

Final Technical Report

Breaking the Cycle of Drug Use Among Juvenile Offenders

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Duane C. McBride, Ph.D.

Curtis J. VanderWaal, Ph.D.

Yvonne M. Terry, M.S.A.

Holly VanBuren, M.S.W.

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The Authors and This Report

The authors, all from Andrews University, prepared this report for the National Institute of Justice (NIJ) under contract number OJP-96-C-004. Dr. Duane C. McBride is Professor and Chair, Behavioral Sciences Department, and Research Director, Institute for the Prevention of Addictions. Dr. Curtis J. VanderWaal is Associate Professor, Social Work Department. Yvonne M. Terry and Holly VanBuren are Research Associates.

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Points of view, research findings, and conclusions expressed in this document are those of the authors and do not necessarily reflect official positions or policies of the U.S. Department of Justice.

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Introduction and Purpose

Background and context

For more than two decades, researchers, clinicians, and juvenile justice program administrators have been aware of the consistent relationship between alcohol and other drug (AOD) use and juvenile crime (a list of abbreviations is at the end of this report). There have been many attempts to document, understand, and intervene in what is often called the juvenile drug-crime cycle (while the term *AOD* is probably the more accurate descriptive term for substance use, the phrase *drug-crime cycle* is commonly used in the literature to encompass the use of alcohol and other illegal substances in conjunction with criminal acts). While these attempts have usually promised much, their success is often unknown or not documented with methodologically rigorous scientific research.

The consequences of the juvenile drug-crime cycle are severe. AOD use among juvenile delinquents appears to be strongly related to other social and psychological problems, including lowered school performance, poor family relationships, and increased interactions with AOD-using peers (Howell et al., 1995). AOD use also appears to be associated with a number of delinquent behaviors. Arrestee Drug Abuse Monitoring Program (ADAM) data strongly suggest that a high proportion of juveniles (likely the majority) processed by the juvenile court have recently used illegal substances. Juvenile AOD use appears to be related to recurring, chronic, and violent delinquency that continues into adulthood (Dembo et al., 1987, 1997; Sickmund et al., 1997). The juvenile justice system is, therefore, a viable point of entry for a comprehensive collaborative service system designed to break the juvenile drug-crime cycle.

Very few juvenile justice jurisdictions provide appropriate substance abuse treatment services for youth. Thornberry et al. (1991) found that treatment for adolescent substance offenders was available in less than 40 percent of the 3,000 public and private juvenile detention, correctional, and shelter facilities across the United States (see also Dembo et al., 1993). Jurisdictions that provide treatment generally limit access to support group services, such as Alcoholics Anonymous (AA) and Narcotics Anonymous (NA), as well as AOD testing (Schonberg, 1993). While a few settings conduct individual or group sessions for substance-abusing juveniles, these facilities do not generally conduct comprehensive treatment needs assessments or plan and carry out individualized treatment programs along a continuum of care. New interventions within the system are needed to address these deficiencies; such programming must be clearly aware of and logically incorporate the etiology, correlates, and consequences of the drug-crime cycle.

Purpose

The two primary purposes of this report are to summarize existing knowledge about programmatic attempts to intervene in the juvenile drug-crime cycle and, based on that review, to propose intervention models with the greatest likelihood of successfully addressing the cycle. Specifically, the report will:

1. Provide a brief overview of the juvenile drug-crime cycle and a description of the juvenile substance-using population.
2. Review programmatic attempts to break the drug-crime cycle for juvenile offenders, including an examination of juvenile justice system processes and the graduated sanctions continuum.
3. Recommend intervention models or modalities that have received the strongest empirical support for effectiveness.
4. Based on the review of intervention programs, present a proposed comprehensive intervention model that will include a focus on the specific elements of successful interventions as well as programs that combine various successful intervention elements.

This report is based on an extensive review of existing literature and research reports as well as interviews with researchers who are active in developing and evaluating programs designed to break the drug-crime cycle among juveniles. Many of these researchers were recommended by either the National Institute of Justice (NIJ) or the National Institute on Drug Abuse (NIDA) and all have extensive research and/or practice experience in addressing adolescent substance use and/or delinquency issues. Please see Appendix A for a listing of conducted interviews.

Substance use terminology

Before proceeding further, the authors feel it is important to discuss the terminology used in this document. The authors will use *substance* and *AOD* interchangeably in addition to the previously defined use of the phrase *drug-crime cycle*. Further, most substance abuse experts make a distinction between the terms *use*, *abuse*, and *dependence*. For the purposes of this report, the term *substance use* includes the occasional and nonproblematic use of alcohol as well as other illegal substances, such as marijuana and cocaine. The American Psychiatric Association (1994) defines *substance abuse* as a “maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances,” including “repeated failure to fulfill major role obligations, repeated use in situations in which it is physically hazardous, multiple legal problems, and recurrent social and interpersonal problems” (182). *Substance dependence* is further defined as “a cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems. There is a pattern of repeated self-administration that usually results in tolerance, withdrawal, and compulsive drug-taking behavior” (American Psychiatric Association, 1994:176).

Such definitional distinctions are important because use, abuse, and dependence categories are clinically different and have unique implications for substance abuse treatment and other interventions. For example, a juvenile who episodically uses alcohol or marijuana does not necessarily require traditional AOD treatment programming. However, it is important to note

that any AOD use (even if statistically normative) is illegal for juveniles and may result in juvenile justice system processing and some type of program intervention.

Given that alcohol and marijuana can be considered gateway substances into harder substance use (Golub & Johnson, 1994), attempts to intervene with AOD treatment services early in a youth's substance use history seem warranted. Additionally, since alcohol is clearly the substance used most prevalently by juveniles, it is critical that detection, assessment, and treatment efforts address alcohol use, abuse, and dependence. However, it is also important to note that it is difficult to utilize use, abuse, and dependence diagnostic categories with precision due to adolescents' relatively short histories of substance use (compared to adults). Further complicating the issue, few normative data exist to set adolescent age-appropriate levels of tolerance and withdrawal (Greenbaum et al., 1996). Despite these barriers, juvenile AOD treatment interventions must be based on carefully conducted assessments of a juvenile's AOD use and then tailored to each adolescent's individualized needs.

This being said, most AOD treatment providers downplay the distinctions between alcohol and other psychoactive substances. Miller (1995) maintains that "There is an enormous overlap between addiction to alcohol and addiction to other drugs. Polydrug addiction is the norm, not the exception, and, except for specific pharmacologic issues and timelines, the processes of progression, treatment, recovery, and relapse are nearly identical for addiction to alcohol and other drugs" (84). Within this framework, most AOD treatment centers treat addictions to alcohol and other substances in nearly identical ways. While detractors might call for more careful differentiations between different classes of substances, current treatment center realities make such distinctions unlikely.

The Juvenile Drug-Crime Cycle and the Juvenile Substance-Using Population

The existence of the drug-crime cycle among juveniles is broadly recognized and accepted. Researchers examining the relationship generally conclude that it is very complex and involves a wide variety of associated behaviors, socio-demographic and economic characteristics, and other situational variables (McBride & McCoy, 1993). Development and implementation of successful intervention programs must include a knowledge of the unique characteristics of the juvenile AOD-using population as well as known correlates affecting juvenile AOD use and treatment outcomes. Adolescents present a very specific treatment population. Compared to adult alcoholics and addicts, adolescent AOD abusers have shorter substance use histories (De Leon & Deitch, 1985), are less involved with opiates and have more involvement with alcohol and marijuana (Johnston et al., in preparation), and report greater binge drinking and more polydrug abuse (Friedman et al., 1986; Leccese & Waldron, 1994).

The extent of juvenile AOD use and its relationship to delinquent behavior has been documented by both self-report and biologic data (such as urine and hair testing) in a wide variety of national and local studies. Prevalence data from the Monitoring the Future study show that among 12th

grade students, 32 percent have consumed five or more drinks in a row in the last 2 weeks (Johnston et al., 1998). Twelve percent of 8th graders report use of any illicit substance in the past 30 days. For 10th graders, this percentage rises to almost 22 percent, and for 12th graders, the percentage climbs to almost 26 percent. Rates of marijuana use in the past 30 days are 10 percent, 19 percent, and 23 percent for 8th, 10th, and 12th graders, respectively (Johnston et al., 1998). Recently reported data also show that daily marijuana use among 10th graders increased from less than 1 percent in 1992 to almost 4 percent in 1997 and 1998. The data further show that cocaine use in the last 30 days among 10th graders increased from less than 1 percent in 1992 to 2 percent in 1997 and 1998 (Johnston et al., in preparation). While no large-scale epidemiological studies have been conducted to determine diagnosable adolescent substance use disorder rates, some limited community surveys indicate that lifetime prevalence of any AOD disorder ranges from 3 to 5 percent in 15-year-olds and 10 to 32 percent in 17- to 19-year-olds (Kashani et al., 1987; Reinherz et al., 1993). It is reasonable to assume that AOD rates for juvenile delinquents are even higher. In 1992, Coccozza estimated that nearly 320,000 male juvenile detainees met diagnostic criteria for at least one substance use disorder. Analyses of data from the National Youth Survey show a strong correlation between serious substance use and serious delinquent behavior (Johnson et al., 1993). Johnson and his colleagues (1993) found that only 3 percent of nondelinquents use cocaine, whereas 23 percent of those with multiple delinquency index crimes are current cocaine users.¹

Data from the 1998 ADAM Annual Report show the extensive prevalence of substance use among juvenile male arrestees/detainees in many cities across the United States. The 1998 ADAM report shows that between 1996 and 1998, cities such as Denver, Cleveland, Los Angeles, and Washington, D.C., reported that about 60 percent or more of their juvenile arrestees had an illegal substance in their urine. Even the lowest substance prevalence cities (St. Louis, San Jose, and Indianapolis) reported that over 40 percent of their juvenile arrestees tested positive for illegal substances (ADAM, 1999). While marijuana was by far the most common substance found, in many cities such as Cleveland, Denver, Indianapolis, Los Angeles, Phoenix, and Portland, 10 to 20 percent of the juvenile arrestees had used cocaine during 1998 (ADAM, 1999). It should also be noted that there are significant local variations in use patterns among juvenile arrestees. West Coast juvenile arrestees are more likely to have methamphetamine in their urine than in other cities. For example, in San Diego, the proportion of juvenile arrestees testing positive for methamphetamine (around 10 percent in 1998) is higher than for cocaine (ADAM, 1999; see also Penell et al., 1999). The report further notes that male juvenile arrestees who are in school are less likely to test positive for substances than juveniles who are not in school (ADAM, 1999), suggesting that those outside of school systems would be even more likely to test positive for illicit substances.

In a study of nonincarcerated delinquents in Miami, Florida, Inciardi and his colleagues (1993) found that about three-fourths of both males and females self-report cocaine use at least weekly. Comparing self-reported use with hair analysis results, Dembo and associates (1996) found that

adolescents accurately report their use of soft substances such as marijuana but underreport use of hard substances such as heroin, suggesting that the self-report rates of the Miami youth could be even higher.

Overall, these epidemiological reports document frequent AOD use among juveniles, recent increases in AOD use frequency, and the correlation between frequent AOD use and extensive and sustained delinquent behavior. These data suggest a strong need to intervene in the juvenile substance use and delinquency cycle.

Juvenile Justice System Conceptual Underpinnings and Developments

An examination of the current juvenile justice system requires a brief review of its conceptual underpinnings and current conceptual developments as well as a review of the system's usual operational practices. These reviews have implications for how programmatic interventions may occur in the juvenile drug-crime cycle.

Conceptual underpinnings

The juvenile court system arose from attempts to develop a justice system for juveniles that differed from the adult system. From its very beginnings in Cook County (Chicago), Illinois, the juvenile justice system defined itself as a *caring parent* as opposed to *punishing judge*. While the developing juvenile system involved classic elements of the adult system in that it operated in the framework of laws regulating behavior and utilized aspects such as prison-like punishment, the primary focus was on rehabilitation. At times, this conceptual underpinning resulted in a lack of careful attention to constitutional due process rights. Beginning in the 1960s, the juvenile court increasingly found itself under constitutional review regarding the application of due process criminal court elements.

A classic illustration of problems with due process occurred in the case of 15-year-old Gerald Gault. In 1964, Gault and a friend were taken into custody by police based on a verbal complaint. Gault's parents were never informed of his being taken into custody. Neither Gault nor his parents were ever given notice of the charges or his basic constitutional right to remain silent. In addition, Gault was not even present at the formal juvenile court hearings in which a judge adjudicated him delinquent and sent him to a state industrial/training school until he was 21. In 1967, the Supreme Court ruled that juveniles have the right to basic constitutional due process, including knowing the charge against them, being informed of their constitutional rights, and actually being present at their own hearings (Re *Gault*, 387 U.S. 1, 18 L. Ed. 2d 527, 87 S Ct. 1428, 1967). The 1970s saw a continuing application of Federal constitutional rights to juveniles and major movements to close State industrial/training schools (Bartollas, 1997).

During the 1980s, American society experienced a very large increase in the rate of juvenile crime, with a particular increase in the rate of violent juvenile crime. This trend resulted in

increasing willingness on the part of Federal and State governments to try juveniles accused of serious (violent) crime as adults (Bartollas, 1997; Strom et al., 1998; Sickmund, 1994). However, while there appears to be an increased willingness to define juveniles as adults, there continues to be strong support for incorporating a rehabilitative philosophy with community protection and justice models based on the initial *caring parent* approach of the early juvenile justice system.

Conceptual developments

While the concept of using the justice system to address human behavior problems is not new, it has received new impetus in recent years. A recent issue of the *Notre Dame Law Review* (Hora et al., 1999) is entirely devoted to the concept of therapeutic jurisprudence and how its application can and is revolutionizing America's response to the drug-crime cycle. Therapeutic justice advocates suggest that psychological, sociological, cultural, and other factors should be fully considered in law applications, and that the goal of the courts should be not only protecting the community and punishing the offender but also addressing the underlying reasons for criminal/problem behavior. Within this framework, key players in the justice system (including judges, prosecutors, and defense attorneys) transition from adversarial roles to problem solvers as part of a collaborative team while at the same time continue to perform traditional roles of community protection, applicators of law, and protectors of due process (Spangenberg & Beeman, 1998). Therapeutic jurisprudence appears to be very consistent with the philosophical underpinnings of the juvenile justice system. As Hora and her colleagues (1999) note, the juvenile court applies therapeutic jurisprudence in its broadest sense by including the family and a wide variety of other relevant factors in decision making.

Within the juvenile justice system, a perspective called Balanced and Restorative Justice (BARJ) has emerged in the last few years that provides a useful framework for examining and developing programmatic interventions to address the juvenile drug-crime cycle (Office of Juvenile Justice and Delinquency Prevention, or OJJDP, 1998). The BARJ perspective attempts to integrate the traditional rehabilitative philosophy of the juvenile court with increasing concerns about victim rights and community safety. Specifically, the model focuses on:

1. *Offender accountability*, which enables the offender to make amends to victims and the community.
2. *Competency development*, which helps a juvenile change his or her behavior and have the skills necessary to function in today's society and economy.
3. *Community safety*, which involves protecting the community by monitoring juvenile behaviors and implementing graduated sanctions.

This model suggests that any response to youth crime must strike a balance between the needs of victims, offenders, and the community. Further, it suggests that victims, offenders, and the

community should be as involved in the justice process as possible (Bazemore & Nissen, in press). Rather than asking the question “What should be done to punish the offender?” restorative justice asks the following questions (Zehr, 1990):

- What is the nature of the harm resulting from the crime?
- What needs to be done to “make it right” or repair the harm?
- Who is responsible for the repair?

This process takes place through collaborative involvement of key players in the juvenile justice system and community and, if desired, the victim.

BARJ has become a guiding principle in juvenile justice system change for at least 12 States (OJJDP, 1998). Illinois provides an excellent example of a strongly proactive attempt to use the model in system reorganization. A recent publication of the Cook County, Illinois, State’s Attorney’s office describes how BARJ has changed the current system, including required interagency collaborative agreements and practices that are monitored by the State’s Department of Human Services (Devine, 1998). The BARJ model is relatively new and has not been subjected to extensive evaluation. However, it is an important part of a developing framework in the justice system. While the BARJ model is used as part of the background material of this report, it has not been formally integrated into the evaluation presented on interventions. The focus of this report is on reviewing the effectiveness of interventions at various points of the juvenile justice system and suggesting guiding principles and a possible model for applying those principles. Where this is consistent with the BARJ model or seems implied by that model, it is noted. The BARJ model provides a general framework rather than a detailed critical analysis of intervention systems and collaborative models.

An additional and related trend in juvenile justice is the recent emergence of the strengths-based approach. Juvenile justice systems in general, and AOD treatment centers in particular, have historically been based on models which emphasize an individual’s deficits and problems: “...it appears that many treatment programs are based on the assumption that offenders can be ‘fixed’ in isolation from the rest of the world. This is due to an all-too-familiar and well-rooted history of treatment grounded in a medical model that suggests that therapeutic intervention acts as a kind of emotional surgery” (Bazemore & Nissen, in press:9-10). Bazemore and Terry (1997) suggest that the juvenile justice system has been designed to see youth either as victims or villains while ignoring the natural capacities of both the youth and their communities. These programs fail to address the role of relationships and the institutional and community contexts which nurture criminal behaviors.

Rather than focus on what is wrong with individuals, the strengths-based perspective suggests that youth have internal resources and community-based supports which can be tapped to encourage appropriate functioning within the community. As such, strengths-based approaches

focus on what youth are good at, who their naturally occurring, positive community supports are, what they want which is positive and interesting to them, and what they can be in spite of their past histories (Bazemore & Nissen, in press; Nissen, submitted for publication). The approach seeks to incorporate concepts such as respecting and looking for client strengths, engaging client motivation for change by tapping into those strengths, seeing the environment as full of resources, and being a collaborator with the client in therapeutic work (Saleebey, 1992). These concepts can be integrated into the entire juvenile justice continuum and have recently been introduced in some drug courts, case management systems, and multidimensional family approaches to intervention. Each of these areas, including program outcome results, will be reviewed later in this report.

The Juvenile Justice System Process

With the foregoing conceptual trends and frameworks in mind, a brief overview of the juvenile justice system process will provide a context for understanding where and how substance abuse services may be appropriately offered (substance abuse treatment services can be and are offered at any stage of the process).² The juvenile justice system is composed of six main phases:

- *Intake.* A preadjudication intake officer at a local juvenile court decides to release a juvenile into parental custody, place him or her on informal probation, or detain the youth in a detention facility. Many juveniles are also counseled by the intake officer and diverted into other community agencies.
- *Social investigation.* A probation officer examines the juvenile's family, education, history of delinquency, etc., for the juvenile court. Some investigations are supplemented by reports from child advocates or court-appointed social workers.
- *Fact-finding hearing.* A juvenile appears before a judge who reviews the complaint and the social investigation. Special juvenile drug courts have been established in some locations to facilitate the evaluation and adjudication of AOD-related offenses.
- *Adjudication.* Based on the fact-finding hearing, the court determines if the juvenile is delinquent. The judge's decision is strongly influenced by the intake officer's recommendations.
- *Disposition.* If the juvenile is determined to be delinquent, a hearing is held where the judge decides case disposition. Options include releasing the delinquent with a warning, community supervision, or commitment to a specialized treatment or detention facility, such as a State training school, boot camp, or community residential facility. Recent trends favor placing youth in detention facilities (Schonberg, 1993).

- *Continuing care.* After the juvenile has completed the court's recommendations, he or she is often released to the supervision of a variety of continuing care providers. Provider services include counseling, school dropout prevention, structured social activities, etc.

Each of these phases will be examined relative to their role in breaking the juvenile drug-crime cycle. As juvenile justice system phases and their relationship to AOD treatment interventions are described, it is important to recognize three overarching concepts and strategies that affect each phase: case management, systems collaboration, and graduated sanctions. These concepts/strategies are raised and discussed in this report within the juvenile justice system phase where each would be primarily applied. Case management and systems collaboration are discussed during the social investigation phase, and graduated sanctions are discussed in the disposition phase.

System contact: the juvenile justice system and court supervision at intake

Intake is the first point of official system contact between youth and the juvenile justice system. The etiology of youth access into the system is varied and may include parental referral based on incorrigible youth behavior, teacher referral, arrest as a result of an accusation within an ongoing criminal investigation, or arrest as a result of an observed legal infraction of the law. As noted above, juvenile justice system involvement at this stage involves preadjudication intake officers of the local juvenile court. Decisions to dismiss, divert to various collaborative community agencies, or move to disposition/detention are usually made by the intake officer.

OJJDP's National Juvenile Justice Action Plan (Coordinating Council on Juvenile Justice and Delinquency Prevention, 1996) outlines several characteristics which any system must include in order to adequately address the comprehensive needs of juvenile offenders. The three characteristics relating to the intake process follow:

1. The system must include a single point of entry which screens and assesses the needs of AOD-involved youth at the time of intake. Currently, most systems of treatment are decentralized with multiple points of entry; this decentralization often results in provision of inappropriate services, unnecessary duplication of services, and major gaps in problem identification, assessment, referral, and overall access to services by youth in need of AOD treatment (Coordinating Council on Juvenile Justice and Delinquency Prevention, 1996).
2. The Action Plan calls for immediate and comprehensive assessment. Supporting this contention, OJJDP's study of risk assessment in 14 States found that, on average, 31 percent of incarcerated youth could be safely placed in less secure settings, resulting in more appropriate rehabilitation in a less restrictive environment. Considerable financial savings would be an added bonus.

3. Assessment should be culturally sensitive and designed to identify environmental, familial, personal, and systemic factors which contribute to delinquency and substance use (Bilchik, 1995).

