program. Similarly, drug dealers who are not addicted, who may end up in drug court as a result of being charged with a drug-possession offense and “admitting” to having a drug problem, would not be appropriate for a secondary prevention approach designed to forestall continued drug use. Given the mandatory sentencing that results from a conviction on drug trafficking charges, drug dealers may have a strong incentive to “end up” in a drug court. Ideally, these individuals should be identified prior to being admitted to the drug court program.

In addition, some premorbid clients who are drug involved may still be unsuited to a prevention package because they have other risk factors that require greater supervision. For example, as noted previously, research reveals that clients with APD require a greater intensity of judicial supervision than most drug court clients (Marlowe et al., 2004). Other risk factors in drug court may include a younger age during treatment (typically younger than age 25 years), an earlier age of involvement in crime (especially violent crime prior to age 16 years), an earlier age of beginning drug use (typically prior to age 14 years), previous failed efforts in drug treatment, and having first-degree relatives with drug-use problems or criminal histories (Marlowe, Patapis, & DeMatteo, 2003). Individuals with these risk factors could, perhaps, be excused from certain interventions, such as 12-step groups, if they do not exhibit clinical features of addiction; however, they ought not be excused from other on-site requirements at the courthouse or treatment program. If reasonable attention is paid to these risk factors for criminality, in conjunction with drug-use severity, there should be sufficient safeguards against threats to public safety.

CONCLUSION

In summary, the services provided in many drug court programs may be clinically contraindicated for a sizeable proportion of clients who do not have a diagnosable or clinically significant substance use disorder. Our review of the literature suggests the following hypotheses about how best to intervene with clients who are low risk:

- They should not have time-consuming requirements for on-site attendance at the program (with the obvious exception of on-site delivery of urine specimens).
- They should not be treated in heterogeneous groups and, instead, should be treated either on an individual basis or in separately stratified groups.
- They should not be required to attend traditional 12-step groups that follow the disease model of addiction.
- They should not be required to admit or verbalize the negative effects of drugs on their lives but rather should receive psycho-education about the potential impacts from drugs they might experience in the future.
- They should not be exposed to classical conditioning exercises aimed at desensitizing craving responses.
- They should attend status hearings on a reduced or as-needed schedule.
- They should engage in a carefully crafted regimen of daily or weekly activity scheduling combined with self-monitoring of compliance with the schedules, which is overseen at a distance by clinical counselors through such means as phone-based or Internet-based counseling.

We recognize that these are merely educated hypotheses that need to be confirmed in a controlled manner. An empirical test of these hypotheses would reveal what benefits, if any, may accrue from matching clients who are low severity in drug court to a program of prevention services based on their service needs. This has the potential to lend important guidance to drug courts about how to tailor services in the most effective and cost-efficient manner.

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