Social investigation: assessment, case management, management information systems, and collaboration

Assessment

AOD treatment services can be provided at several points along the juvenile justice continuum. At the point of entry into the juvenile justice system (intake), the preadjudication intake officer provides a critical gatekeeping function in identifying and intervening with substance abuse problems. Such problems are usually enmeshed within a wide variety of other issues; thus, comprehensive assessment is necessary in order to successfully address substance abuse. Hoge (1999) notes that juvenile justice systems may make poor decisions about juvenile placement because they fail to gather adequate assessment information. Considerable discretion is afforded to personnel who collect such information, and there is often heavy dependence on informal and unsystematic assessment and decision procedures that may result in invalid inferences about clients.

Because the recommendations of the preadjudication intake officer often heavily affect judicial decisions, it is imperative that intake personnel be thoroughly trained in the use of comprehensive assessment tools. More careful screening mechanisms not only will help identify services most needed by juveniles but also will prevent system duplication leading to inefficient and poorly coordinated service delivery. By properly assessing and coordinating point-of-entry services, the juvenile justice system can more effectively work toward preventing increasing levels of future delinquency. However, in order to make appropriate assessment and treatment decisions, assessment personnel must consider and incorporate issues of culture and ethnicity into comprehensive juvenile evaluations, as well as be prepared for the complexities of clients with multiple diagnoses.

Culturally sensitive assessment. Statistics indicate that a disproportionate number of juvenile detainees are minorities. Minority group membership is often characterized by social injustice, differential treatment by society, and a sense of personal impotence and powerlessness. Comprehensive program development should address these and other issues of ethnicity and how they relate to assessment, intervention, and treatment in juvenile populations. Because of the danger of overgeneralization and its accompanying stereotypes and prejudices, broad guidelines will be introduced both here and in later sections of this report dealing with intervention and treatment that focus on increased awareness of cultural differences and how they might affect a juvenile's progress through the justice system.

Since both formal and informal assessments are initiated at the juvenile's first point of contact with the system, cultural competencies need to be developed with all front-line staff, including law enforcement, justice system professionals, assessors, case managers, and any others who become involved early in the process. While cultural competence is desirable at all points in the continuum of care, it is crucial that the people making decisions about how the juvenile will be initially processed have an understanding of the roles of ethnicity and culture.

Validation of screening and assessment instruments has typically been based on European-American values (Canino & Spurlock, 1994; Ho, 1992; Paniagua, 1994). Culturally sensitive practitioners should select instruments shown to have the least bias with the minority population encountered. According to Flaherty and colleagues (1988), in order to be valid, assessment instruments must have content, semantic, technical, criterion, and conceptual equivalence across cultures (for lists of recommended instruments, please see Canino & Spurlock, 1994; Paniagua, 1994). An assessment model developed by R.H. Dana (as summarized by Paniagua, 1994) suggests that the following elements are needed in culturally sensitive assessment: assessing degree of acculturation, providing culturally specific service delivery styles, using the client's preferred language when possible, selecting appropriate assessment measures and methods, and displaying cultural sensitivity when informing clients about findings resulting from assessment.

Paniagua (1994) summarizes various assessment methods according to their degree of bias, recommending that the least biased method be used whenever possible. Methods which reflect the least cultural bias include physiological assessment, direct observation of behaviors, self-monitoring or behavioral self-reporting scales and instruments, and clinical interviews. Methods more prone to bias include trait measures, self-report of psycho-pathology, and projective tests. Some general guidelines for culturally sensitive assessments include asking culturally appropriate questions, focusing on ethnic identification rather than race, addressing socio-economic status as it interacts with ethnicity, and self-awareness of prejudices, biases, and stereotypes which may lead to faulty conclusions about the client (Canino & Spurlock, 1994; Paniagua, 1994).

Co-occurring addictive and mental disorders. Assessment of AOD abuse is further complicated by the co-occurrence of mental disorders (also referred to as dual diagnoses). Both mental health and substance abuse treatment providers have long known that AOD abuse and mental disorders often coexist in the same individuals. A recent study based on data from the National Household Survey on Drug Abuse (Substance Abuse and Mental Health Services Administration, 1999) determined that adolescents who self-reported emotional problems were nearly four times more likely to be dependent on alcohol or illicit substances than other adolescents. They were also four times more likely to have used marijuana and were seven times more likely to have reported use of other illicit substances in the previous month.

Treatment for a client with co-occurring addictive and mental disorders is typically hard to obtain. Clinicians often find it difficult to diagnose both disorders due to mixed and overlapping symptoms. However, both psychiatric and chemical dependency treatment centers routinely

refuse to admit individuals who are judged to have coexisting disorders. If a client is admitted to one type of center who later is found to have significant symptoms of the other disorder, he or she can be told they are no longer an appropriate treatment subject. Such problems occur for several reasons:

- Treatment providers feel inadequately trained and equipped to deal with the unique problems associated with co-occurring disorders.
- The unique contributions of each disorder to the existing functional impairment are often difficult to determine, thus complicating both assessment and treatment interventions.
- Differing philosophies of what has caused the disorder lead clinicians from both professions to downplay the importance of the other disorder.
- Acting-out behaviors associated with both disorders can be difficult for many facilities to handle.

Large-scale epidemiological studies of co-occurring disorders have not yet been undertaken for adolescents. However, a major review of smaller scale general population and clinical studies has been conducted in both inpatient psychiatric and addictions settings (Greenbaum et al., 1996). While many of the studies reviewed contained numerous methodological problems, results show that approximately half of all adolescents receiving mental health services also have co-occurring substance abuse problems. Conduct disorder and depression are the two most frequently reported co-occurring mental disorders, with most clinicians considering depression to be a major element of dual diagnoses. In a review of 16 clinic- and community-based studies, Winters (1998) found that diagnosable substance use disorders are two to five times more prevalent among youth with a conduct disorder diagnosis than among control group youth. In addition, Winters, Latimer, et al. (in press) reported that a general delinquency factor is responsible for nearly 50 percent of the variance in AOD use severity in an AOD-clinic referred sample for both boys and girls across all ethnic groups. Other less commonly reported co-occurring psychiatric disorders include bipolar disorder, anxiety disorder, and attention deficit/hyperactivity disorder (ADHD) (Thompson et al., 1996).

When ADHD and conduct disorders co-exist in the same youth, researchers estimate that co-occurring substance use disorder rates range from approximately 30 to 60 percent (Wilens et al., 1994). Pharmacotherapy treatments for these co-occurring disorders have not been well researched for adolescents (see Solhkhah & Wilens, 1998, for a review of studies on the effects of medication for treating children or adolescents with AOD disorders). One further difficulty in assessing and treating juveniles with co-occurring disorders is the lack of a coordinated and centralized approach to assessment. Community assessment centers provide one solution to this problem.

Community assessment centers. While the OJJDP Action Plan calls for the establishment of community assessment centers, few jurisdictions currently provide a single point of system entry or comprehensive screening and assessment for juveniles during the intake process. Notable exceptions are Target Cities programs, Treatment Alternatives for Safe Communities (TASC), and the Juvenile Assessment Center (JAC).

1. *Target Cities.* Target Cities programs (supported through the Center for Substance Abuse Treatment, or CSAT) provide comprehensive screening and assessment. Target Cities sites are required to improve coordination among relevant human service agencies, establish or enhance a Central Intake Unit (CIU) and referral services, include quality monitoring, and focus on treatment services for at least one specified subpopulation, which may include adolescents (Department of Health and Human Services, or DHHS, 1995; Scott et al., forthcoming; Cleveland C.A.R.E.S., 1999; Kraft & Dickinson, 1997). Juvenile offenders are served at two Target Cities sites (Albuquerque, New Mexico, and Cleveland, Ohio).
2. *TASC.* TASC programs follow a case management model, including single-point-of-entry assessment and diagnosis; specialized service planning and treatment matching; intervention, service referrals, and placement; and monitoring and reporting (Baille & Breslin, 1996).
3. *JAC.* The JAC began in Tampa, Florida, but has spread to nine other Florida locations. While services in each location vary, the basic elements and functions of the model include centralized location of relevant agencies which can conveniently provide needed services to at-risk youth; screening, diagnosis, and, if appropriate, linkage of arrested and high-risk youth with area service providers; case management of juveniles assigned to diversion programs within the juvenile justice system; and tracking, which is usually limited to the purpose of determining referral disposition (Dembo & Rivers, 1996). Ideally, the JAC is designed to move juveniles through the system in the following way:
 - Law enforcement officers bring the arrested youth to the JAC where he or she is processed by Department of Juvenile Justice detention intake and JAC assessor personnel.
 - JAC assessors conduct breathalyzer and urine tests for substance use; substance abuse and mental health histories are also collected. In addition, the juvenile undergoes preliminary screening using the NIDA Problem Oriented Screening Instrument for Teenagers (POSIT) to identify potential problems in 10 different psychosocial functioning areas (the POSIT is described in greater detail below). Based on the results of this preliminary screening process, indepth assessments are conducted in problem areas such as AOD abuse, mental illness, physical and sexual victimization, and delinquency.

- On the basis of assessment findings, current charges, and arrest history, intake staff determine whether the youth should be placed in secure detention, home detention, or released into the care of a parent, guardian, or responsible relative.
- When a minor is not appropriate for detention, he or she is assigned to the misdemeanor case management staff at the JAC. This unit reviews the arrest histories and current charges of the youth to determine his or her eligibility for arbitration or various diversion programs within the local juvenile justice system.
- JAC misdemeanor case managers follow the case until the juvenile successfully completes the program to which he or she is assigned. If the program is not successfully completed, the case manager has the option to file a delinquency petition, and the case is turned over to the Department of Juvenile Justice case manager.

One obvious component of a successful community assessment center is the use of valid and reliable screening instruments. The following section describes a number of assessment instruments for adolescents that the research literature suggests are considered valid and commonly used.

Assessment instruments. The number of adolescent AOD assessment tools has grown rapidly in recent years (Farrow et al., 1993; Winters & Stinchfield, 1995), with over 30 tools currently available for both screening and assessment. This increasing growth has made selection of an appropriate screening instrument more difficult than ever before: “The rate of development of this new generation of measures has out-paced efforts to critically evaluate them, leaving the field somewhat at a loss as to their absolute and relative merits” (Stinchfield & Winters, 1997:63). Recognizing that alcohol is the mood-altering substance most commonly used by juveniles, most of these instruments assess alcohol as well as other substance use, abuse, and dependence.

Substance abuse assessment tools are commonly divided into screening and comprehensive assessment instruments. Several full-range assessment systems have also been designed to combine screening, diagnostic evaluation, and comprehensive assessment in one package. The primary purpose of screening is to determine if the need for a more comprehensive assessment exists. Thus, it is inappropriate to use screening instruments to formulate a diagnosis or decide treatment needs. If the screening instrument indicates an AOD problem, a more comprehensive assessment is indicated. At minimum, the comprehensive assessment should include: (1) an in-depth examination of the severity and nature of the AOD abuse identified by the screening process, (2) a more thorough assessment of additional problems flagged during the screening and additional inquiry into problems that may not have been included in the screening, and (3) a strong effort to use multiple methods and sources with special emphasis on including the youth’s family in the assessment, using standardized assessment instruments, and obtaining prior assessments and other relevant records (Winters & Stinchfield, 1995).

Appendix B includes an overview of a number of stand-alone substance abuse screening tools and mid-range instruments. It is recommended that both screening tools and mid-range substance abuse instruments be supplemented with more comprehensive assessments of the juvenile's broader psychosocial needs.³

Assessment systems integrate screening, diagnosis, and comprehensive assessment into one package. Advantages include rapid referral of adolescents to more indepth assessment, standardization of the assessment and referral process, assurance that an adolescent's comprehensive needs have been adequately addressed, and evaluation of client needs with adequate referral to appropriate adjunctive services. Disadvantages include higher costs for commercial assessment instruments and the need for staff expertise and training to administer and interpret the instruments (Winters & Stinchfield, 1995), as well as comparatively longer time periods for administration than non-comprehensive assessment instruments. Two full-range assessment systems commonly used with juvenile delinquent populations are discussed below:

1. *Adolescent Assessment/Referral System (AARS)*. NIDA initiated the AARS in order to identify reliable and valid assessment instruments that could be used to assess the broad psychosocial problem areas of AOD-involved youth and guide treatment decision development (Rahdert, 1991). The AARS includes three components plus a treatment plan, which are described below.
 - The POSIT. The POSIT is available in both Spanish and English and is a 139-item, yes/no, self-administered instrument which explores difficulties in 10 high-risk areas of functioning: AOD use/abuse, physical health status, mental health status, family relationships, peer relations, educational status, vocational status, social skills, leisure and recreation, and aggressive behavior and delinquency. The POSIT is designed to quickly identify problems in any functional area requiring further assessment and/or treatment. A reliability study indicates that the POSIT consistently identifies potentially troubled youth who are in need of indepth assessment and intervention or treatment services (Dembo et al., 1996).

NIDA is currently pilot-testing an HIV/STD-risk mini-questionnaire designed to be administered alone or as a supplement to the POSIT (Rahdert, 1999). This questionnaire will provide valuable information on juveniles' high-risk sexual practices. Early evaluation supports internal consistency and test-retest reliability, as well as content and criterion (predictive and concurrent) validity.

- The Client Personal History Questionnaire (CPHQ). The CPHQ is included with the POSIT and identifies client demographics, history of juvenile justice and mental health contacts, school performance, health care utilization, and current life stressors. Academic information and school discipline information are gathered when available. Collateral information is also collected from parents or guardians using the Problem Oriented

Screening Instrument for Parents (POSIP). This information is useful in helping assessment professionals corroborate juvenile claims.

- The Comprehensive Assessment Battery (CAB). The CAB includes a variety of psychometrically validated assessment tools which probe more deeply into each of the 10 problem areas identified by the POSIT. Examples of recommended CAB assessment instruments are the Personal Experience Inventory (PEI) and the Adolescent Diagnostic Interview (ADI) for AOD abuse (Winters, 1991; 1992; Winters & Henly, 1989), and the Family Assessment Measure (FAM) for family relations (Skinner et al., 1983).
 - Treatment planning. The AARS recommends that staff develop a treatment plan after completing the assessment phase. The AARS manual guides programs in developing their own local directory of adolescent services, which assists the case manager or referral agent in locating appropriate resources and placing troubled youth in services which match their treatment needs.
2. *Minnesota Chemical Dependency Adolescent Assessment Package (MCDAAP)*. Like the AARS, the MCDAAP attempts to provide both screening and more intensive assessment. However, the MCDAAP differs from the AARS in several ways: “The MCDAAP tools are primarily geared to measure drug abuse characteristics and related problems and only screens [*sic*] for coexisting mental and behavioral disorders; the MCDAAP screening tool contains fewer items than the POSIT; and the MCDAAP does not include resources related to additional assessment and treatment referral” (Winters & Stinchfield, 1995:153). The MCDAAP has three components, described below.
- The Personal Experience Screening Questionnaire (PESQ). The PESQ (Winters, 1991; 1992) is a 40-item, self-report screening instrument primarily designed to estimate the potential need for AOD treatment services among adolescents. The instrument evaluates problem severity (18 items), psychosocial problems (8 items), substance use history (4 items), defensiveness or *faking good* (5 items), and infrequency or *faking bad* (3 items). The index measures behaviors, attitudes, and consequences related to AOD use by adolescents. The PESQ’s advantages include its format, brevity, and relatively easy reading level (fourth grade). Evaluation indicates internal consistency, reliability, accurate prediction of comprehensive AOD assessment need, and follow-through of referral.⁴
 - Adolescent Diagnostic Interview. The ADI assesses symptoms found in substance use disorders as described in the American Psychiatric Association’s *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*. The interview format includes a substance abuse history and signs of abuse or dependence in all major AOD categories. The ADI also screens other mental health disorders and several domains of functioning (e.g., school performance, peer and family relationships, legal problems, and

leisure activities) (Winters & Stinchfield, 1995). Evaluation supports interrater and test-retest reliability, as well as criterion validity.⁵

- Personal Experience Inventory. The PEI is a multiscale instrument which identifies problems and makes referral and treatment recommendations based on a differential diagnosis of a client's problems. It is divided into two sections: chemical involvement problem severity and psychosocial risk factors. The PEI measures AOD misuse problem severity and use frequency as well as psychosocial and environmental correlates of adolescent AOD abuse (e.g., negative self-image, social isolation, physical and sexual abuse, and estrangement from family). Several additional clinical problems are also measured, including eating disorders, suicide potential, other mental health symptoms, and parental history of substance abuse. "PEI scores have been found to be highly correlated with other measures of drug abuse problem severity and psychosocial risk factors, independent recommendations regarding need for drug abuse treatment, and independent clinical diagnoses" (Winters & Stinchfield, 1995:9). The PEI is recommended by a NIDA publication for use in comprehensive evaluation of adolescent substance use/abuse (Rahdert, 1991).

Case management

Whatever assessment instrument is chosen, it is crucial to use the assessment for the development of a comprehensive intervention/treatment plan. Such a plan must be housed within an organizational structure including roles that facilitate meeting the identified needs of the juvenile. Case management provides one way for juvenile justice systems to coordinate meeting the comprehensive needs of adolescents. The function of the case manager (CM) is "to secure and coordinate continued social, mental health, medical, and other services for a client" (Healey, 1999:1). The approach has emerged as an intake, during-treatment, and posttreatment strategy which can connect clients (adults and juveniles) to needed resources throughout the service continuum resulting in more rapid access to services (Bokos et al., 1992), higher levels of goal attainment (Godley et al., 1994; Rapp, 1997), longer lengths of stay in treatment (Rapp et al., 1997), improved AOD treatment outcomes (Rapp, 1997), improved employment functioning (Siegal et al., 1996), and improved connection to needed resources over time (Dennis et al., 1992; Godley et al., 1994; Schlenger et al., 1992) when compared to standard treatment services. Due to its individualized nature, case management appears particularly effective in meeting the needs of special populations, such as homeless persons (Conrad et al., 1993; Perl & Jacobs, 1992), injection drug users (Falck et al., 1994), persons with AIDS (Lidz et al., 1992; McCoy et al., 1992), youth with dual diagnoses (Evans & Dollard, 1992), and juvenile delinquents (Enos & Southern, 1996). Research suggests that case management may be useful as an adjunct to substance abuse treatment for two reasons: (1) retention in treatment is generally associated with better outcomes, and one of case management's primary goals is to keep the adolescent engaged in the treatment process (Kolden et al., 1997; Siegal et al., 1995), and (2) treatment is more likely to succeed when a youth's non-substance abuse problems (e.g., school performance, family problems, etc.) are also being addressed (Westermeyer, 1989).

According to a recent NIJ examination of case management within the criminal justice system (Healey, 1999), optimum case management models currently combine two broad approaches: strengths-based and assertive. *Strengths-based* case management focuses on a client's self-identified strengths and talents when developing a service plan, assuming a client's ability to use these strengths in order to move toward "socially acceptable choices" (Enos & Southern, 1996:44-45). Within the criminal justice setting, CMs combine support and positive regard for a client's strengths with clear disapproval of the behaviors leading to justice system involvement. *Assertive* case management requires active involvement of the CM in seeking out and delivering services to clients as opposed to passive service provision (Inciardi, 1996; Healey, 1999). Many current versions of case management methodologies have followed a passive approach to service provision, providing clients with referral information but not actively engaging in obtaining such services for the client. According to much of the research, by combining strengths-based and assertive case management, aggressive service provision based on a client's own strengths and talents can best support client success.

Case managers support and reinforce treatment continuum goals by providing five major functions:

1. *Engagement.* CMs orient, support, and meet immediate adolescent needs, as well as serve as linkages to resources and services.
2. *Assessment.* CMs assess the appropriateness and eligibility of both internal and external resources. Some CMs provide the majority of assessment services, including the collection of information from family, school, and court systems (Babor et al., 1991).
3. *Planning, goal-setting, and implementation.* CMs are not treatment providers but instead focus on the longer term recovery needs of juveniles while assisting in the maintenance of the treatment plan as devised by the treatment service provider(s). CMs follow youth as they move through and at times beyond the treatment continuum, acting as system guides to ensure that youth obtain needed resources and stay motivated to maintain treatment progress.
4. *Linking, monitoring, and advocacy.* CMs can enhance adolescents' commitment to seek needed resources, help implement plans derived from such contacts, troubleshoot obstacles which may prevent client success, and model, rehearse, and summarize the implementation of those plans (Ballew & Mink, 1996). CMs can also help navigate the often confusing social service system and advocate for needed resources where necessary.
5. *Disengagement.* CMs help youth summarize and review progress toward goals, with a focus on treatment gains and planning for youth to continue to access services on their own.

At posttreatment, the CM might help the adolescent reintegrate with his or her family or an out-of-home placement, coordinate care between staff and services at other agencies, and/or help with reintegration into the school system. In addition, CMs may intervene in crisis situations or assist youth in finding work and/or appropriate substance-free friends and leisure activities. Intensive case management services are most critical during the vulnerable 2-month period following discharge from primary treatment with the purpose of providing continuity of care while simultaneously working to move the adolescent toward independence (Spear & Skala, 1995).

While a CM can help a juvenile navigate through an interconnected array of treatment services, it is also clear that such services must occur within the context of the juvenile justice system. System representatives, such as drug courts or probation offices, will maintain primary responsibility for a juvenile's movement through the juvenile justice system via the use of graduated sanctions. The graduated sanctions process allows the judge or probation officer to maintain an appropriate balance between community protection and juvenile rehabilitation (graduated sanctions will be discussed in greater detail below). However, judges generally have neither the time nor training to ensure that juveniles receive a continuum of services. It should be noted that if a community has Intensive Probation Supervision (IPS) services, IPS probation officers are likely able to fulfill the case management role if trained in clinical and evaluation methodology. However, the reality of traditional probation case loads (as well as potential limitations from collective bargaining agreements) may prevent probation officers from serving in case management functions to provide the vital role of linking adolescents to needed and appropriate interconnected community resources including AOD treatment services.

Case management in the criminal justice system requires unique methodologies of service provision. Healey (1999:2) notes that criminal justice case management often involves a conscious blurring of roles between CMs, mental health providers, substance abuse counselors, domestic violence program counselors, and other social service providers. Significant cross-training is often necessary to allow such blurring to take place without confusion of appropriate role responsibility. Therefore, role expectations should be clearly negotiated between service providers before service provision begins. In addition, it is critical that philosophical differences between criminal justice personnel and AOD treatment and mental health service providers be shared and discussed in order to ensure smooth communication and successful treatment for the client (Healey, 1999; McBride & VanderWaal, 1997).

While case management has been used in the delivery of residential (Godley et al., 1994) and inpatient (Siegal et al., 1995) substance abuse treatment services, little is known about its effectiveness in juvenile justice settings. Conceptually, case management could be an important part of the juvenile justice system, providing a coordinated control point for implementing judicial decisions and reporting back to the court. Three promising case management programs designed to assist high-risk, AOD abusing adolescents are described below, as well as one program with potential applicability to juvenile justice settings.

Youth Evaluation Services (YES) (Del Boca et al., 1995). YES is an integrated assessment and case management system. Its primary goal is to coordinate services for youth with substance abuse problems; in addition, the system collects data on treatment utilization, service costs, and outcomes. Adolescents are screened and comprehensively assessed using the AARS (described earlier). This information is supplemented by data gathered from parents, CMs, and schools. YES personnel formulate a treatment plan based on the results of the assessment process utilizing a Treatment Matching Criteria system. Finally, adolescents are referred to various substance abuse treatment services. Following acceptance of the treatment plan by the youth and his or her parents, CMs begin performing a variety of client-specific functions, including monitoring the adolescent's progress, linking him or her to appropriate services, coordinating continuing care services, and advocating for his or her needs. Formal monitoring of treatment and progress toward recovery continues at regular intervals for up to 18 months (treatment outcomes were not available).

The Amity Project (Healey, 1999; Stiles & Mullen, 1993; Adult Probation Department, 1994, 1995). This model was a collaborative effort between Amity, Inc., and the Pima County (Arizona) Department of Probation. Minorities and younger offenders at high risk of probation revocation due to continued substance abuse were served in a day-and-evening program resembling a therapeutic community. A graduated sanctions approach incorporating case management and a variety of other services (including educational/vocational training, health services coordination, and continuing care) was provided at a community-based site. Two years after initiation of the program, reductions in AOD use relapse were observed, as well as increases in employment. Positive urine screens (part of program monitoring) fell by over 50 percent in the first year of program operation. Funding issues caused the closure of this program.

The Iowa Case Management Model (Hall, 1997). This model assists juveniles in maintaining an AOD-free lifestyle following discharge from an inpatient treatment facility. The CM targets both individual and environmental outcomes for change in the youth's social system. The Iowa Case Management philosophy emerges from the principles of strengths- and solution-based therapeutic models. Client-driven goals are described in behavioral terms using solution-oriented language emphasizing the presence of positive behaviors rather than the elimination of negative ones. The program is divided into three primary phases conducted over a 1-year period: active case management with regular CM/adolescent meetings, transitional case management with less frequent meetings, and self-directed case management. Case management functions include:

1. *Assessment and monitoring.* Using assessments to discover the adolescent's strengths, resources, ambitions, goals, and past successes, as opposed to problems and past failures.
2. *Negotiating and contracting.* Together with the youth, jointly developing a solution plan including involvement and responsibilities of each party.
3. *Solution-based problem solving, and planning and referral.* Using an individual solution plan to develop referrals to necessary services.

4. *Evaluation of process and outcomes.* Monitoring and providing feedback on activity or goal achievement.

As of this writing, the Iowa Case Management Model was still undergoing evaluation relative to its effectiveness for juveniles.

The Case Management Enhancements Project (CME) (Siegal et al., 1996). This NIDA demonstration project is designed to examine the impact of community-based aftercare and strengths-based case management on retention and outcomes related to adult AOD treatment. It is described in this report because of the program's strengths-based approach (Rapp, 1997) and its potential applicability to juvenile justice settings. Case management within the CME is designed to supplement an existing medically based, disease concept-oriented treatment program. Clients are first evaluated using a strengths assessment covering nine life domains; within each domain, CMs ask participants to describe specific incidents where they successfully demonstrated skills and abilities. CMs then help participants set their own goals and strategies, including target and review dates. Researchers (Rapp et al., 1998) randomly assigned AOD-using Veterans Hospital participants to a CME experimental case management group (n=313) or a control group (n=319; approximately 75 percent of participants were retained at 6-month follow-up). Multivariate analyses revealed that case-managed clients stayed longer in aftercare programs than noncase-managed participants, leading to improved substance use treatment outcomes. Cluster analysis data suggested that providing strengths-based case management was associated with retention in aftercare treatment for over one-third of the group (Siegal et al., 1997). While researchers caution that case management by itself should not be expected to have a direct impact on substance-using behavior, it may indirectly improve treatment outcomes by retaining clients in treatment.

How case management is organized in the juvenile justice system is an important question. Challenges to offender case management include: how to provide continuous service to juveniles who are returning to the community, how to best apply graduated sanctions in ways that optimize service participation while avoiding unnecessary incarceration, and how to measure program effectiveness (Healey, 1999). Most of the examples given previously are based in a treatment program-centered case management system. That is, the CM is structurally located in a treatment program or some other type of human service agency. In many ways, probation officers have provided case management services within the justice system. They carry out and manage court orders regarding conditions of probation, including ensuring the obtainment of needed mental health and other social services. It has recently been argued (Healey, 1999) that case management can be effectively located and applied within the criminal justice system. The literature suggests that the courts have utilized other administrative structures, such as drug courts, and other programs, such as TASC, to provide case management apart from probation (Inciardi et al., 1996). Healey (1999) has suggested that a criminal justice CM may (at least in some cases) be a part of a team of CMs who coordinate service delivery and achievement of criminal justice goals. The structural location of a CM in a particular community will depend on a variety of local conditions, including available community resources, probation case loads, or

the existence of a successful drug court or a TASC program that would have the expertise and resources to provide case management.

Management information systems and confidentiality issues

Effective use of assessment data within a case management framework requires a complex information system that can ensure the availability of relevant information to those involved in service provision. Many of the current attempts to intervene in the juvenile drug-crime cycle have included a management information system (MIS) as part of the necessary infrastructure to support principles of client confidentiality and juvenile justice system responsibility.

According to the Office of Justice Programs' (OJP) Drug Courts Program Office, MIS development should include the following key characteristics (Mahoney et al., 1998:2): rapid recording and transmittal of a variety of data on individuals involved in court processing; effective integration with all involved service providers and the justice system; ability to provide detailed information on an individual from the point of intake onward; design specifications to provide information aiding decision making at all stages of the justice system process; ability to expand and modify as needed; user-friendliness for a variety of levels of technology sophistication; proficiency in monitoring and evaluation use; and location-specificity regarding cost, size, and scope needs.

Examples of MIS approaches include both adaptations of existing software and development of new programs. For example, drug court MIS programs such as both the Jacksonville Drug Court MIS and Buffalo Drug Court MIS use the Microsoft *Access* software (Mahoney et al., 1998), while the Brooklyn Treatment Court MIS, the Washington, D.C. Pretrial Real-time Information System Manager, and the Washington/Baltimore High Intensity Drug Trafficking Area Treatment Tracking System have all developed specialized systems (Mahoney et al., 1998). Recent efforts by OJP to determine the success of these programs have resulted in the recognition of three required MIS functions (Mahoney et al., 1998:16-17):

1. To facilitate initial decision making, such as program admission, treatment level, and testing (current charge, criminal and AOD abuse history, detoxification needs, insurance eligibility, basic socio-demographic data including employment, housing and family situation, and assessment results).
2. To support ongoing participant supervision (AOD test results, treatment service level, treatment participation and compliance, medical and family issues, major life events, new arrest data, and relapse information).
3. To support provision of treatment services (court-ordered decisions affecting treatment provision).

Target Cities projects have also developed advanced MIS programs, including the Person Tracking System (PTS) within the Philadelphia Target Cities project (System Design Associates, 1996). The PTS involves a central registry (for screening and identification) and the following eight modules: (1) intake (for demographics and other pertinent data), (2) assessment (including the Addiction Severity Index), (3) evaluation (assisting CMs in combining information gained through previous modules for the purpose of determining an appropriate level of client care and other needed services), (4) service plan (facilitating placement of the client by summing available treatment modalities and provider capacities), (5) slot/capacity registry (real-time monitoring of patient care service slots in the collaborative area), (6) service tracking, (7) case management, and (8) discharge (including data on coordination of needed continuing care services). An additional component is also available that includes various justice department data, such as the tracking of court petitions, assignment of parole officers, etc.

Sharing of information and MIS development must precede coordinated planning, budgeting, service delivery, and meaningful program evaluation. Recognizing that information systems are crucial to successful program design, it must also be stated that one of the most difficult barriers to the development and execution of coordinated and intensive services for AOD-involved juveniles is the necessity to comply with the special confidentiality requirements involved in juvenile proceedings. As electronic storage and retrieval of participant information becomes more widespread, threats to confidentiality increase. Confidentiality becomes particularly important when a participant is connected to several systems. For example, it is common for drug court participants to have contact with judges, prosecutors, defense attorneys, probation officers or CMs, child protection workers, and various treatment providers and coordinators. In such circumstances, the juvenile could rightly fear that his or her personal disclosures in, for example, an AOD treatment facility would lead to further sanctions in the criminal justice setting.

Confidentiality laws relating to AOD treatment were originally created to encourage substance abusers to obtain help with their AOD problems. The most significant Federal confidentiality law is Section 290dd-2 of Title 42 of the United States Code. Under this law, covered information acquired by affected programs is kept confidential subject to exceptions described in the statute and accompanying regulations.⁶ Lawmakers reasoned that such laws would make it more likely that substance abusers would enter treatment if they were assured that information about their AOD use would not readily be available to the public, including employers and the media. Assurances of confidentiality also make it more likely that the substance abuser will communicate freely in a therapeutic setting.

Consent by participants who are under 18 years of age raises a special concern. Some States require the consent of a parent or guardian for a minor to enter a treatment facility. However, even in those States, Federal confidentiality laws protect minors who have sought treatment. Under this provision, treatment or drug court practitioners may not approach a child's parents or guardians to ask them to approve a child's request for admission unless the child authorizes disclosure of that request or lacks the ability to make the choice. Once a parent/guardian has

agreed to treatment and the child has been admitted, further disclosures again require the consent of both the child and the parent/guardian (National Drug Court Institute, or NDCI, 1999b).

Because information sharing is necessary to facilitate multiple system involvement, it is important that the participant give his or her consent to communications between systems. Improper disclosures of information covered by confidentiality laws can result in criminal prosecutions and civil lawsuits. The simplest way to ensure that such communications do not violate Federal and State confidentiality laws is to obtain valid consent from the participant (examples of consent forms can be found in NDCI, 1999b). Information sharing between various systems can best be facilitated using a memorandum of understanding (MOU). MOUs serve to facilitate trust and communication between systems by ensuring that all parties are aware of how other organizations will access, share, and use participant information. MOUs can also be used to explain to participants how information will be distributed between systems. MOUs should specify the following:

- Discussions in team meetings are confidential.
- All parties are bound by redisclosure provisions, meaning that any information an agency receives from another agency remains confidential and cannot be passed on to other entities without participant consent.
- The prosecutor's office will not use the information to prosecute a participant (with exceptions made for child abuse or neglect and crimes committed at the treatment center or against treatment personnel).
- Parameters are described for sharing and refusing to share information.
- Rules are set governing storage of and access to written and automated records.

In addition to the use of MOUs, some States are revising their juvenile justice reform provisions to address confidentiality issues. Effective January 1, 2000, lawmakers in Illinois have moved to clearly limit the disclosure of juvenile case and clinical records to judges, parties involved and their attorneys, probation officers and court-appointed special advocates, custodial bodies, placement providers, law enforcement officers and prosecutors, prisoner review boards, authorized military personnel, and members of the Illinois General Assembly (Devine, 1998).⁷ These revisions were made to replace previous legislation allowing broader disclosure at the discretion of the Department of Children and Family Services Director.

Record storage is a particularly important issue in this era of computerized records. Federal laws require that written records be stored in a secure room or locked container. However, these laws do not address computerized records. The NDCI (1999b) recommends that all computerized records covered by Section 290dd-2 be password-protected, with the password guarded in the same manner as a key to a file cabinet. Computers which are networked to one another in the

same system or between two or more systems should be protected by both passwords and encryption systems. Fears of data tampering within a system or between systems can be addressed in greater detail by utilizing a computer consultant with knowledge of security systems (Gelman et al., 1999).

One of the most important uses of an effective MIS is the coordination of services among the different agencies or community groups that are used to meet the assessed service needs of juveniles. If services are to be effectively integrated, it is crucial that intake, assessment, and progress information be shared and not be needlessly duplicated. Such information can play a major role in increased service delivery efficiency and outcome. A recent article by Taxman (1998) provides an excellent illustration of how an MIS can be use for seamless case management in the justice system.

Collaborative structures and strategies

A restorative justice model, as advocated in a BARJ approach, calls for a community response to the juvenile drug-crime cycle. However, as long ago as the early 1960s, service providers were frustrated by a lack of coordinated response to multiple-needs clients, such as substance-abusing juvenile delinquents (Agranoff, 1991). The lack of communication was (and still is) complicated by the lack of an effective MIS as well as by increasingly fragmented services, high numbers of multiple-needs families, poor cross-systems communication, increased specialization, and inadequate funding. Such factors have forced human services professionals at all levels to rethink and reform service delivery structures and systems. Interest in systems collaboration has been further strengthened by the devolution and decentralization of resource control at Federal, State, and local levels. In addition, managed care models have emerged at both State and county levels, forcing service providers to compete, subcontract, and collaborate with other agencies in efforts to cut costs, avoid duplication of services, and survive in the competitive environment.

In 1994, CSAT called for solutions to such coordination problems to be built on a systems perspective, stating that “The problem of AOD abuse absolutely defies a solution by an individual agency or program” (Crowe & Reeves, 1994:153). As a result of widespread recognition of such conditions, communities are increasingly forming interorganizational collaboratives (also known as multipurpose collaboration, comprehensive service provision, or systems integration). Collaborative partners share expertise, resources, and responsibility while working together to meet identified needs. Dembo (1996:87) has specifically addressed the importance of systems integration with juveniles, calling for “...linkages and coordination among various community agencies dealing with ‘high-risk’ youth—including law enforcement, the courts, schools, human service agencies, and treatment programs. Such an effort would reduce duplication of services and barriers to treatment, and respond to youth in a comprehensive manner.”

Community-based collaborative efforts will ensure that services are accessible to the target population, be relevant to the community’s unique needs and structures, build on community-

specific strengths, and increase ownership and accountability with all parties (North Central Regional Educational Laboratory, 1996). In addition, collaboratives can impact public policy through a larger and stronger advocacy base, increase funding options by accessing funds that require collaborative partnerships, and reduce wasteful duplication of services (Bailey & Koney, 1996).

Many of the successful interventions designed to address substance use within the juvenile justice system are built on a foundation of collaborative structures, including juvenile drug courts, Target Cities projects, and TASC programs. A key concept of drug courts (including juvenile drug courts) is that “forging partnerships among Drug Courts, public agencies, and community-based organizations generates local support and enhances Drug Court effectiveness” (Tauber & Huddleston, 1999:6). Target Cities provide an example of collaboration in provision of AOD treatment systems, calling for “model infrastructures to coordinate and enhance local treatment networks” (DHHS, 1995:1). Target Cities projects typically involve collaborative efforts with AOD abuse, health, mental health, education, law enforcement, judicial, correctional and human services agencies (Scott et al., forthcoming). Observed success of Target Cities collaborative efforts may be due, in part, to the pressure from outside funding sources to both develop and formalize interagency agreements (Kraft & Dickinson, 1997). TASC programs emphasize the need to develop an integrated care system for juveniles. Such a system requires successful collaboration, including identification of expectations, realities of service provision limitations and resources, utilization of established community collaboration methods, and a dedication to making sure all stakeholders are involved in collaborative plan development (Mull, 1998).

When developing a collaborative specifically for the purpose of linking treatment and juvenile justice systems, CSAT (McPhail & Wiest, 1995:27-29) has focused on five major issues that need to be successfully addressed by collaborative members: community decisions; juvenile justice decisions; AOD abuse treatment decisions; physical, mental health, and social services decisions; and management system decisions. Specific issues included in each type of decision are summarized below:

1. *Community decisions.* These include identifying stakeholders to be involved in the process, agreeing on community accountability, anticipating locational differences, defining family roles and expectations, and planning for community diversity.
2. *Juvenile justice decisions.* Included here are developing and implementing education and training programs for court personnel regarding treatment resources and effectiveness, helping other collaborative members understand the flow of the justice system, establishing AOD abuse treatment responses for the judiciary, defining the juvenile justice system target population, defining treatment noncompliance and completion, identifying outcomes measures for decision making, and developing supervision ability for the treatment process.

3. *AOD abuse treatment decisions.* These decisions involve defining and identifying the needed services continuum, treatment modalities, treatment expectations, and supervision roles of providers. Also needed are decisions to define and locate services, establish eligibility and acceptance criteria, develop the assessment process to be used, and specify procedures for dealing appropriately with culture, gender, and ethnicity.
4. *Physical, mental health, and social services decisions.* These include defining physical, mental health, and social services needed for youth and their families, and deciding on linkages between these systems and the AOD treatment system as it is integrated with the juvenile justice system.
5. *Management decisions.* Two types of decisions are included in this group: ethical and legal decisions as well as management decisions. Ethical and legal decisions include deciding what information is appropriate to exchange, agencies/individuals appropriate to receive such information, MIS and between-agency confidentiality issues, and compliance procedures for local, State, and Federal reporting requirements. Other management decisions relate to funding and cost considerations, communication assistance between collaborative members, assurance of program management capabilities, cooperation and collaboration, preparation of training and public education, system oversight and evaluation, feedback analysis and outcomes reporting, and definition of ongoing data requirements (including demographics).

Before beginning a discussion of the various components that have been identified as important considerations within collaborative development, it is important to clearly state that all successful community collaborative efforts will have one thing in common: they will be specific to the communities they are in. The literature on collaborative development repeatedly maintains that no single system can function effectively for all locations (OJJDP, 1998; Join Together, 1999) and that collaborative guides should not be used as blueprints for organizing new groups (Mull, 1998). With this in mind, the following components are presented as a springboard from which collaborative organizers can move toward formalizing an approach best suited for their own distinct communities and issues.

Collaborative elements. In developing and/or seeking out collaboratives, local juvenile justice systems should be aware of interrelated elements that guide and affect interorganizational collaboratives. Each element is equally important and should be considered in collaboration development (Bailey & Koney, 1996; Gutierrez et al., 1996; Chrislip, 1995; Rosenblum et al., 1995; Weinstock, 1995; Markze & Both, 1994).

1. *Ownership.* Leadership within a collaborative body is a delicate issue. By definition, a collaborative group should be made up of members who are equally able to participate in discussion and dialogue. However, the current discussion of treatment reform within the juvenile justice system calls for recognition of (1) the primary role the justice system will play in monitoring adolescents along the graduated sanctions continuum and (2) the

primary role substance abuse treatment services will play in providing appropriate and effective treatment services. Ownership of successful collaborative efforts to provide AOD treatment services with the juvenile justice setting will vary by community depending on available community resources and programs.

In point of fact, ownership of the program will likely emerge as a result of the level of involvement in program development. While all key stakeholders will share in the ownership of the collaborative, there will likely be a lead agency that provides the majority of the energy and drive to form the group. TASC and Target Cities programs maintain that optimum organization would place a neutral group (i.e., one that is not involved in direct service provision) in the position of managing partner in order to ensure unbiased service organization referrals, case management, and collaborative organization. For example, TASC fills this role, while a single State agency, or SSA, is advocated in Target Cities programs. Program ownership success in individual communities will be affected by the managing partner's level of community trust and respect, past patterns of community authority, experience, expertise, and understanding of funding opportunities.

A policy committee should be established at each collaborative site, chaired by a representative from the managing partner (such as the SSA) and made up of a member of the funding agency in addition to juvenile justice and treatment provider staff. The presence of the funding agency is critical to the agency's understanding of program needs and effectiveness. Such a model has proven successful in both Target Cities and TASC programs (DHHS, 1995; Rivers, 1997; Mull, 1999) and would be adaptable to the formation of community collaboratives focusing on service provision within both the juvenile justice and substance abuse treatment systems. Within drug court collaboratives, political leadership of community collaboratives follows various formats. Some jurisdictions utilize a cochair (from both the court and treatment provider services), while others prefer a rotating chair (where the private sector holds the position for one year and the public sector the next). Regardless of the entity that acts as the managing partner, it is crucial that this lead agency actively include all stakeholders from the beginning of design and implementation of the proposed program.

2. *Funding.* External funding for program development requiring collaborative applications may provide valuable incentives for the development of successful juvenile justice collaboratives (evaluations of the Target Cities programs indicate that external funding requirements helped hold the collaborative together during initial formation struggles) (Kraft & Dickinson, 1997). Such funding has been sought in the form of block grants for drug court programs (such as the Juvenile Accountability Incentive State Block Grant funded through OJJDP), primary and relapse prevention funding through Title V Incentive Grants for Local Delinquency Prevention Programs (or the Community Prevention Grants Program, also funded through OJJDP), as well as private foundations such as The Annie E. Casey Foundation. Federal demonstration grants are also available

(such grants supported the development of TASC and Target Cities programs). Some communities have developed pooled funds from various sources such as child welfare, juvenile justice funds budgeted for residential treatment, Medicaid capitation, and mental health funds (Milwaukee County Mental Health Division Child and Adolescent Services Branch, 1998). Depending on the nature and structure of the collaborative, application for funds can be made through the managing entity (TASC, the SSA, or the collaborative as a whole) but only after all key stakeholders within the collaborative have been involved with proposal development. Such funds are necessary for program start-up, but collaboratives should seek to utilize evaluation data and networking efforts to attain legislative budget line-item support to continue programs with demonstrated success.

The following is a brief overview of general funding options as summarized by Crowe and Reeves (1994:159-160; see also Romig & Rasmussen, 1991):

Federal funding. Grants (such as the State block grants noted above), entitlement programs (Medicaid, Medicare, supplemental security income, Social Security disability insurance), and other programs (including the Drug Free Schools and Communities Program).

State and local funding. State general fund revenues, State Medicaid funds for substance abuse services, substance taxes, seized assets from AOD crimes, property tax revenues, sales taxes, and court fines/assessments imposed on intoxicated drivers.

Private sector funding. Insurance coverage, client fees, private foundations, donations, and United Way fund appropriations.

3. *Membership formation.* Collaborative formation should include partners who contribute resources, perspectives, expertise, and diversity to the overall effort. Membership should represent as complete and as wide a spectrum as possible of knowledge and experience relative to the community's needs and systems (Mull, 1998). In addition, membership should strive to include two types of individuals: "1) those who understand and have an interest in the broad and specific problems of community welfare, juvenile justice, AOD abuse, and health and social services and 2) community leaders who can ensure that productive change occurs" (McPhail & Wiest, 1995:28). Such membership might include judges, probation and social services representatives, the State/district attorney as well as private attorneys, the public defender, and representatives of the following systems: law enforcement, child welfare, State and local corrections, child advocates, families and family advocates, managed behavioral healthcare, community treatment, the health department, State/local managed care initiatives, and the welfare agency (Mull, 1998:7). Additional members to consider are public and private sector employers, consumers, elected officials, religious and other community leaders, nonprofit organizations, administrators, and adolescents. Efforts should be made to involve all key stakeholders in the planning and implementation of collaborative agendas. Individual members must

have some level of authority and credibility within their own agencies as well as within the collaborative. They must also acknowledge and be committed to the interdependence of collaborative partnerships and develop effective conflict negotiation skills.

4. *Visioning based on issue identification.* Collaborative visioning should include identifying needs, developing a joint vision and goals to meet such needs, and creating or strengthening strategies that bring together resources to address identified needs.
5. *Role clarifications, cross-training, and communication.* For membership within collaborative structures to be productive, it is essential that all parties clearly understand the roles each play within the group, as well as the basic processes involved in each role. Mull (1998) suggests that during the collaboration establishment process, each party should inform all other parties of the flow of their system, including usual service gateways, admission criteria, service levels (with accompanying time and outcomes expectations), and system goals. Points at which services from other collaborative partners might be warranted would also be discussed. It is important that collaborative members remain open to being educated by other groups. For example, those in the treatment community need to educate judges on the nature of addictions, the approach of seeing a legal infraction as part of a larger behavioral problem, and the perception of a defendant as a client with his or her own strengths and resources. Judges have the need to educate the treatment community on the legitimacy of community safety. Such communication efforts that familiarize collaborative partners with each other's systems and theoretical foundations help the various groups to anticipate the effects of their actions on other members and can improve overall collaborative efforts (Crowe & Reeves, 1994). The NDCI has recognized this cross-training need and has established a training series to educate the various members of drug court teams, including judges, prosecutors, drug court coordinators, treatment providers, and defenders. For example, juvenile drug court judges receive training in substance abuse issues, AOD testing, sanctions, incentives, community resources, ethics and confidentiality, the drug court environment, MIS development and use, adolescent development, eligibility and screening, sanctions, and incentives (NDCI, 1999a).

It is worth noting that collaborative efforts will likely require significant changes in service provider roles. The traditional adversarial court environment will not support the collaborative and therapeutic team nature of successful partnerships (Hora et al., 1999). For example, judges in drug courts “must assume, according to [Judge] Tauber, ‘the role of confessor, task master, cheerleader, and mentor’” (Setterberg, 1994), as well as of team leader as opposed to the traditional position of referee (Drug Strategies, 1999). Prosecutors will need to act as change agents, ascertaining if a juvenile is appropriate for the program (as opposed to sole focus on the likelihood of winning a case), while the defense attorney will need to place energy into keeping a client in treatment versus attempting to minimize the legal ramifications on the juvenile (Hora et al., 1999; Drug

Strategies, 1999). Judge, prosecution, and defense must work together as part of the treatment team.

6. *Decision-making processes.* Effective collaboration is best achieved through consensus building. In recommending methods for combining treatment and diversion programming within the juvenile justice system, CSAT encourages consensus-building decision making. This flows from the approach's emphasis on dialogue that brings the various collaborative members together to reach common ground: "Consensus builds ownership and does not require absolute agreement on every point" (McPhail & Wiest, 1995:27).
7. *Structures and strategies.* Agreed-upon structural connections, including those with the greater community and society, allow goal setting, strategy development, and desired outcome achievement. These linkages provide two-way streams of information, funds, and services without which the collaborative cannot be effective. The goals of strategy development are to share work and experience among partners to improve or increase the impact of services and programs. Regular assessment of intervention effectiveness should occur that considers how various interventions fit into the collaborative's larger vision.
8. *Ongoing support for collaborative efforts.* Management and administrative support within the various partner agencies must be obtained. Examples of such support include pledging existing funds or working together to obtain funds to provide ongoing training to keep staff engaged in the collaborative process and aware of resources outside of their own agencies or organizations.
9. *Resource development.* Collaboratives must effectively utilize existing resources and outline strategies to replenish them as needed. By having a managing partner as the representative of the original funding application, sustainability will be enhanced as this body will then be able to take a lead role in seeking project continuation after the initial funding period is completed. Such activity might include the assessment of, application for, and establishment of interagency funding pools, Federal grants or matching funds, Federal or State demonstration funds, block-grant applications, private foundation funding, and local contributions as well as efforts to establish legislative line-item support.

Optimum collaboration structure. A variety of approaches exist for the start-up of collaborative groups. However, a recent survey of coalitions formed to prevent substance abuse and gun violence points to the possibility that coalitions demonstrating success in fighting substance abuse in their communities share some similar characteristics. Among those coalitions reporting that the substance use problems in their communities were improving, the following community resources were reported: a responsive local government, community institution involvement, and improved treatment service access (Join Together, 1999:20). Further, successful collaboratives reported the following characteristics specifically related to coalition formation/structure: the existence of a strategic plan (including specific coalition goals, an outline of programs related to

achieving those goals, evaluation methods, regular public progress updates, and a description of goal and program review and change); growth in membership; a large number of volunteers; increases in the range of and intensity of effort given to problems; and current or former Center for Substance Abuse Prevention funding (Join Together, 1999:4,22). In addition, it may be helpful for communities considering collaborative development to refer to documents that outline broad goals and tasks to accomplish in the process, such as *Developing a Managed Care Response for Juvenile Justice: A Guide* (Mull, 1998), and *Development and Implementation of Drug Court Systems* (Tauber & Huddleston, 1999). Once collaborative system connections are in place, adolescents require assistance to help them access services throughout those systems. CMs can effectively serve this function.

Collaboration and the juvenile justice system. The juvenile justice system can integrate with a collaborative model in a variety of ways, including diversion, adjudication, or a juvenile probation program. As will be noted in the following sections on supervision and treatment programs, mandated treatment appears to be related to treatment retention and positive outcome. The leadership and monitoring of the juvenile justice system could play a crucial role in the successful functioning of a collaborative model by helping to ensure that assessment recommendations are carried out and that the juvenile actually receives the recommended and/or mandated services. It is important that in its leadership/monitoring role, the juvenile justice system recommend and utilize the professional services available through community collaborative agencies. Such agencies are integral partners in providing collaborative resources and expertise to the system.

Dismissal and/or diversion programs

At the conclusion of intake and assessment, intake officers and/or CMs generally have the option of dismissal of the case with no further action, utilization of diversion programs, or referral to further juvenile justice system processing. Diversion programs include sending juveniles home in parental custody, placing them on informal probation, or diverting them to another facility or community program. Although judges and police officers often utilize diversion programs, the most common utilization of such programs is through intake officers after completion of assessment.

Diversion programs generally fall under the category of early intervention in that a juvenile's behavior is not yet serious enough to merit formal entry into the juvenile justice system. This period offers a crucial time in which to provide interventions with the potential to successfully move high-risk adolescents away from more serious substance-abusing or delinquency behaviors. Dembo et al. (1993) argue that resources are best placed in assessing and providing needed services to adolescents and their families at the earliest, and preferably the first, point of contact with the juvenile justice system. These services are more likely to be cost-efficient and effective than those targeted toward juveniles who have already had repeated exposure to the juvenile court system. Several reviewers (Hawkins et al., 1992; Kumpfer, 1989; Henggeler, 1997a) have gone further to maintain that prevention and early intervention services should be

specifically targeted toward high-risk youth. This makes good social and economic sense since “the determinants of drug abuse are generally the same as the determinants of delinquency, school dropout, and unprotected sexual activity” (Henggeler, 1997a:261).

In a major review of early intervention literature, Klitzner and his colleagues (1991; see also Dembo et al., 1993) found a lack of consensus in defining what constitutes early intervention and determining how it differs from prevention or treatment. Those concerns aside, Klitzner and his colleagues concluded that early intervention programs are ideally targeted toward individuals or groups whose AOD use puts them at high risk for problem behaviors and related consequences, whose AOD use has created clinically significant dysfunction or outcomes, and who demonstrate certain problem behaviors that lead to AOD use (e.g., spending time with AOD-using peers) (see also Brewer et al., 1995, for a comprehensive review of early intervention programs). Klitzner and his colleagues found relatively few preadjudication or postadjudication early intervention programs in the juvenile justice system, perhaps because the system does not become concerned over the behavior of adolescents until they have appeared in court several times (Dembo, 1997). The majority of the programs which did exist at the time of the review had not been formally evaluated.⁸

Fact-finding hearings and adjudication: judicial processing

One of the possible outcomes of the petition (charge) made against the juvenile is formal referral to the juvenile court and formal adjudication. A decision to refer a juvenile for formal hearings is usually based on a combination of the seriousness of the charge, previous offenses, social investigation results, and some type of assessment. Judges will generally use the assessment and arrest report as well as other facts to determine disposition and, if necessary, sentencing. In most jurisdictions, fact-finding and adjudication take place in a conventional juvenile court system. However, in recent years, a specialized court called the juvenile drug court has evolved. While juvenile drug courts utilize the general juvenile justice processes described elsewhere in this report (including the possible use of case management, systems collaboration, and graduated sanctions), it is important to briefly examine the unique aspects of this new and developing trend in juvenile justice.

In an attempt to play a more active role in breaking the linkage between substance use and crime, the judicial system developed the drug court. Drug courts allow judges to take a more active role than that provided by previous options, such as mandated lengthy sentences.⁹ Judges draw on a variety of professionals in assessing needs and recommending services and are then actively involved in the decision-making process of what services are to be received, monitoring compliance, and applying sanctions when a lack of compliance is evident.¹⁰ Thirty-eight states currently operate some type of juvenile drug court (including the District of Columbia and Guam) for a total of 69 programs under way and an additional 48 in the planning stages as of June 1999 (American University, 1999a). A recent American University report indicates that 20 percent of drug courts in the United States serve juveniles either as a separate program or as part of an overall community drug court program (1999b).

The general philosophy of drug courts—including an emphasis on an active judicial role in service decisions and management—was developed within an adult framework. However, this philosophy is consistent with the traditional role and function of juvenile courts and juvenile court judges. As noted previously, juvenile courts have traditionally focused on service interventions designed to change problem behavior rather than on punishing criminal behavior. Given this role, a recent publication of the OJJDP (Roberts et al., 1997) indicated that six approaches appeared to be more common to juvenile drug courts than regular juvenile court procedures:

1. Much earlier and more comprehensive intake assessment procedures. Procedures usually involve initial screening and later comprehensive assessment designed to identify a wide variety of environmental, family and psychosocial functioning problems. Typically, screening and assessment provide the basis for referral and service decisions.
2. Greater focus on juvenile and family functioning throughout the juvenile court process. There is a recognition that the emergence of juvenile delinquency and AOD use usually occurs within the context of significant family functioning problems.
3. Closer integration of information obtained during the assessment process as it relates to the juvenile and the family. This includes collecting information on individual characteristics and well as on family behavior, interaction, and functioning. Assessment is designed to result in the integration of individual and family intervention services.
4. Greater coordination between the court, treatment community, school system, and other community agencies in responding to the needs of the juvenile and the court. This strongly implies recognition of the need for active case management to try to ensure barrier-free integration and coordination of needed services.
5. More active and continuous judicial supervision of the juvenile's case and treatment process. To a significant degree, this results in the judge playing the role of CM in assessing service needs, making referral decisions, and monitoring progress.
6. Increased use of immediate sanctions for noncompliance and of progress incentives for both the juvenile and family. From the judicial perspective, these options provide the rationale for the effectiveness of judicial involvement. Judges often argue that it is within their power to provide immediate sanctions to help ensure compliance with required services. Such power significantly increases the probability of improved service effectiveness through increased retention of participants in programs.

Overall evaluations of juvenile drug courts have not occurred, perhaps due to their relatively short history. The research that does exist has tended to focus primarily on formative and process evaluation rather than impact evaluation. However, a recent report on the last decade of drug courts notes a high level of program retention (over 70 percent) and participant satisfaction with

the drug court experience (American University, 1998; see also Turner et al., 1999). There are also very positive reports about lower rates of AOD use and criminal justice recidivism.

A number of presentations made at the 1999 National Association of Drug Court Professionals Annual Training Conference suggested that drug courts meet the needs of key system participants, including giving judges a strong sense of active involvement in addressing a very complex problem. For district attorneys, drug courts may provide an effective means of addressing the underlying causes of criminal behavior while at the same time providing for community safety. Public defenders and defense attorneys appear to support drug courts because the approach keeps their clients out of jail/detention and, if they are successful in the program, generally they do not have a felony conviction or were not adjudicated delinquent. Treatment program providers often see the drug court *carrot* (no criminal/delinquent record) and *stick* (incarceration/adjudication on the original criminal charge) approach as an important part of ensuring client participation in treatment.

While drug court personnel are often very enthusiastic about the program, researchers and the Government Accounting Office (GAO) have been critical of some aspects of drug court evaluation research methodology, leading to significant questions regarding drug court effectiveness conclusions. Inciardi and his colleagues (1996), as well as the GAO (1997), expressed considerable concern regarding a lack of appropriate comparison groups in drug court evaluation research, the widely varying populations involved in drug courts, and lack of consistent standards for assessment and referral. The GAO concluded that the 20 evaluation studies reviewed "...did not permit the GAO to reach definitive conclusions concerning the overall impact of drug courts..." (13).

Despite these concerns, positive initial perceptions of drug court effectiveness have strongly encouraged their application to the juvenile justice system as evidenced by the recent increases in juvenile drug courts noted earlier. While it is likely too early to adequately evaluate effectiveness, a literature is emerging suggesting that like adult drug courts, juvenile drug courts are being successfully implemented, are receiving positive responses from all system and client participants, and seem to result in lower rates of AOD use and recidivism (Shaw & Robinson, 1999). It is expected that over the next few years, there will be further increases in the number of juvenile drug courts and hopefully prospective scientific evaluations measuring the behavioral change impact of juvenile drug courts.

Disposition

Both the conventional juvenile justice system and the juvenile drug court system utilize the adjudication process to determine case disposition and, if necessary, sentencing. Case disposition generally takes place within the framework of a graduated sanctions continuum.

The graduated sanctions continuum

The material presented in this report focuses primarily on the need for comprehensive assessment, appropriate referral, effective interventions, and effective services along a continuum of care within a case management framework in a community with systems collaboration. Within this therapeutic framework and consistent with the BARJ philosophy, there exists a responsibility to hold juveniles accountable for their actions and to protect the community. Even with the very best assessment, services, interventions, and case management, there will be youth who do not respond to therapeutic interventions and who continue to engage in substance use and delinquent behavior. Within the concept and application of graduated sanctions, accountability and community protection needs are integrated with assessment, referral, service provision, and case management. Assessment techniques are used to incorporate offense history and other behaviors to determine community risk from the juvenile and probability of recidivism. This information then informs final judicial decisions on the types of services to be received and the delivery location (State training school, a detention center, or in the community).

Within the framework of case management, the graduated sanctions continuum is used as part of a *carrot-and-stick* approach to treatment progress. The concept of graduated sanctions applies to (1) the initial type of treatment intervention (outpatient, residential, or types of collaborative services), (2) the sentencing context of service delivery (from community diversion to incarceration in a State training school), (3) overall intervention/treatment program outcome goals, and (4) progress within the program.

The lowest levels of juvenile justice sanctions and therapeutic/service interventions generally occur for first-time offenders with minimal AOD use from two-parent families. Higher initial sanction levels and increasingly intensive therapeutic/service interventions are likely to be applied to repeat offenders with extensive AOD use histories involving cocaine and/or opiates. If a participant successfully completes a mandated treatment program (recognizing the need for continuing care), his or her charge may not be filed in the juvenile court or, if adjudicated, the charge may be dismissed (forming the *carrot* part of sanctions). If the participant fails in treatment and/or is referred again to the juvenile court for a new charge, the *stick* aspect of sanctions may result in formal processing of the original referral/charge and the carrying out of the previously imposed sentence.

Based on an individual's progress, sanctions and therapeutic/service interventions can become more or less intense.¹¹ If AOD use and/or delinquency recidivism occur at any particular point in the treatment process, the application of graduated sanctions generally involves placing the individual in a higher security, more intensive therapeutic environment. Avoiding the application of graduated negative sanctions (and thus decreased freedoms) is seen as an incentive for treatment progress. If the program participant is making good progress in treatment, the application of positive graduated sanctions generally means increased freedom or other rewards designed to provide personal and public recognition of a juvenile's achievements. This may involve more freedom of movement, fewer treatment or supervision contacts, rewards within a

token economy, or public recognition, such as applause in open court. It is important to recognize that all entry points into the justice and treatment intervention systems should be integrated into a comprehensive sanctions program.

Many AOD treatment providers are suspicious of treatment coerced by the justice system. Conventional wisdom in the treatment community has generally maintained that providing treatment services to participants against their wishes will generate resistance from the participant and ultimately lead to treatment failure. However, many researchers have determined that court-ordered treatment is as effective as or more effective than voluntary treatment (Anglin & Hser, 1990; Hubbard et al., 1989; Collins & Allison, 1983). Compared to individuals in voluntary treatment, individuals legally mandated for treatment have been found to stay in treatment longer and are more successful in posttreatment measures (Allison & Hubbard, 1985; De Leon, 1985; Siddall & Conway, 1988).

Few specific evaluations of the effectiveness of graduated sanctions as a separate and distinct program have been conducted. One of the few exceptions is a basic study comparing an adult program using graduated sanctions to a regular court process in a pretrial intervention program (Harrell, 1998). The graduated sanctions program involved substance use testing and, based on urinalysis results, could result in a range of graduated sanctions from additional program activities to time in jail. The regular court process also included substance use testing but used the results only for sentencing without a graduated sanctions framework. The study reported that those in the graduated sanctions program had a lower rearrest rate for both short- and long-term (1 year) follow-up.

In addition, Lipsey and Wilson (1998) recently performed a meta-analysis on the effectiveness of juvenile intervention programs. Overall, they concluded that the most successful intervention programs incorporated graduated sanctions as part of a comprehensive intervention strategy. Such inclusion was associated with both lower AOD use and delinquency recidivism rates. Generally, Lipsey and Wilson found these programs reported recidivism rates between 30 and 50 percent lower than those of comparison groups. However, Lipsey and Wilson (1998), as well as Krisberg and Howell (1997), noted some qualifications to such findings. Youth who experienced significant damage to their self-concept through incarceration did not appear to reduce recidivism. Thus, less severe sanctions may reduce recidivism more than incarceration. It may be that when the level of sanctions stipulating incarceration is applied, problem behavior patterns are strongly established; sufficiently intensive therapeutic/service intervention strategies have perhaps not yet been developed. All of these researchers further argue that well-structured community programs may be able to offer sufficient community security without the apparently negative consequences of incarceration.

Results of research on the comparative cost benefits of comprehensive graduated sanctions programs have been positive. Greenwood and Turner (1993) imply that such programs are as effective at serious crime reduction as California's three-strikes law at only 20 percent of the cost. Analysis by Rivers and Trotti (1995) found that in South Carolina, reducing the movement

from probation to incarceration by just 5 percentage points could save the State \$37 million per year.

In an era of increasing demands for juveniles to be tried as adults and imprisoned if convicted, the above findings on the effectiveness of graduated sanctions, particularly in a community setting, provide an important counterbalance to the current emphasis on incarceration. According to some research, a comprehensive program including graduated sanctions could be more effective than incarceration and much less costly. Since many researchers argue for an intervention program that incorporates graduated sanctions, it is important to briefly review the range of sentencing options that are used as part of a comprehensive graduated sanctions program or as stand-alone interventions. Specifically, brief examinations of both supervision and treatment options will be provided.

Sentencing options

The graduated sanctions continuum utilizes two broad intervention tracks operating simultaneously to affect juvenile offenders: supervision options and treatment options. While supervision and treatment will be discussed separately in this report, both operate concurrently along their own continua and should be viewed as complementary and essential aspects of any judicial processing and sentencing methodology. All supervision and treatment programs take place within the framework of graduated sanctions and thus should be considered as part of the whole as well as programs in and of themselves.

Supervision options range from light to intensive and include monitoring through various means. This review will follow a light-to-intensive continuum including juvenile TASCs, intensive probation, boot camps, and State training schools.

1. *Juvenile TASCs.* TASC programs seek to provide a linkage between the justice system and the treatment system. TASC attempts to provide screening, assessment, referral, case monitoring, and reporting to the justice system. A number of juvenile TASC sites exist in the United States, and a recent TASC evaluation by Anglin and his colleagues (1996) included a juvenile site in Orlando, Florida. This quasi-experimental evaluation focused on changes in AOD use, crime, and HIV risk behaviors. The study compared a TASC group with a comparison group in which participants were placed on probation and received services associated with that status.

The analysis found that juvenile TASC participants were significantly more likely to obtain needed services than those in the comparison group. In addition, TASC participants were found to have significantly reduced their sexual risk behaviors in comparison to the control group. The reduced sexual risks included increased use of condoms and a significant reduction in sex while high on various substances. However, the analysis did not find significant differences in AOD use change measures. In addition, no differences were found for any type of criminal behavior recidivism.

The evaluation by Anglin and his colleagues concluded that TASC, including juvenile TASC, has an overall positive benefit. However, they note that problems with comprehensive case management, community intervention resources, and the lack of a coordinated continuum of care likely result in limited impact. It was further suggested that community TASC programs be integrated with local drug courts. It is important to note that very few TASC programs were evaluated in this study and only one juvenile program was assessed. In addition, that assessment did not involve a tightly controlled experimental design.

2. *Intensive probation supervision.* Probation is the most widely used form of case disposition in the juvenile court. Nonintensive probation involves a set of conditions the juvenile must adhere to, often including behavioral and association requirements as well as receiving needed services. Assuring compliance with these conditions is the task of a probation officer. Historical concerns regarding probation supervision include overburdened probation officers with exceedingly large case loads, high rates of recidivism, lack of appropriate assessment, lack of available needed services, overcrowding of services, and limited resources to pay for services. Indeed, data do not suggest that regular juvenile probation services are effective at preventing recidivism or addressing the underlying causes or correlates of delinquent behavior (Armstrong, 1991; Palmer, 1991).

Both adult and juvenile probation programs are now trying to combat high recidivism by utilizing intensive social control approaches and close monitoring. Monitoring techniques may include electronic monitoring, urine monitoring, and monitoring through personal visits and telephone calls. Commentators have often noted that the mere fact of being watched so closely will likely result in increased detection of minor or technical violations. Such increases should be considered when evaluating heightened monitoring programs.

Juvenile probation has made some important additions to the probation system focusing on assessment, use of community agencies, and use of volunteers. In addition to intensive monitoring, assessment is recommended to determine the therapeutic and human service needs of the juvenile and to find available community services. The process may involve coordinating and utilizing a wide variety of professional services available in the community including citizen groups and volunteers. Within this framework, juvenile community probation/corrections operates not just as a monitoring office protecting the public and ensuring compliance, but also as comprehensive assessor, resource broker, and advocate to and for existing services.

Such operations require comprehensive plans that allow juvenile community correction officers to have the skills and resources necessary to conduct assessments; to undertake a resource inventory of the community, including its mental health and substance treatment resources; and to match the juvenile to needed services. Meeting identified needs must

include addressing the causes of the drug-crime cycle (for example, see Catalano et al., 1990/91), and requires officers to be able to link the existing justice system to other agencies and systems in the community. Throughout this process, juvenile community correction officers must continue to use monitoring and possible sanctions to increase retention and, thereby, treatment effect.¹²

An example of this type of program was reported in the literature by Pennell and Curtis (1990). Near the end of 1982, the San Diego County Probation Department and the county district attorney's office initiated an interagency program to serve less serious first-time offenders. The probation department entered into formal agreement with a variety of community agencies including substance abuse treatment programs. The program consisted of a diversion contract requiring specific behaviors and participation in needed services. Monitoring included frequent reports from the agencies and the use of graduated sanctions in response to program violations.

Pennell and Curtis reported a high degree of satisfaction with the program on the part of the juvenile justice system, parents, and program participants. While there was an initial increase in rearrest rates after the implementation of the program (this may again illustrate the problem of heightened monitoring), the rearrest rate went down over time. Although this was a small program in one local area, it illustrates the possibility of interagency cooperation and the possibility of juvenile community corrections playing an active role in case management.

Many similar programs would have to exist and be implemented before adequate evaluation could occur. However, this program provides some important suggestions for facilitating interagency cooperation. These recommendations include: a clear elucidation of each participant agency's obligations and role, monitoring to ensure agreements are upheld, periodic training to ensure new staff understand the arrangements and are more likely to enthusiastically participate, monitoring the quality of services provided, agreement to and monitoring of expected outcomes, and recognition that it takes time to develop a functioning system that can have an impact.

3. *Boot camps.* Also referred to as shock incarceration programs, boot camps were first established in the early 1980s as a viable response to prison overcrowding. Boot camps are structured on a military model incorporating discipline, physical training, and hard labor in their program structure. Additional services (rehabilitation, AOD treatment, etc.) may or may not be provided for detainees depending on the philosophy and resources of each individual program. Reducing recidivism is seen as the primary goal of most programming.

Studies have been inconclusive regarding the effectiveness of the boot camp model with juvenile populations. Data collected on juvenile boot camps are often anecdotal or quasi-experimental (Henggeler & Schoenwald, 1994). A 1997 OJJDP report provided a

summary of the program elements of boot camps for juvenile offenders. Outside of the military aspects, common elements in most or all of the juvenile camps in the study included case management (through probation officers or outside contractors), employment assistance and vocational training, substance testing, family counseling, and transitional programming. Though self-reports of program effectiveness were generally positive, few of the programs had specific supporting data from formal evaluations or investigations. Several additional studies of juvenile boot camp programs found that at best, comparisons between control groups and boot camp graduates showed no difference in recidivism rates. At worst, boot camp graduates had higher rates of reentry into the justice system (MacKenzie, 1991; MacKenzie et al., 1992; Peters et al., 1997, Peterson, 1994, as cited in Henggeler & Schoenwald, 1994). The reason for this apparent lack of success may lie in the historical lack of consistent continuing care provisions, lack of follow-through at the local level regarding guidelines for model programs developed by the OJJDP, and poor program development and planning in regards to community resources and support (Peterson, 1994, as cited in Henggeler & Schoenwald, 1994). It is also argued by Henggeler and Schoenwald (1994) that boot camps are ineffective at addressing or ameliorating the causes of delinquency because (1) youth are removed from their community and any support systems which could be used within the home community and (2) youth are provided with few skills which will be of practical use upon returning to their home environment. Economic analyses of boot camps also indicates that the cost of these programs is greater than the economic benefits which might be derived from felony reductions (Peters et al., 1997; Washington State Institute for Public Policy, 1998).

Boot camp programs do provide a point in the juvenile justice continuum of care at which substance abuse problems could be addressed. However, the lack of conclusive data about their effectiveness and inconsistencies in treatment provisions across programs indicates that conclusions about this model's usefulness in meeting the needs of substance-abusing delinquents are premature.

4. *State training schools.* The most extreme form of juvenile justice sentencing supervision usually involves some form of State training facility that has many of the characteristics of a jail or prison. Facilities may or may not provide AOD treatment interventions. While the stated goal of the facility is often rehabilitative, the use of a training school generally reflects the seriousness of the offense committed by the juvenile and an end point of repeated criminal offenses. Such offenses are generally associated with violence and an extensive history of cocaine/crack and/or heroin use. State training schools are generally considered to be a last resort to protect the community from a juvenile who has not responded to any previous levels of treatment or supervision interventions. Despite recent emphasis on utilizing some type of community corrections for juveniles versus large State training institutions, a study led by Parent (1994) found a 26 percent increase in the number of juveniles confined to training schools between 1979 and 1991.

While critics often recognize that community protection requires incarceration of dangerous juveniles, evaluation studies have generally been very skeptical of the positive impact of juvenile institutions. Findings frequently note the exploitation of weaker juveniles by stronger ones, the development of maladaptive survival strategies that make success in the outside world even less likely than the original maladaptive strategies that brought the juvenile in contact with the justice system in the first place, and further entrenchment in criminal and AOD-using subcultures (Krisberg et al., 1989; Bartollas, 1997). Researchers have argued that incarceration does not reduce recidivism and is less effective than nonincarceration community-based interventions (Lipsey & Wilson, 1998; Krisberg & Howell, 1997). These researchers further argue that community-based interventions can be constructed to protect the community and effectively address juvenile AOD use and other problems. In addition, nonincarceration supervision interventions are more cost effective than incarceration. The use of a training school is the most expensive intervention in the graduated sanctions continuum, estimated at an average cost of \$27,000 per year per juvenile in the late 1980s (Bartollas, 1997).

Supervision monitoring: biologic testing

As mentioned previously, monitoring often involves biologic testing. Such testing can involve urine, hair, and blood analyses. However, urine analysis is the most widely used and accepted method for several reasons. It is minimally invasive, carries no religious or cultural taboos on collection, and cannot be shaved off. Urine monitoring can and often is used in treatment settings to support the overall monitoring process; however, it is most commonly used in a supervision context. While urine monitoring will not be reviewed again in the following section on treatment, readers should keep in mind its potential for use in that area as well.

The collection and analysis of urine for the presence of illegal substances is commonly done for three purposes. First, as has been discussed, urine monitoring is one of the basic methods of examining the extent of substance use within the juvenile justice population (Drug Use Forecasting, 1997). Second, such monitoring is often used as a part of assessment. The use of urinalysis in assessment helps overcome denial and is believed to make adolescents more likely to openly discuss their substance use problems (Lashey, 1994). Third, urine monitoring is used as a part of monitoring treatment progress and outcome in the context of graduated sanctions. Urines are monitored to examine the overall effectiveness of treatment and progress within a treatment level (Hubbard et al., 1989; Lashey, 1994). If a client's urine is found to contain illegal substances, that information may be used to increase the intensity of therapeutic intervention and juvenile justice system supervision.

The use of urine monitoring in juvenile justice system supervision generally rests on the assumption that substance use is a maladaptive behavior that can be changed with monitoring and increased consequences for continuing the behavior. There are those in the juvenile justice system who argue that urine monitoring alone (with appropriate consequent sanctions involving incarceration and/or placement in a substance treatment therapeutic community) may be a cost-

effective means of reducing AOD use and consequent criminal behavior.¹³ As part of a comprehensive graduated sanctions program, urine monitoring is often seen as an essential component providing the best data on AOD use (Lipsey & Wilson, 1998). It would appear that urine monitoring is most applicable as a part of overall comprehensive assessment, graduated sanctions, and treatment outcome evaluation.

Range of treatment options

Treatment options within the graduated sanctions continuum involve three primary components: treatment correlates, treatment programs, and treatment modalities. Like other components within the graduated sanctions continuum, all treatment option components operate simultaneously and should be continually evaluated. This section will examine the three treatment option components and then provide a meta-analysis summary of treatment approaches.

Treatment correlates. In designing any type of AOD treatment intervention program, it is crucial that service providers be aware of the correlates of substance use initiation and how these and other factors affect treatment outcomes and relapse rates. While it is not within the scope of this report to thoroughly examine all applicable correlates, research consistently indicates AOD use and treatment outcome correlates should be considered in comprehensive assessment and intervention strategies. In their 1990/91 comprehensive review of adolescent AOD treatment literature, Catalano and associates identified a range of pretreatment, during-treatment, and posttreatment factors associated with relapse or failure to complete treatment. These factors should be considered in designing and implementing effective AOD treatment programs (as summarized by Dembo et al., 1993:117).

1. *Initiation of AOD use or pretreatment factors.* Little can be done to change initiation or pretreatment factors. However, the potential effect on substance use choices can be reduced through early identification and appropriate intervention strategies.
- *Biological factors.* The literature suggests that a number of biological factors may be related to AOD use. Such factors are thought to be evidenced by a family history of AOD abuse (Merikangas et al., 1992) that may reflect genetic contributions and/or variance in brain receptor sites for a variety of chemicals (Wyman, 1997).
- *Personality.* Personality characteristics such as low self-esteem (Henggeler, 1997a), sensation seeking, and aggressive behavior have been shown to be related to AOD use initiation (Brook et al., 1990). In addition, Henggeler (1997a) has found that lower intellectual achievement is related to substance use.
- *Ethnicity.* In the general population, African-Americans are less likely to initiate AOD use than white non-Hispanics or Hispanics (Johnston et al., 1996). However, in arrested

populations, African-Americans are more likely to have used illegal substances (Drug Use Forecasting, 1997).

- **Gender.** While males are more likely to initiate illegal substance use, use more frequently, and engage in more violent and other forms of criminal behavior (Martin et al., 1995), females are more likely to initiate because of sexual abuse and/or family violence and support their substance use through prostitution (Nelson-Zlupko, 1995).
- **Family.** A wide variety of family characteristics have been found to be related to AOD use initiation, including substance use role modeling (Brook et al., 1990), conflict and violence (Needle et al., 1990), and lack of relational attachments (Brook et al., 1993).
- **Peers.** The role of peers in AOD use initiation and continuation has been well documented. Peers usually introduce individuals to all types of AOD use and provide continued access as well as the social context and justification for use (Elliott et al., 1985; Towberman, 1993; see also Henggeler, 1997a).
- **School.** A wide variety of problem behaviors including AOD use and delinquency have been found to be related to school performance. Poor school attendance and low grades are consistently related to higher rates of substance use and delinquency (Hawkins et al., 1992; see also Henggeler, 1997a).
- **Co-morbidity.** Researchers have often concluded that it is not so much one or perhaps even a few factors that result in the initiation and continuation of AOD use, but rather a combination of biological and personality as well as environmental factors. Research consistently shows that adolescent substance users and delinquents are characterized by extensive co-morbidity (Inciardi et al., 1997).

2. *Treatment retention and completion.*

- **Ethnicity.** While ethnicity has not been found to be related to completing treatment, African-Americans are more likely to use substances during treatment than are white non-Hispanics or Hispanics (Moore, 1992; Catalano et al., 1990/91).
- **AOD use type and age of onset.** The younger the age of onset, the more serious the primary substance of abuse and the abuse of multiple substances. AOD use type and age of onset are also related to not completing treatment as well as poorer treatment outcomes (Catalano et al., 1990/91; Hawkins et al., 1992).
- **Educational level.** School attendance, performance, and high school graduation are all positively related to completion of treatment and positive posttreatment outcome (Catalano et al., 1990/91; Hawkins et al., 1992).

- Voluntary versus mandated treatment entry. Treatment mandated by the courts is positively related to treatment retention (Leukefeld & Tims, 1988; Inciardi & McBride, 1991).
- Staff characteristics. Quality staff who establish positive role relationships with clients can improve treatment outcome (Catalano et al., 1990/91).
- Involvement of family/parents in treatment. Treatment involvement by family members is positively related to program completion (Dembo et al., 1993).

3. *Posttreatment factors influencing relapse.*

- Criminality. The amount of lifetime criminal involvement is related negatively to posttreatment outcome (Catalano et al., 1990/91).
- Ethnicity. African-Americans are more likely to have slightly higher relapse rates than are white non-Hispanics or Hispanics (Moore, 1992; Catalano et al., 1990/91).
- Length of time in treatment. Treatment duration is related positively to long-term positive treatment effect (Hubbard et al., 1989).
- Comprehensive services. Programs that provide comprehensive assessment and needed services along a continuum of care, including continuing care within a case management framework, have significantly lower recidivism rates (Rapp et al., 1998).
- Thoughts and feelings about substances and substance cravings. Substance-focused thoughts and cravings are related to relapse (Catalano et al., 1990/91).
- Involvement in productive activities. Activities such as school or work are related positively to posttreatment outcome (Catalano et al., 1990/91).
- Few and less satisfactory active leisure activities. Low levels of activity and satisfaction are related to relapse (Catalano et al., 1990/91).
- Physical abuse and sexual victimization. Dembo and associates (1990) found that at initial entrance into the juvenile justice system, 60 percent of youth reported being physically harmed by an adult in one or more of six different ways. In addition, 61 percent of females and 25 percent of males interviewed indicated that they had been sexually victimized at least once in their lifetimes. These reported rates should be considered conservative estimates and may indirectly affect relapse rates.

The research strongly suggests that while no system will be able to address each correlate noted, a balance between the optimum and possible should be sought. Adequate consideration of the

various correlates of AOD initiation and use are essential in developing successful treatment programs and choosing appropriate treatment modalities. Both programs and modalities are reviewed in the following two sections of this document.

Treatment programs. If a judge is favorable toward treatment, a juvenile offender may receive a mandatory referral to an adolescent AOD treatment facility. A range of more traditional nondetention options exist within communities, although not nearly as many as are needed to meet the demand for such services. Options include (from lesser to greater restrictiveness): support groups such as AA or NA, outpatient, day treatment, inpatient, and residential therapeutic communities (TCs). While no single treatment for adolescent AOD abusers has clearly emerged as superior to other forms of treatment, some tentative treatment patterns are beginning to emerge.¹⁴ Interventions which address a wide range of AOD correlates within the context of the adolescent's natural environment appear to demonstrate the most positive outcome effects.

1. *Support group, outpatient, day treatment, and inpatient programs.* Henggeler (1997a) maintains that researchers know little about the effectiveness of support groups, outpatient, day treatment, and inpatient programs. Such programs are called *traditional treatments* and are the most widely used programs for adolescent substance abuse. The Twelve-Step approach is believed to be the most widely used intervention approach in the United States for treating severe substance-abusing adolescents (Hoffmann et al., 1993). However, controlled trials have not been conducted for specialized inpatient treatments and Twelve-Step programs, making conclusive judgments about their effectiveness inappropriate. The Chemical Abuse/Addiction Treatment Outcome Registry (CATOR) data base is currently the most extensive longitudinal data base on adolescent treatment outcomes (Harrison & Hoffman, 1989; see also Jenson et al., 1995). Results collected from 924 youth (49 percent of the eligible follow-up sample) at a 1-year follow-up period indicate that 42 percent report total abstinence and another 23 percent have less than monthly AOD use. Alford et al. (1991) determined that youth who regularly attend AA and NA groups following inpatient treatment have significantly higher abstinence rates than adolescents who complete inpatient treatment only (see also Jenson et al., 1995). While such findings underscore the importance of posttreatment supports, these nonrandomized outcomes may simply reflect higher motivation levels to remain substance-free on the part of support group attendees.

Winters, Stinchfield, et al. (in press) recently conducted a quasi-experimental outcome study of AOD-abusing adolescents treated with a Twelve-Step approach. Subjects included 245 AOD clinic-referred adolescents who were assessed with at least one substance dependence disorder as classified by the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition Revised* (DSM-III-R). Outcome analyses indicated that those who complete treatment maintain superior treatment outcomes compared to those who do not complete treatment or are part of a waiting group (n=66). Fifty-three percent of those who complete treatment report either abstinence or only a minor lapse during the

12 months following treatment, compared to 15 and 28 percent for the incompletes and waiting list groups, respectively. Treatment retention was found to be an important contributor to outcome, with favorable treatment outcomes for AOD abuse being two to three times more likely if treatment was completed. No outcome differences were found between residential and outpatient groups. Additionally, gender and age did not interact with outcome findings. Despite the quasi-experimental nature of this study, the findings are generally consistent with other Twelve-Step outcome studies (Harrison & Hoffmann, 1989; Brown et al., 1989), which may indicate that such programs are a relatively effective treatment approach.

In comparing inpatient versus outpatient treatments, the 1991 United States Congress Office of Technology Assessment review found no clear evidence that either setting was more effective in reducing adolescent substance abuse. The review additionally found that treatment modalities more clearly associated with positive outcomes for youth in treatment (e.g. recreational, educational, social skills training, and family therapy components) were viewed by treatment staff as secondary supports to actual substance abuse treatment. Treatment modalities will be reviewed in a separate section below.

2. *TCs for adolescents.* TCs are 24-hour settings in which multidimensional rehabilitation services are provided, including personality restructuring, social education, and economic and survival skills. Adolescents who enter AOD-free TCs generally have very severe substance abuse problems which have caused serious disfunction in their daily lives. While the traditional TC focuses on the adult (usually male) addict, the need to accommodate the developmental differences and use patterns of adolescents has led to the following treatment modifications: shorter recommended lengths of stay than for those in adult TCs due to more rapid developmental changes in emotional and physical areas for adolescents, participation by families in the therapeutic process, limited use of peer pressure with a greater focus on positive influences (pretreatment peer influences have been generally negative), less reliance on life experiences to develop understanding of one's self and behaviors, and participation in the daily authority structure of the TC's operations with peers (staff maintain control over all decisions and supervision) (Jainchill et al., 1995).

Jainchill and her colleagues (1995) have reviewed several major studies of TC effectiveness, including the Drug Abuse Reporting Program (DARP) study (conducted during the late 1960s and early 1970s), the Treatment Outcome Prospective Study (TOPS, conducted from 1979 to 1981), and the Center for Therapeutic Community Research (CTCR) study (involving 6 adolescent TCs at 9 sites based on a sample of 938 adolescents between 1992 and 1994). In the past, a substantial proportion of total TC referrals came from self, family and/or friends, and medical and substance treatment-based referrals. In what appears to be an increasing trend, 70 to 100 percent of admissions into programs reviewed by Jainchill and colleagues (1990) were court referrals for all but two of the programs. The large majority of clients were males who

entered treatment because of marijuana and/or alcohol abuse problems, with the exception of Hispanic youth who reported significant abuse of heroin.

Jainchill and her colleagues have also reported significant reductions at 6-month posttreatment in AOD use among adolescents who were involved in a TC. Other outcome measures, including criminal activity and educational achievement, showed significant improvements as well (in press; see also Winters, Stinchfield, et al., in press). In her meta-analysis of residential programs for delinquent youth, Garrett (1985, as cited in Catalano et al., 1990/91) reported on the effectiveness of various treatment approaches within residential facilities. She reported that “a cognitive-behavioral approach, a relatively recent development, seems to be more successful than any other, even in the more rigorous studies” (304).

The amount of time spent in a treatment program (TIP) is the largest and most consistent predictor of treatment outcomes within TCs (Catalano et al., 1990/91; De Leon, 1988; Jainchill et al., 1995). Positive outcomes (e.g., no criminal activity, no AOD use, employment, and improvement in psychological measures) are all associated with longer TIP (De Leon, 1984; Hubbard et al., 1985; Simpson & Sells, 1982; see also Onken et al., 1997, for recent studies on general AOD treatment retention). Therefore, while juvenile TCs advocate comparatively shorter treatment times than adult TCs, it is essential that programs allow adequate time for treatment effectiveness. Further support for this claim was found in the TOPS study, which concluded that at 12-month follow-up, “residential treatment produced more substantial and consistent reductions in drug and alcohol use, drug-related problems, and predatory illegal acts than outpatient treatment” (Catalano et al., 1990/91:1107). However, this finding was confounded by the DARP study, which found that outpatient AOD-free clients showed slightly better outcomes for reductions in alcohol and marijuana use. High rates of dropout are the norm for TCs, with 30-day dropout rates in the CTCR study ranging from 2 to 35 percent (reasons for this wide dropout range were not discussed, but lower rates are likely related to court-mandated referrals). Given the recent trend toward court-referred TC stays, it is anticipated that high dropout rates would be significantly lowered.

Long-term TCs: Variables which correlated negatively with retention through 90 days include an antisocial lifestyle, high criminal involvement, significant problems with fighting or controlling violent behavior, poor psychological status, and relationship with friends who are strongly involved with AOD and crime. Variables predicting retention include high levels of self-esteem, high CMRS Index scores (a scale which measures circumstances, motivation, readiness, and suitability for treatment), high Environmental Risk Index scores (a scale measuring various environmental factors which occur in treatment settings), and interviewer impressions of client likelihood of staying in the program (Jainchill, et al., 1995). While positive outcomes for those who remain in treatment appear promising, a great deal more research is needed to understand the complex and interactive relationships between client, treatment, and outcome.

Short-term TCs: Short-term residential facilities have more problematic outcomes than their long-term alternatives. While the trend in the juvenile justice system is to place troubled adolescents in these large and frequently crowded residential facilities, “These facilities are often intimidating and otherwise stressful environments, where youth educational and other rehabilitative needs are often ignored or insufficiently addressed. Evidence has been accumulating that these expensive programs serve primarily to isolate youth from the general society, are ineffective, and have no significant impact on recidivism” (Dembo et al., 1993:119).

Overall treatment program evaluation issues. Many studies on adolescent AOD treatment effectiveness have relied on quasi-experimental or one-group pre-post designs. However, researchers (Henggeler, 1997a; Catalano et al., 1990/91) note that reported changes in treatment conditions can result from a number of factors unrelated to treatment effectiveness. Such factors include: (1) statistical regression effects, which are likely because youth who enter treatment in crisis often reduce their AOD use when problems have diminished; (2) differential dropout rates, which may skew results so that those with the most serious problems drop out of treatment, leaving the less severe users to show a false overall improvement in treatment outcomes; (3) effects of history and maturation, which are especially important for adolescents (in 1994, Brown and her colleagues reported that there are wide normal variations of AOD use for adolescents over time; see also Henggeler, 1997a), and (4) AOD use patterns, which for adolescents in no-treatment or minimal-treatment control conditions have shown substantial decreases in substance use over time (Joanning et al., 1992; Amini et al., 1982). In addition to the above factors, the delinquency treatment literature has a long history of demonstrating successful outcomes in uncontrolled studies, but these effects diminish when submitted to controlled clinical trials (Henggeler, 1997a).

Treatment modalities. In addition to a variety of treatment levels and settings, a variety of modalities are utilized, including family therapy, skills training, conflict resolution, adult mentoring, and after-school recreation programs. Although focused on in this subsection, the modalities and concepts examined here are found at various places along the treatment continuum. For example, one might find family therapy interventions used in prevention settings, diversion programs, inpatient and outpatient settings, and (in a limited way) among residential facilities. In addition, these modalities are often used to reduce other problem behaviors in addition to substance use. In this sense, they should be considered integral to the various phases of any multiproblem system, including substance abuse treatment within the juvenile justice system.

While randomized trials have provided minimal support for the effectiveness of any specific treatment modalities for adolescent AOD abuse (Henggeler, 1997a), several interventions have shown promise under experimental conditions (to be reviewed below). However, despite the overall lack of carefully controlled studies, Winters and Latimer and colleagues (in press) maintain that adolescent substance treatment is better than no treatment at all, with 1-year abstinence rates (between 30-50 percent) approaching those found in the adult literature. Several

carefully designed experimental studies have compared adolescent treatment modalities: inpatient versus outpatient (Amini et al., 1982), family therapy versus parent training (Friedman, 1989; Lewis et al., 1990), and conjoint versus one-person family therapy (Szapocznik et al., 1983; 1986; see also Henggeler, 1997a). For all studies, findings generally support decreased adolescent AOD use across all paired experimental and comparison treatment conditions, leading the authors to conclude that each compared treatment condition was effective. However, Henggeler maintains that “such conclusions may be in error because these studies and their results present the same difficulties in interpretation and significant threats to internal validity as noted for single group designs. That is, history, maturation, and regression may have accounted for the similar decreases in AOD use across treatment conditions” (1997a:264).

Briefly examined below are the treatment modalities of family therapy, skills training, conflict resolution and violence prevention, peer mediation, adult mentoring programs, and after-school recreation programs. In the discussion of the various modalities, primary emphasis is given to reported effectiveness.

1. *Family therapy.* Family therapy has been utilized extensively as a treatment modality in the mental health and AOD abuse fields. Researchers have been led to design and test family interventions specifically for AOD-abusing adolescents (Liddle & Dakof, 1995) for two reasons: (1) success of family-based interventions in other related problem areas, such as delinquency and child behavior problems (Kumpfer et al., 1996; Patterson, 1986), and (2) identification of consistent family-related factors associated with development of adolescent AOD use (Brook et al., 1990). Family therapy models include conjoint family therapy and one-person family therapy,¹⁵ group treatment of families versus individuals (utilizing strengths of social networking, self-help, and mutual support that are often part of minority group culture),¹⁶ and integrative models.

Integrative models are the most promising family-based interventions (Coyne & Liddle, 1992; Gurman & Kniskern, 1992). These interventions, which recently emerged with developments in psychotherapy, emphasize the construction of systematic and prescriptive packages, which have been termed *multisystemic* (Henggeler & Bourdin, 1990) and *multidimensional* (Liddle et al., 1991). Examples include Multidimensional Family Therapy (Liddle et al., 1991), Brief Strategic/Structural Family Therapy (BSFT) (Szapocznik & Kurtines, 1989), and Multi Systemic Therapy (MST) (Henggeler et al., 1991). These comprehensive approaches view the family as a system which is, in turn, part of a larger social network including schools and peers. Within these networks, parents and other significant primary caregivers are viewed as being the most critical influences in the development of a child’s prosocial attitudes and behaviors.

Such interventions therefore focus on rebuilding a child’s natural habitats in ways which build upon the existing strengths of these primary support systems. Caregivers are helped to establish boundaries and consequences for their child’s behaviors and are coached on ways to become more involved with teachers and school activities. Parents also become

more involved with their child's peer groups and learn how to monitor peer networks more effectively. In addition, such approaches attempt to work with legal systems in order to educate judges and other professionals in system collaboration models. Within this integrative framework, the use of graduated sanctions is generally seen as a constructive way to create *carrot-and-stick* incentives for reducing delinquent behaviors.

Research groups have recently published results of randomized clinical trials assessing the effectiveness of family-based treatments with other treatment modalities as evidenced by significantly lower AOD use at termination. A few of the trials demonstrated the superiority of family therapy over other treatments in the areas of individual counseling (Henggeler et al., 1991), parent education and skill-building groups (Joanning et al., 1992; Lewis et al., 1990; Liddle & Dakof, 1992), and peer group therapy (Joanning et al., 1992; Liddle & Dakof, 1992). Studies have demonstrated that family-based models can engage and retain cases in AOD treatment (Santisteban et al., 1996). This is especially important given the traditionally high dropout rates in the field of substance abuse. Home-based MST has demonstrated a particularly strong ability to reduce and, in some cases, almost completely eliminate program dropouts (Henggeler et al., 1991; 1996; 1998).

The most systematically evaluated integrative model is MST, a comprehensive family- and community-based treatment approach embedded within the Family Preservation Model of service delivery. MST attempts to address the multiple determinants of youth and family problems by targeting the individual, family, peer, school, and community factors associated with serious antisocial behavior. MST practitioners meet with juveniles and their families in the home, school, neighborhood, and community as these are the areas where AOD use and delinquency behaviors are most likely to occur. Interventions are intensive, highly individualized, comprehensive, and include a team approach to service delivery. Therapeutic contacts emphasize positive aspects of the family and use these strengths as levers for change. Interventions are present-focused and action-oriented. "The therapist's task is to identify the 'fit' of identified problems with the strengths and needs of the multiple systems within which the youth is embedded and to collaborate with family members in using these strengths to create and maintain changes in the individual behavior and social ecology of the youth (e.g., family interactions, access to negative peers, school-family interactions, etc.)" (Schoenwald et al., 1996:435).

MST has recently shown promise in reducing a number of AOD-related delinquency behaviors, including fewer arrests, fewer criminal offenses, and 10 fewer weeks in juvenile detention during a 59-week follow-up period (Henggeler, 1997a). Two studies focusing on AOD-using juvenile offenders demonstrate significantly lower incarcerations, out-of-home placements, and soft- and hard-AOD use at posttreatment. In addition, reductions in soft-AOD use have been maintained at 6-month posttreatment follow-up for males (Henggeler et al., 1991; 1997b). Another multisite randomized trial (Henggler et al., 1997b) compared MST with the usual juvenile justice services among a

population of violent and chronic juvenile offenders and their families. Findings indicate that MST produced a 47 percent reduction in days incarcerated at a 1.7 year follow-up. MST also significantly reduced self-reported alcohol, marijuana, and other substance use at posttreatment, although these differences disappeared at 6-month follow-up. Researchers concluded that MST's effectiveness appears to be reduced when the therapists who administer the intervention do not carefully adhere to treatment protocols (Henggeler et al., in press). Finally, in a recent meta-analysis of family-based treatments of substance abuse (Standon & Shadish, 1997), MST effect sizes were among the highest of those reviewed.

MST appears to be more effective than usual community treatment for inner-city juvenile offenders, specifically in improving family warmth and cohesion and decreasing youth behavioral difficulties, such as aggression with peers. "The relative efficacy of MST was neither moderated by demographic characteristics—ethnicity, age, social class, gender, arrest, and incarceration history—nor mediated by psychosocial variables including family relations, peer relations, social competence, behavior problems, and parental symptomatology. Thus, MST was equally effective with youth and families of divergent backgrounds" (Henggeler, 1997b:4). Positive findings were replicated in an MST intervention with rural African-American and white families (Scherer, 1994).

Cost comparisons made between MST and usual services (outpatient substance abuse referral received over a 1-year period) show that "the incremental costs of MST were nearly offset by the savings incurred as a result of reductions in days of out-of-home placement during the year" (Schoenwald et al., 1996:431). Cost savings are estimated to be much greater if youth are at risk of out-of-home placement (Henggeler et al., in press; Schoenwald et al., 1996). Supporting this claim, the Washington State Institute for Public Policy conducted an economic study of 16 programs and concluded that MST was the most cost-effective intervention for juvenile offenders (Washington State Institute for Public Policy, 1998).

Such multidimensional family therapy models have proven to be particularly effective at engaging, retaining, and reducing problem behaviors among minority youth. Szapocznik et al. (1990) designed the Structural Strategic Systems Engagement (SSSE) approach to engage Hispanic/Latino substance abusers and their families more effectively. SSSE is based on the premise that the same dysfunctional interactional patterns which create and maintain the presenting problem will emerge in the engagement phase as resistance to beginning treatment. "The goal of SSSE is to begin the work of diagnosing, joining, and restructuring the family with the very first contact, thereby facilitating the engagement of the entire family into therapy" (Santisteban et al., 1996:35). Overall results in controlled experiments indicate that 81 percent of experimental group families were successfully engaged compared to 60 percent of control group families. Further, SSSE was more successful in engaging non-Cuban Hispanics (97 percent) than Cuban Hispanics (64

percent). In addition, dropout rates in therapy were up to three times lower for families that had received the SSSE intervention compared to control group families.

Regarding other integrative models, once engaged in the therapeutic process, BSFT has been effective in preventing or reducing problem behaviors in Hispanic/Latino youth (Szapocznik, 1995; Coatsworth et al., in press; Santisteban et al., 1996). MST has shown considerable success in engaging and retaining both African-American and white families in treatment. As stated earlier, findings from clinical trials also show that MST has been equally effective in obtaining favorable clinical outcomes with these cultural groups (Brondino et al., 1997). Another family-based intervention, Multidimensional Family Therapy (MDFT) (Liddle, 1995), has been developed and refined for inner-city adolescent substance abusers. Controlled randomized clinical trials have demonstrated MDFT's superiority to adolescent group therapy and a multifamily educational condition in reducing substance use as well as improving grades. Current clinical trials are comparing MDFT to an individual-based cognitive therapy condition.

One final family-based intervention showing initial promise is the Youth Support Project (YSP), a 5-year study funded by NIDA. The purpose of the project's Family Empowerment Intervention (FEI) is to improve family functioning by empowering parents. This is accomplished through nine goals: restore the family hierarchy; restructure boundaries between parents and children; encourage parents to take greater responsibility for family functioning; increase family structure through implementation of rules and consequences; enhance parenting skills; have parents set limits, expectations, and rules that increase the likelihood that the target youth's behavior will improve; improve communication skills among all family members; improve problem-solving skills, particularly with the problem youth; and where needed, connect the family to other systems (e.g. school, church, and community activities) (Dembo et al., 1998).

Families involved in the project were randomly assigned to either the Extended Services Intervention (ESI) or the Family Empowerment Intervention. Families in the ESI group received monthly phone contacts and, if indicated, referral information; FEI group families received three 1-hour, home-based meetings per week from a clinician-trained paraprofessional. Twelve month follow-up analysis (Dembo et al., in review, a) of participating families (n=303) indicated that youth and families who completed the FEI experienced significantly lower rates of new charges and significantly fewer new arrests than youth not completing the FEI. An earlier 12-month follow-up analysis (Dembo et al., in review, b) (n=272) also found that youth completing the FEI had lower rates of delinquency (self-reported crimes against persons, substance sales, and total delinquency) and substance use (measured by self-reports and hair test results) than juveniles who did not complete the FEI. Dropout rates for the FEI were quite high (47 percent), largely due to families moving from the area or parents/guardians who were unwilling or unable to commit to participating in family meetings.

2. *Skills training.* Skills training (also referred to as interpersonal skills, life-skills, or social skills training) has been recommended for a number of problems including adolescent substance abuse. While the definition of a skill varies across studies and program reports, a skill can be defined as “the exact words to say, the way to say them, and the hand movements needed to convey a message” (Hall, 1995:255). These programs are often integrated into school-based prevention programs using cognitive-behavioral strategies. One common difficulty with skills training is that the existence of many models make agreement on a common intervention and set of skills difficult. Skills training often includes such components as assertiveness training, communication skills, anger management, peer-resistance training, problem solving, and relapse prevention skills (Hawkins et al., 1992; Catalano et al., 1990/91). Specific treatment techniques which are often used to teach skills include providing information, demonstrating desired behaviors by appropriate modeling, role playing desired behaviors by teens, giving structured and supportive feedback, and assigning homework to practice skills in the teen’s natural environment.

While skills training is found in many clinical programs and prevention model descriptions, few evaluation studies are available. Hall (1995) has identified only seven studies where skills training was either the sole treatment approach or a major component of treatment. Hawkins and colleagues (1991) provide the only study which utilized skills training as the primary treatment with incarcerated adolescents to increase resistance to AOD use. In both studies, investigators found strong evidence that youth in the experimental group improved their skills in AOD use avoidance, social interaction, self-control, and problem solving from pretreatment to posttreatment when compared to control group teens. However, few studies demonstrate long-term effects of acquired skills on reductions in AOD use (Jenson et al., 1995), and attrition rates are quite high with high-risk youth (Botvin et al., 1990). While such interventions show promise, more controlled studies using well-defined intervention techniques are needed in this area.

3. *Conflict resolution and violence prevention.* Conflict resolution and violence prevention programs use curricula developed to improve student social, problem solving, and anger management skills, promote beliefs favorable to nonviolence, and increase knowledge about conflict and violence. The curricula address risk factors such as early and persistent aggressive behavior and association with delinquent and violent peers, factors which are also correlates of substance use. Content and instructional methods vary considerably between programs.

While many such curricula have been developed in recent years, few have undergone controlled evaluation. Evaluations that have been done show mixed results (Brewer et al., 1995). While various programs have been generally effective in improving student social skills in hypothetical conflict situations, only one (Gainer et al., 1993) of the four controlled studies measuring attitudes about violence has shown reduced student attitudes about violence. Two studies show reductions in self-reported violent behavior

(Bretherton et al., 1993; Spiro et al., cited in Webster, 1993). Several of the curricula were designed and tested with minority, low-income adolescents (Gainer et al., 1993; Hammond & Yung, 1991). While a variety of methodological problems and lack of random assignment make interpretations of these findings problematic, such programs appear to merit more careful study and controlled implementation among high-risk juvenile populations.

4. *Peer mediation.* Peer mediation programs are often offered in conjunction with conflict resolution curricula. Students in conflict agree to involve a peer mediator to help resolve the dispute. The mediator examines various aspects of the problem, recommends changes and compromises, and develops a mutually agreed upon solution. Peer mediation may address risk factors such as early and persistent antisocial behaviors, association with peers who are involved in violence, and delinquent behaviors such as substance abuse.

Lam (1989, as cited in Brewer et al., 1995) reviewed 14 evaluations of peer mediation programs in North America. While qualitative and anecdotal reports were positive, none of the controlled studies showed significant impact on observable student behaviors (e.g., disciplinary referrals, fighting). One other noteworthy school-based study conducted by Tolson et al. (1992) found that peer mediation participants are significantly less likely to be referred again within 2.5 months to school authorities for interpersonal conflicts than are individuals receiving traditional discipline. More controlled studies are needed in this area.

5. *Adult mentoring programs.* Adult mentoring programs typically involve nonprofessional volunteers who spend time with individual adolescents acting as nonjudgmental, supportive role models. These programs are designed to address risk factors, such as alienation, academic failure, low commitment to school, and association with delinquent or violent peers. Mentoring programs are also designed to provide protective factors, such as opportunities for prosocial involvement, bonding with prosocial adults, and development of healthy beliefs and clear standards for behavior (Brewer et al., 1995).

In their review of 10 available evaluations, Brewer and his colleagues determined that "noncontingent, supportive mentoring relationships do not have desired effects on outcomes such as academic achievement, school attendance, dropout, various aspects of child behavior (e.g. misconduct), or employment" (1995:99). However, one small short-term study found that when mentors use behavior management techniques such as contingency contracting, student school attendance improves. This is consistent with findings from studies of school behavior management interventions (Brewer et al., 1995). More evaluations with randomized designs are needed in this area before firm conclusions can be reached.

6. *After-school recreation programs.* After-school recreation programs are designed to address risk factors, such as alienation and association with delinquent and violent peers, as well as provide protective factors, such as skills for leisure activities and opportunities

for involvement and bonding with prosocial youth and adults. While few evaluation studies have been conducted in this area, Jones and Offord (1989) found statistically significant reductions in antisocial behaviors during the program, perhaps indicating that participants who are involved in structured activities have less free time on their hands to become involved in delinquent behaviors. No changes were reported in home or school behaviors, and positive program effects declined significantly after the intervention concluded. Given the lack of evaluations of these types of programs, more research designs using random assignment are needed (see Brewer et al., 1995, for a comprehensive review of these programs and their effectiveness).

Meta-analysis of treatment effectiveness. Lipsey and Wilson (1998) recently conducted a meta-analysis of experimental or quasi-experimental studies of intervention programs for serious and violent juvenile offenders. This analysis reviewed 200 programs divided into interventions with noninstitutionalized juveniles (n=117) and interventions with institutionalized juveniles (n=83). The great majority of the juveniles in these studies were reported to be adjudicated delinquents, and most or all had a record of prior offenses usually involving person or property crimes. While this comprehensive analysis did not specifically look at AOD use reductions, it provides very useful insight into which intervention programs showed the greatest impact on outcomes closely related to substance use, such as reductions in police contacts/arrest recidivism rates, officially recorded contacts with juvenile courts, offense-based probation violations, or other similar categories. Evidence from the analysis clearly shows that intervention programs are generally capable of reducing the reoffending rates of serious juveniles. The more important question for this report, however, is which types of programs are the most effective and which have proved to be ineffective.

1. *Interventions with noninstitutionalized juveniles.* Lipsey and Wilson calculated treatment effectiveness by using a mean effect size for each treatment. Treatments were then grouped into similar effect sizes. The top group consists of those treatment types which show consistently positive, statistically significant treatment effects. This group includes interpersonal skills training, individual counseling (including MST and reality therapy), and behavioral programs (e.g., family counseling and contingency contracting). Overall, these treatments have been found to reduce recidivism rates by about 40 percent, a considerable reduction considering the expense and social damage caused by juvenile delinquents.

Close behind this top group is a second tier of treatment types for which evidence is also statistically significant and quite convincing. These programs include multiple services, such as intensive case management and multimodal service as well as restitution programs for juveniles on probation or parole.

The bottom group of treatments “show the strongest and most consistent evidence that they were *not effective* in reducing the recidivism of noninstitutionalized serious juvenile offenders” (Lipsey & Wilson, 1998:323, authors’ italics). This group includes

wilderness/challenge programs, early release from probation or parole, deterrence programs (mostly shock incarceration), and vocational training or career counseling/job search programs. While strong arguments can be made that job skills and access to jobs are crucial, existing studies do not indicate much success. Perhaps at the program level, job training is not of sufficient intensity or does not take place within sufficient collaboration to be effective. In addition, job opportunities at a macro level must be available for any vocational training to be effective.

The largest proportion of effect size variance has been associated with the *characteristics* of juveniles who receive treatment, especially prior offense histories. The influence of treatment type and amount shows intermediate effect sizes, with general program characteristics only weakly related to effect size. Interestingly, the largest intervention effect sizes have been seen with the *more* serious offenders rather than with less serious offenders, offering good reason to believe that such interventions would be at least equally effective if used exclusively with more serious offenders.

2. *Interventions with institutionalized juveniles.* Again, mean effect size for each treatment type was calculated and findings were grouped into similar effect sizes. However, there were too few total studies in each group to make any firm conclusions about the relative effectiveness of different treatment types. Treatment types in the top two groups with the strongest treatment effects include interpersonal skills training (such as social skills, aggression replacement, and cognitive restructuring), teaching family homes (including small behavior modification group homes with teaching parents and token economies), behavioral programs (such as cognitive mediation training and stress inoculation training), community residential programs or TCs, and multiple services within residential settings. The most effective of these treatments reduced recidivism rates by 15-20 percent, a considerable decrease given the relatively serious offenses of involved juveniles.

The largest proportion of effect size variance has been associated with the general characteristics of the intervention *program*, especially the age of the program and whether services are administered by juvenile justice or mental health personnel (programs run by mental health professionals are significantly more effective than those provided by juvenile justice personnel). Type and amount of treatment show only moderate effects, and juvenile characteristics show little effect. This is the reverse of the pattern shown by noninstitutionalized offenders.

3. *Summary.* Based on the findings from the meta-analysis by Lipsey and Wilson (1998) and the review of the range of AOD treatment and supervision options available to judges, the following summary represents three levels of knowledge about what is known regarding the effectiveness of AOD supervision and treatment programs/modalities. The first level shows programs or modalities with the strongest empirical evidence of effectiveness. The second level highlights existing programs which need further research

before conclusions can be made about their effectiveness (particularly related to program costs). The final level shows programs which appear to show little or no evidence of success based on current empirical studies. Both nonincarceration and institutionalization program summaries are provided.

What works: Within *noninstitutionalized* programs, program options which show good evidence of effectiveness include individual counseling, behavioral programs (family counseling and contingency contracting), multiple services (including intensive case management and multimodal services), restitution programs (parole- and probation-based), and inter-personal skills training. Among *institutionalized* programs, evidence of effectiveness has been demonstrated for behavioral programs (cognitive mediation and stress inoculation training), longer-term community residential programs (therapeutic communities with cognitive-behavioral approaches), multiple services within residential communities (case management approach), interpersonal skills training (social skills, aggression replacement, and cognitive restructuring), and teaching family homes.

Program options which require more research to document effectiveness: Among *noninstitutionalized* programs, the following require additional research: employment-related programs, academic programs, advocacy/casework, family counseling, and group counseling. For *institutionalized* programs, more research is required for individual counseling, guided group programs, and group counseling.

Program options which do not show evidence of effectiveness: Effectiveness has not been demonstrated for the following *noninstitutionalized* programs: deterrence programs, vocational training or career counseling/job search, early release from probation or parole, and wilderness challenge programs. *Institutionalized* programs without evidence of effectiveness are milieu therapies.

Amidst the discussion of treatment modalities and effectiveness, it is important to recognize that while knowledge of general effectiveness exists to varying degrees, there is very little information on the relationship between treatment program outcomes among different ethnic/cultural groups. In planning and implementing treatment programs, it is crucial to develop interventions based on the specific characteristics and needs of the ethnic/cultural groups that will be served by the program.

Culturally sensitive intervention and treatment programming. Interventions at any point of system contact (diversion, disposition, and sentencing) may have differential effects on adolescents based on their ethnic association. Ethnicity can affect family relationships, self-esteem, achievement orientation, and perceptions of authority structures and treatment providers (Canino & Spurlock, 1994; Paniagua, 1994). Care must be taken to address considerations of ethnicity in developing interventions which are effective with adolescents from a broad range of backgrounds or that meet the specific needs of a given population.

One intervention option involves improving intergroup relations. This could be done in the context of treatment, supervision, therapy, or community-building activities. In their discussion of designing and implementing effective strategies of this kind, Hawley and his colleagues (1995) provide the following principles, stating that effective strategies:

1. Address individual and institutional sources of prejudice and discrimination in a context relevant to the population targeted for change.
2. Consider diversity within and across groups, acknowledging all to be of equal importance.
3. Should receive support from those who have authority and power within the structure where they are being implemented.
4. Are periodically reinforced with old members of the group and explained to new members.
5. Should be implemented across related systems as appropriate.
6. Need to examine diversity of ethnicity, socioeconomic status, gender, and language, appreciating and acknowledging the strengths inherent in each as well as the challenges.
7. Should dispel myths which perpetuate stereotypes and prejudices.
8. Recognize that experience of prejudice and discrimination is unique at the level of the individual and the ethnic group of association, and therefore does not necessarily apply to others.

When developing interventions, it is also important to consider that minority populations may have experienced problems accessing health and mental health services, barriers to education (such as language differences or inappropriate placement in special education programs), and other discrimination based on their ethnicity. Very little research has been done to assess the effectiveness of various treatment modalities with minority adolescent substance abusers; however, there are various compilations of available literature which suggest general guidelines for treating specific minority populations (for further information, please see Canino & Spurlock, 1994; Ho, 1992; Paniagua, 1994).

Continuing care services: beyond and within the juvenile justice system

As mentioned previously, dropout rates (percent of clients discontinuing treatment before program completion) from voluntary substance abuse services are quite high (up to 35 percent in methadone maintenance programs, 82 percent in outpatient drug-free programs, and 90 percent in TCs) (Anglin & Hser, 1990; Bale et al., 1980; Hubbard et al., 1989; Mejita et al., 1997; McLellan et al., 1983). Regardless of the progress clients make in residential AOD treatment facilities, research suggests that it is difficult to maintain these gains following discharge (Hayes, 1988; Hubbard et al., 1989; see also Godley et al., 1994). Brown et al. (1989; Godley et al., 1994) found that 60 percent of adolescent substance abusers had relapsed within the first 3 months of discharge, with relapse rates climbing to 80 percent in the first 12 months following discharge. Similarly, Spear and Skala (1995) found that 92 percent of adolescents had relapsed at least once during the first year after discharge from a residential facility, with 76 percent using primarily alcohol or marijuana at least monthly by the end of the first year. Adolescents were found to be most vulnerable to relapse during the first 2 months following treatment. Perhaps this is not surprising given that adolescents often return to the familiar peer, family, and school stressors which supported and promoted their initial AOD use.

Continuing care services are a vital link in the service continuum, but such services are infrequent, underdeveloped, and tend to focus on only single problem areas such as peer networks or school placements (Armstrong, 1991; see also Dembo et al., 1993). While many programs are well intentioned, services which are provided are often fragmented. In an OJJDP-commissioned study on community-based continuing care services, Altschuler and Armstrong (1991) found that a relatively small proportion of programs focus on juveniles, and that reported outcomes are often anecdotal, impressionistic, and descriptive. In addition, the design and operations of most programs are not clearly spelled out, explained, or implemented.

Several recent studies have more systematically evaluated aftercare treatment programs for juveniles and have come to mixed conclusions about the effectiveness of continuing care services. Sontheimer and Goodstein (1993) evaluated an intensive aftercare probation program for juveniles with a primary focus on reintegrating serious, habitual male juvenile offenders from a State training school back into the community. Individuals were randomly assigned to an experimental intensive aftercare probation group or a traditional probation control group. The study found that the incidence of rearrest was significantly lower for the aftercare group than the parole group, but this effect disappeared when controlling for follow-up. When examining rearrest frequency, however, the aftercare group showed a significantly lower number of rearrests than the control group, and these differences were maintained when controlling for follow-up period length.

Greenwood et al. (1993) conducted a 4-year evaluation of two experimental aftercare programs for juvenile offenders. At the conclusion of residential placement, approximately 100 youth from each site were randomly assigned to a 12-month experimental aftercare group or a control group. The aftercare model included multiple contacts between the juvenile and his or her caseworker,

improved family functioning, and linkages to appropriate educational or employment programs. Control group participants were released into the community with no services. Researchers did not find significant differences in self-reported offenses, substance use, school involvement, or official arrest data when comparing the two groups. Some positive effects were observed on self-report measures, such as personal goals, sense of self-efficacy, and coping skills, although these effects were not consistent between the two programs. Researchers concluded that “surveillance and casework” (32) was insufficient to overcome the multiple negative influences of peers, family, and environmental deficits. They recommended refocusing the program on cognitive-behavioral techniques that would provide more concrete tools for community reentry.

Only one quasi-experimental study has focused on the effectiveness of treatment-oriented aftercare following residential substance treatment for addicted offenders. Sealock and Gottfredson (1997) evaluated 700 substance-abusing juvenile offenders who were assigned by a judge to either a 2-month residential substance abuse treatment program group or a comparison group. At the conclusion of the residential program, participants reported significantly decreased substance use and delinquency as well as increased cognitive decision-making skills. Participants also demonstrated a longer period of time from entry into the study until rearrest than the comparison group. Following program completion, residential program participants were assigned to a treatment (n = 120) or comparison group (n = 132) for a 4-month community aftercare phase. Aftercare services included improving discipline and reducing enabling negative behaviors within the youths’ families, increasing youth involvement in productive community activities, and reducing negative peer influences. Results from this program indicated that the positive gains which were made in treatment were not maintained through aftercare. Aftercare youth reported more delinquent behaviors and demonstrated more participation in substance-related crime than the comparison group. Aftercare juveniles did, however, show less participation in interpersonal crimes. The researchers concluded that “...this research provides yet another case in which the positive results of residential treatment are short-lived...Future efforts to provide treatment-oriented aftercare services must grapple with the difficult issue of client attrition...and with the basic problem that treatment services of the type provided in aftercare programs do not seem able to compete with the temptations of street life” (13).

One important exception to this trend is the Wraparound process. Wraparound is not a program or type of service, but an approach to developing a system of care for children and their families (vs. an interagency network) among formal and informal resource providers based in individual communities (VanDenBerg, 1998). Wraparound is a strengths-based, needs-driven, unconditional approach to developing individualized family-centered plans involving “a combination of existing or modified services, newly created services, informal supports, and community resources, and should include a plan for a step-down of formal services” (Ottawa-Carleton Wraparound, 1998). A community team accepts family referrals, and, if a family is accepted based on local priorities, sends the case to a broker agency. While not *the* Wraparound agency, the broker agency facilitates the case as part of the process involving all community resources. In developing a service plan, a child and family team is composed of four to ten individuals (plus the child and family); this team must have a membership of at least 50 percent

nonprofessional individuals representing both formal and informal resources (Ottawa-Carleton Wraparound, 1998). While each community defines the population to be targeted by the Wraparound process, some communities have chosen to include adolescents who could be returned from residential treatment centers to the community through the availability of Wraparound services (Milwaukee County Mental Health Division, 1998). The process seeks to find the least restrictive, most normative environment possible for an adolescent while providing access to a variety of services and community supports (VanDenBerg, 1998). Continuing care services available through processes such as Wraparound might be optimum methods of providing ongoing care once a juvenile has completed juvenile justice system processing.

According to Catalano and associates (1989), a strong continuing care/aftercare program must include elements which deal rapidly with relapse to substance abuse, respond to those relapses in ways that discourage continued use, and support a return to abstinence. As mentioned in the *Treatment Correlates* subsection above, strong predictors of relapse include the presence of AOD cravings and the inability of treatment clients to establish non-AOD-using social contacts in work and school settings. Specific interventions which appear to have the greatest promise of addressing these multiple factors include multidimensional family therapies and cognitive-behavioral skill training. Skill training “seeks to alter skills by actively developing new ways of interpreting and responding to inter- and intrapersonal situations....Because skill training seeks to alter individuals’ methods of coping, and to instill self-control, it should be effective in helping adolescents maintain treatment gains and negotiate their post-treatment environment” (Catalano et al., 1990/91:1130). While well-controlled studies are needed to evaluate the long-term effectiveness of cognitive-behavioral skill training programs, evidence is accumulating which supports such interventions in other related areas (see Catalano et al., 1990/91 for a review of these studies).

Internal evaluations of Wraparound services have shown positive results. A critical component of the Wraparound process is to design outcome indicators and collect outcomes information. In Wraparound Milwaukee (Milwaukee County Mental Health Division, 1998), 65 percent of youth served were delinquent. Youth and their families were enrolled in Wraparound Milwaukee and assigned to a broker agency. A strengths inventory was built, and a child and family team was convened to develop the Wraparound plan, including establishing goals, identifying and prioritizing needs, and developing strategies to meet identified needs (including identifying both formal and informal resources). While a comparison group evaluation has apparently not been undertaken yet, results from a before-after comparison study showed a 40 percent reduction in utilization of residential treatment services, and an almost 50 percent drop in the utilization of inpatient psychiatric Medicaid hospital days. In addition, children enrolled in the process showed a 40 percent drop in the number of felonies committed between intake and 1 year of services, and a 31 percent drop in misdemeanors committed. Clinical outcomes were also positive, with improvements in functional assessment scale and behavior scores, as well as decreases in reported restrictions in living situations.

General Recommendations for Future Intervention Research

Recommendations for future research on adolescent AOD treatment have been made by a number of prominent researchers (Henggeler, 1997a; Greenbaum et al., 1996; Dembo, personal interview; Szapocznik & Williams, in review; Winters, Latimer et al., in press). The following provides a summary of what the authors consider to be especially relevant:

1. Develop consistent assessment and outcome measures for use in national demonstration projects of program effectiveness.
2. Conduct well-controlled trials, preferably with random assignment, so that the relative effectiveness of different modalities can be more adequately tested. This includes exploring which treatments work best at various developmental periods in an adolescent's life.
3. Develop and evaluate multisystemic interventions that can be used with a variety of cultural groups or which can be differentially used to engage, retain, and treat specific cultural groups.
4. Explore factors which relate to treatment retention.
5. Compare the cost-effectiveness of various treatment modalities.
6. Examine the mechanisms which support positive changes in adolescent substance use behaviors, including the role of the environment and health service options.
7. Establish prevalence of co-occurring mental disorders and AOD abuse among adolescents using general population samples.

Summary and Recommendations

Based on a review of the juvenile drug-crime cycle with all of its correlates as well as a review of the various interventions used to break this cycle, it is essential to develop successful interventions as a comprehensive system, not merely a series of components. The evaluation data strongly suggest that an integrated, collaborative system that includes comprehensive assessment, referrals to appropriate services, case management along a continuum of care, and system collaboration has the greatest probability of yielding successful outcomes.

Throughout this report, several systems and services have been cited as examples of juvenile justice programs that have shown some success in combating the juvenile drug-crime cycle (such as drug courts, TASC, and Target Cities). These programs and services have all been developed to assist in ameliorating the serious problems associated with the cycle to a greater or lesser

extent. It is the authors' position that each of the successful programs and services discussed in this publication should be looked at as a potential source for developing community-specific programming. If a community has an existing TASC service that is functioning well and has the support of community members, it would likely be best to build improved service provisions around TASC. The same principal holds true for drug courts, Target Cities, or other programs. If communities have existing resources on which to build, those resources should be looked at as essential assets; it is expedient to not waste time reinventing the wheel.

A Conceptual Model

As a result of extensive literature review, input from juvenile justice and adolescent substance abuse experts, and analysis of available data, the guidelines below are recommended in developing community-based collaborative infrastructures capable of intervening in the juvenile drug-crime cycle. Interventions designed to meet these guidelines should recognize the balance of the very real needs for public safety, juvenile treatment, and the importance of reintegrating the juvenile into the community. This statement implies a primary importance of protecting the public. Today, society expects the justice system to protect us from future crimes that may be committed. There is also a recognition that, at some point, a juvenile leaves the supervision of the juvenile court and an expectation that the court will help ensure that services are provided to change/rehabilitate the juvenile.

As has also been noted in this report, the juvenile justice system is increasingly concerning itself with reintegration into the community – often the community that has been damaged by the juvenile's behavior. Such interventions can be successfully accomplished through a local collaborative system using graduated sanctions addressing public safety, rehabilitation, and community reintegration. However, all key stakeholders within the collaborative should recognize that as the party responsible for the safety of the community, the juvenile justice system must hold final authority in supervision and treatment decisions. At the same time, it is crucial that the juvenile court recognize the importance of collaborative input from appropriate service agencies and the community if goals are to be successfully addressed through comprehensive assessment, informed collaborative judicial decision making that results in public safety, and successful treatment/rehabilitation ending in continuing care and community reintegration.

Guiding principles

1. Intervention must take place early when it has the best chance of reversing or ameliorating problem behaviors.
2. Adolescents entering the system must undergo a comprehensive needs assessment in order to tailor interventions to each juvenile's unique needs.

3. Once needs have been identified, adolescents must be provided with a flexible and comprehensive continuum of care which offers a full range of relevant services needed for effective intervention. Recognizing that a full range of treatment services may not be available in all communities, an important collaborative role is to advocate for additional services.
4. Collaboration between and across systems relevant to juveniles (families, schools, the courts, and communities) must be in place, and there must be an agent or agency accountable for establishing and maintaining collaboration between components of the care continuum.
5. Case management through one agent or agency should be provided to help juveniles and their families successfully navigate the continuum of care.
6. Consistent with principles of client confidentiality and juvenile justice system responsibility, an MIS should be in place in which all relevant information would be available to those involved in service provision.
7. Continuing care services should be developed to provide continuing support for the juvenile following release from formal AOD treatment.
8. Programs must undergo consistent, ongoing, rigorously designed evaluation including cost-benefit analysis. Such evaluation should result in modifications to strengthen what works and change what does not.
9. Effective interventions must be related to the school, peer, and family systems where adolescents routinely socialize and receive reinforcement for their substance-using behaviors.
10. Program interventions and staff training must be sensitive to the unique and culturally specific needs of adolescents.
11. It is important to recognize that interventions occur within specific national and local community, educational, and economic opportunity structures. A successful intervention should include attempts to ensure high quality educational and job opportunities for those at risk. Job opportunity issues here refer to a macro-level concern for environments that provide positive alternatives to delinquency and substance use for youth.
12. Given the general lack of experimental evidence supporting more restrictive services, treatment dollars should be targeted toward programs which are less restrictive and are more likely to address juvenile problems in the context in which they occur and are reinforced: the family, the school, and peer groups of the adolescent.

These guiding principles provide a reasonable framework for developing a suggested model program that could contribute to local intervention program development. Following is a brief description of the broad categories that a model program would incorporate using the previously outlined guiding principles.

Systems flow: what a model program might look like

Acknowledging that each community system for breaking the juvenile drug-crime cycle will be uniquely tailored to the locale's needs and resources, the following section provides a brief description of the flow in a comprehensive system.

Single point of entry

From a cost-efficiency standpoint, adolescents would enter the system at a single-point-of-entry such as a JAC or Target Cities-modeled CIU. This location would be able to utilize a comprehensive MIS (consistent with principles of client confidentiality and juvenile justice system responsibility) and might be ideally colocated with an appropriate substance abuse treatment facility providing adolescent detoxification and stabilization (Dembo & Rivers, 1996). The point-of-entry would provide assessment and screening, assign a CM trained in both effective assessment and juvenile justice system management, and make recommendations for services based on assessment.

Immediate and comprehensive assessment

At the point-of-entry, immediate and comprehensive assessment would be provided. Identification of key needs and problem areas is required to avoid inappropriate referrals, duplication of services, and unnecessarily restrictive placements. Assessment should be consistent with protecting the community. Recommendations to the judicial system for services would be made based on this assessment (including dismissal, diversion, or disposition/detention, as well as initial psychosocial and treatment suggestions). Assessors would have training in the specific instruments used, be culturally sensitive, and aware of the role of cultural differences.

Cross-systems case management

Case management identifies needs, service gaps, and preliminary outcomes through the following functions: ensuring involvement with assessment, supporting compliance with recommendations, tracking treatment progress, forging linkages with service providers, and monitoring random substance testing, such as urinalysis. All those involved in service provision would have access to relevant information through the MIS (again recognizing client confidentiality and juvenile justice system responsibility). Case management would be coordinated by one agent or agency. Specific functions of case management could be contracted

or reassigned with the understanding that the coordinating agent would oversee how various aspects connect and work for the best interest of the juvenile.

Continuum of care

Recognizing that many delinquent youth have multiple factors which affect their decisions to use substances, a continuum of care providing links to service providers in a variety of areas is crucial. Services provided within the continuum of care would be community-based whenever possible, involve the family (nuclear and extended), identify and address risk factors, identify and effectively utilize protective factors and resources, be comprehensive and flexible, empower families and communities, aim at modifying personal characteristics and developing competencies, and build positive peer networks.

Judicial decision making

While judicial involvement and decisions may occur at other points, judges would typically become involved after assessment and perhaps after the initiation of case management. Judges would retain sanction imposition authority, and would play an active role in ensuring the juvenile's adherence to treatment services as recommended by both the CM and other treatment collaborative partners as well as ensure supervision requirements under a graduated sanctions framework. Sanctions would be clearly stated and defined, provided in list format for the juvenile to sign at program entry with the understanding that any infractions would have clearly defined repercussions. Collaborative members would agree on the sanction process and support judicial decisions. The least restrictive supervision option still consistent with community protection would be utilized.

Systems collaboration

As has been shown, breaking the juvenile drug-crime cycle is a complex process that draws upon a wide variety of community agencies and systems. Therefore, it is crucial that the juvenile justice system provide linkages between all of the community systems that can contribute to breaking the cycle. For example, in a family based intervention, linkages would occur with agencies and systems such as schools, communities of faith, social service, and public health agencies and employers (including job training and skill development).

Treatment

Treatment programming is complex due to the need to address factors involved in substance abuse initiation, continuation, and relapse. In order to increase the probability that treatment will be effective, factors such as those previously identified as correlating to substance use would be considered and programming would be based on individual case requirements. Programs showing the strongest evidence of treatment effectiveness would be given highest treatment priority. Ideally, a core of treatment services would be provided at a clearly specified point in the

care continuum under the guidance of a CM who would then connect the adolescent and his or her family to other needed services.

Utilization of traditional services

While many traditional AOD services such as inpatient programs, outpatient services, and half-way houses fail to show long-term treatment successes, these services will continue to be needed within the continuum of care. However, these alternatives would begin to incorporate the approaches shown to have the greatest likelihood of success in enhancing long-term outcomes as they sought to remain viable parts of the juvenile justice process.

Continuing care

The juvenile justice system and the juvenile would maintain contact after formal systems processing is completed. To maintain ongoing evaluation efforts, the juvenile justice system would benefit from continued monitoring of and involvement with the client system. For the juvenile, continuing care would help maintain treatment and programming gains during his or her transition from treatment to community. This view is consistent with both the BARJ model, which stresses the importance of community reintegration, and the concept of reentry courts that is emerging within the drug court movement.

In the BARJ model, it is strongly suggested that a type of closure be sought where the offender is reintegrated into the community, generally under the care or supervision of a community organization. In the drug court model, a more formal system is suggested that includes judicial/court supervision of an offender (juvenile or adult) after they complete their court imposed sentence, including all required treatment and auxiliary services, as reported at the 1999 National Association of Drug Court Professionals Annual Training Conference in Miami, Florida. Reintegration would link the juvenile to community supports and reinforce positive modeling. Continuing care would include an exit posttreatment assessment conducted by the CM (within the framework of the BARJ model, reentry court or similar structure) to identify unmet or ongoing service needs, as well as link the juvenile to community supports and educational, vocational, and economic opportunities. Four official reports (at approximately 1, 3, 6 and 12 months after treatment completion of formal systems processing) by the specified community services to the CM would be planned, allowing the juvenile justice system to intervene early and appropriately with observed problems, thus reducing recidivism and problem escalation. Such intervention would include judicially recommended referral to relevant human service agencies and available publicly or privately funded treatment programs. Continuing care monitoring would also help collaborative partners not only better inform national and local policymaking bodies about the local juvenile community but also advocate needed macro-level changes.

Evaluation

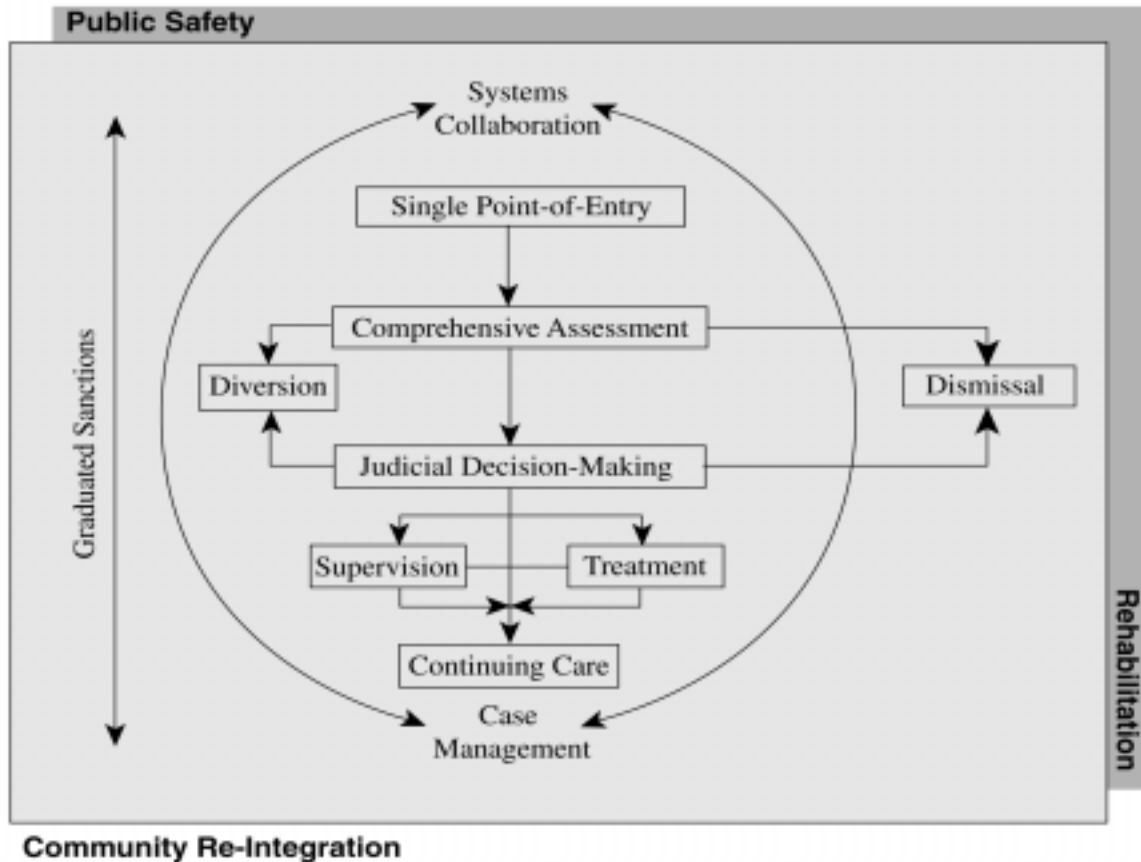
As has been noted throughout this report, scientifically well-designed evaluation studies documenting program effectiveness are generally absent. This occurs for a variety of reasons ranging from a lack of resources to limited expertise to conduct such studies. It would likely be impossible for each program to conduct major scientific outcome studies. However, at the program level, a number of things could be done that would provide important evaluation information. First of all, local programs need to engage in formative and process evaluation. This would involve careful documentation regarding initial goals and objectives, the process of program implementation, and structural changes that occurred during implementation. Perhaps the most important program level evaluation activity would be the development and implementation of an MIS. An MIS would allow programs to document programmatic and client characteristics as well as important baseline, change, and outcome data that would allow for a basic level of evaluation (a before-after comparison). Carefully designed scientific outcome studies would likely be beyond the resources of any local program; however, such efforts should be encouraged by funding agencies and could be conducted under the auspices of a wide variety of Federal funding agencies. Large-scale evaluation impact studies are an important part of documenting the effectiveness of the collaborative intervention program alternatives advocated in this report. Continued funding of collaborative programs designed to break the juvenile drug-crime cycle likely will depend on the provision of data documenting a well-managed program serving at-risk populations who show levels of behavioral change significantly greater than would have occurred without the collaborative intervention program. As noted, funded programs should be required to utilize an MIS system that supports formative, process, and before-after evaluation. Participation in larger scale scientific comparison group studies that would provide valid data on cost-effective outcomes of the program should also be encouraged.

An integrated model

A wide variety of material has been reviewed in this report, and an attempt has been made to examine effective intervention programs and their elements at each stage of the juvenile justice system. This has been done within the broad framework of existing conceptual and structural models from the BARJ model to drug courts to TASC. In their review of promising drug treatment programs, Nissen and her colleagues (in press) have made many model program recommendations which are similar to those in this report, thereby providing independent corroboration from practitioners.

Figure 1 attempts to both summate and integrate the suggested model elements that have been discussed and illustrates the relationship between graduated sanctions, case management, and systems collaboration as a juvenile progresses through the juvenile justice system. As noted earlier in this report, the juvenile justice system is held responsible for maintaining public safety, while at the same time acting as an advocate for rehabilitation of the offending juvenile with the

Fig. 1: Breaking the Cycle: Juvenile Justice System Treatment Services Reform



goal of effective community reintegration. Graduated sanctions provide the direction and energy for such movement. However, in order for the adolescent to receive appropriate and comprehensive services, interconnected linkages (systems collaboration) must exist between service providers. CMs both assess the juvenile and help him or her move through and between judicial, AOD treatment, and social service systems. In this way, juveniles receive the most appropriate and comprehensive services a community can offer while still remaining firmly under juvenile justice system supervision.

Implementation at the local level

In order to successfully implement the strategies outlined above at the local level, support from all relevant components of the juvenile justice system and the community is mandatory. Although mandated treatment can be successful for adolescents, gains made need to be sustained once the adolescent returns to his or her community. The following steps comprise a suggested strategy for implementing model programs at the local level.

First

Planners should conduct a community assessment in order to identify juvenile justice system willingness to participate and provide leadership (especially judicial willingness), identify potential resources, understand community expectations, determine level of community support for program goals and objectives, and identify existing collaborative structures. Judicial buy-in and support of the recommended strategies is essential. As judges provide final authority in the juvenile justice system, attempts to develop a collaborative systems approach to juvenile justice substance abuse treatment simply will not be successful without sustained judicial support.

Second

All major systems in which the adolescent interacts (schools, communities of faith, families, etc.) need to be invited to participate with the courts in the development of strategies and services. This establishes points of contact, opens communication channels, promotes integrated approaches to problem solving, and increases community buy-in to the process.

Third

The juvenile justice system at the local level must be committed to making referrals a reality. In maintaining the delicate balance between accountability and rehabilitation, the juvenile justice system serves as the link between the needs of the juvenile and the needs of the larger community. Enforcement of treatment plans, engagement of the family unit, and support of collaborative action are all roles which can be filled by judges, probation officers, and other law enforcement officials.

Fourth

Those responsible for implementing any element of the overall plan should receive necessary training prior to implementation. Supervisors should support professional development activity enhancing employee effectiveness in their assigned roles.

Fifth

Mechanisms must be put in place to ensure that collaborative program efforts are sustainable. Transitions into new initiatives should be planned and gradual, allowing time for necessary training and problem solving. Alternative strategies and processing options should be available as often as possible for staff charged with implementing new programs. At all levels (administrative, management, and direct service staff), commitment to cross-systems collaborative principles is needed to sustain effort and create an environment in which collaboration can occur. Appropriate resource development activities should be directed to sustain and replenish resources. Ongoing feedback and support mechanisms should also be in place.

Sixth

The implementation phase of any project potentially involves conflict, which can result in wasted resources and energy or even lead to program destruction. Within a collaborative system, successful conflict mediation involves taking various perspectives of the problem situation into account and then attempting to reach consensus on how best to resolve them. Additional strategies to resolve conflict include avoiding or delaying action, deciding by majority rule, encouraging those in conflict to develop alternative solutions on their own, or even using directive processes by which those in positions of authority gain compliance with their views and wishes (Kindler & Leigh, 1996).

Kindler and Leigh (1996) suggest that no single approach to conflict resolution will be effective in every case. Rather, they note that effective mediators of conflict do the following: explore the issue to identify the source of conflict and those who should be involved in resolving it; determine the level of resource commitment (time, effort, etc.) to devote to resolution; and implement a conflict resolution strategy based on these considerations, learning from the process through follow-up after the conflict is resolved.

Finally

It is critical that planners monitor and evaluate community collaborative processes and outcomes, as well as implement evaluations of the overall attempts to intervene with juvenile delinquency treatment. The knowledge gained from such monitoring and input from various community units should be shared with local and national decisionmakers with the goal of informed advocacy at the macro-level.

Conclusion

The nature of juvenile AOD use, AOD treatment, and crime is complex. Future programmatic attempts to break the juvenile drug-crime cycle must be based on knowledge gained from past work and methodologically sound evaluation research. This report has been an attempt to summarize such knowledge and suggest a model that would be useful to communities attempting to develop intervention programs. The focus has been on general principles rather than on specific organizational structures, recognizing that local communities must use any models suggested or information provided within the framework of local resources and possibilities. The authors are hopeful that the information presented here will provide a useful contribution to the work of collaborative partners in the juvenile justice system, AOD treatment programs, and a wide variety of community agencies as they search for ways to intervene with the juvenile drug-crime cycle.

Endnotes

¹These researchers found a correlation of .53 between delinquency and substance use (see also Johnson et al., 1991).

²It should be noted that the definition of the age of offenders covered by the juvenile court increasingly depends on State law and, at times, the discretion of the district attorney. That is, many States have differing ages that define juvenile status; even within State definitions, specific violent crimes may either require trial as an adult or leave decisions of adult or juvenile status up to the discretion of the district attorney (Sickmund, 1994; Strom et al., 1998).

³Please refer to Schaefer (1995), Leccese & Waldron (1994), and Winters & Stinchfield (1995) for a comprehensive review of adolescent substance abuse measurement instruments, including detailed validity and reliability information.

⁴For further information on use of the PESQ, as well as reliability and validity estimates, see Winters, 1991,1992,1993.

⁵Interrater reliability on diagnoses ranged from Kappa = .53 to .86. Test-retest reliability on diagnoses over a 1-week period ranged from Kappa = .80 to .83. Evidence for criterion validity was found in clinician ratings which were generally in agreement with the ADI scores, ranging from Kappa = .71 to .82 (Winters et al., 1993).

⁶See the National Drug Court Institute (1999b) publication *Federal Confidentiality Laws and How They Effect Drug Court Practitioners* for a more complete overview of confidentiality laws.

⁷Children and Family Services Act, 20 ILCS 505/35.1

⁸Dembo et al., (1993) describe one promising preadjudication program: the Family Education Program, run by the Prevention and Intervention Center for Alcohol and Drug Abuse (PICADA) in Madison, Wisconsin. PICADA is a diversion program which provides a variety of intervention services, including screening, assessment, education, and referrals to youth and their families. Goals include: increase knowledge about AOD; increase clients' ability to identify and communicate attitudes about AOD; promote attitude change; increase clients' abilities to more accurately assess their substance use/abuse; and increase clients' willingness to accept referrals to other programs. Pre- and posttest measurements, in the absence of a control or comparison group, indicated changes in knowledge, attitudes, and feelings regarding substance use when assessed shortly after program participation. Literature reporting formal evaluation of this program was not located.

⁹For a history of the involvement of the court with AOD abuse, see Inciardi et al., 1996.

¹⁰For a recent description of drug courts, see Drug Strategies, 1999.

¹¹For a comprehensive discussion of the issue and application of graduated sanctions, see Krisberg and Howell, 1997.

¹²For a description of intensive juvenile probation, see Wiebush, 1993.

¹³For an overview of a urine-monitoring program, see Crowe, 1998 and Inciardi, 1994.

¹⁴Nissen and her colleagues (in press) recently completed a CSAT monograph which reviews innovative and promising practices and programs which attempt to integrate substance abuse treatment with the juvenile justice system. The document reviews specific program models which are being used with some level of success, are meeting most of their program goals, and have gained increasing popularity. All the programs which were reviewed were demonstration projects associated with CSAT over the course of the 6 years prior to publication. This document should prove to be a valuable resource for reviewing the "best practices" of programs which are currently showing the greatest promise of effectively intervening in the drug-crime cycle of juvenile offenders.

¹⁵For example, the Strategic-Structural Systems Engagement technique (Santisteban et al., 1996; Szapocznik et al., 1988). This modality has proved particularly promising with Hispanic families due to traditionally strong family ties.

¹⁶An example of this modality is the Multiple Family Group Treatment (MFGT). Due to the large client base, the MFGT decreases the impact of differences in ethnicity/socioeconomic status and power between the facilitator and the clients. The MFGT model provides a supportive network for families engaged in addressing similar problems, and promotes the use of community as a resource for at-risk children and parents. Rather than focusing on individual pathology, the group addresses areas which are of concern to all families (McKay et al., 1995).

Appendix A: Conducted Interviews

Foster Cook, M.A.

Director, Substance Abuse Program, University of Alabama

Interview Subject Expertise: Treatment services for drug-using offenders.

Peter Delaney, D.S.W.

National Institute on Drug Abuse

Interview Subject Expertise: Services needed by adolescent AOD users.

Richard Dembo, Ph.D.

Comprehensive Assessment Center, University of South Florida

Interview Subject Expertise: Single-point-of-entry.

James Hall, Ph.D.

University of Iowa

Interview Subject Expertise: Skills training and strengths-based case management.

David Hawkins, Ph.D.

Director and Professor, Social Development Research Group, University of Washington

Interview Subject Expertise: Prevention and early intervention with at-risk families, children, and juvenile delinquents.

Scott Henggeler, Ph.D.,

Clinical Psychologist, Family Services Research Center, Medical University of South Carolina

Interview Subject Expertise: Multi Systemic Family Therapy, adolescent AOD use, and chronic juvenile offender interventions.

Carl Leukefeld, D.S.W.

University of Kentucky

Interview Subject Expertise: Treatment services, including mandated treatment, in the justice system.

Ethel Mull, M.A.

Executive Vice-President, Chicago TASC Program

Interview Subject Expertise: Juvenile treatment and community services.

Laura Burney Nissen, Ph.D., M.S.A., CAC III

Codirector, Center for High Risk Youth Studies, Metropolitan State College of Denver

Interview Subject Expertise: Strengths-based treatment of juvenile delinquents.

Elizabeth Rahdert, Ph.D.

Research Psychologist, Division of Clinical and Services Research, Treatment Research Branch, NIDA

Interview Subject Expertise: Adolescent AOD abuse assessment and interventions.

Richard Rapp, M.S.A., A.C.S.

Wright State University

Interview Subject Expertise: Case management and the continuum of care.

Harvey Siegal, Ph.D.

Wright State University

Interview Subject Expertise: Strengths-based case management.

Randy Stinchfield, Ph.D.

Associate Director, Center for Adolescent Substance Abuse, University of Minnesota

Interview Subject Expertise: Adolescent addiction instruments.

Jose Szapocznik, Ph.D.

Professor and Director, Center for Family Studies, University of Miami School of Medicine

Interview Subject Expertise: Strategic/Structural Family Therapy, client retention.

Beth Weinman, M.A.

United States Bureau of Prisons

Interview Subject Expertise: Treatment services in incarcerated settings.

Ken Winters, Ph.D.

Director, Center for Adolescent Substance Abuse, University of Minnesota

Interview Subject Expertise: Adolescent addiction assessment, AOD treatment for juvenile offenders.

Appendix B: Assessment Tools

The information below summarizes some of the most frequently utilized and empirically validated screening and mid-range assessment instruments for screening and comprehensively assessing AOD problems in adolescents. Special attention has been paid to those instruments which have been commonly used with juvenile delinquent populations.

Screening tools

Several instruments offer brief, nonintegrated system measures which screen for AOD use. However, the majority of these instruments are either normed on non-juvenile-delinquent populations or have limited psychometric data available. One notable exception is the Client Substance Index-Short (CSI-S) (Thomas, 1990), which offers promise as a screening protocol being developed through the National Center for Juvenile Justice. The CSI-S is a 15-item, yes/no self-report instrument designed to identify juveniles in the court system who are in need of additional AOD abuse assessment. Reliability and validity information were not available at the time of this writing.

Other screening instruments with the most psychometric data include the Adolescent Alcohol Involvement Scale (AAIS) (Mayer & Filstead, 1979), the Adolescent Drug Involvement Scale (ADIS) (Moberg & Hahn, 1991), and the Adolescent Drinking Index (Harrell & Wirtz, 1990). Since it is relatively rare for a substance-abusing juvenile delinquent to use only one substance, alcohol indexes may be of limited value. For a more comprehensive list of adolescent substance abuse instruments, refer to Leccese and Waldron's (1994) or Winters and Stinchfield's (1995) review of adolescent AOD assessment instruments.

Mid-range comprehensive assessment instruments

Several multiscale tools provide strong assessment information. These tools often include both paper-and-pencil and interview formats and address a range of content domains. Due to variations in comprehensiveness, many of these tools can be described as mid-range instruments.

Comprehensive Addiction Severity Index for Adolescents (CASI-A)

The CASI-A is a 45- to 90-minute semistructured clinical interview to assess the "multidimensional nature of problems experienced by those adolescents who present for treatment at various provider agencies" (Meyers, et al., 1995:183). The length of the interview is dependent upon the extent of the adolescent's AOD involvement. The CASI-A is patterned after the well-established, adult-oriented Addiction Severity Index (ASI) (McLellan, et al., 1980) to assess symptoms in areas of adjustment which either result from or contribute to the addiction. It measures risk factors, ongoing symptoms, and consequences of AOD use in seven areas of functioning: education status, AOD use, family relationships, peer relationships, legal status,

psychiatric distress, and use of free time. The instrument incorporates results from a urine screen and observations from the assessor.

Reliability and validity information, while preliminary, is encouraging (alpha ranges between 0.48 and 0.80 for individual sub-scales). Revisions are being made to those areas where the coefficient alpha dropped below 0.60 or where correspondence with clinical records fell below 75 percent. Adolescents were highly satisfied with the structure and format, feeling the instrument was easily understood and allowed them to express themselves clearly. The CASI-A is suitable for repeat administration at posttreatment follow-up evaluations.

Adolescent Chemical Dependency Inventory—Corrections Version II (ACDI-CVII)

The ACDI-CVII is designed for juvenile courts, probation and parole departments, and community corrections programs for troubled youth. It contains 143 items presented in a computerized or paper-and-pencil self-report format, and requires 25 minutes to complete. Items are based on a sixth grade reading level. The six measures include: truthfulness, adjustment (coping, adapting, and functioning), violence, alcohol, other substances, and distress (anxiety and depression). Gender specific norms have been established for the Alcohol Scale and the Distress Scale (the remaining scales did not have significant gender differences). The instrument's developers (Risk and Needs Assessment, Inc.) have reported strong reliability and validity information, although their reports do not appear to be validated by external sources. Validity coefficients for the ACDI and selected MMPI scales ranged between 0.59 and 0.69. Internal reliability coefficients ranged between 0.85 and 0.92 over repeated administrations with large regional samples (Risk and Needs Assessment, Inc., 1997). The company attempts to re-standardize the instrument on a State-by-State basis.

Other comprehensive assessment instruments

The Adolescent Problem Severity Index (APSI) (Metzger et al., 1991) has good psychometric information but has not been normed on juvenile offender populations. Other assessment instruments which have more limited psychometric information are reviewed in Leccese and Waldron's (1994) or Winters and Stinchfield's (1995) review of adolescent AOD assessment instruments.

List of Abbreviations

AA	Alcoholics Anonymous
AAIS	Adolescent Alcohol Involvement Scale
AARS	Adolescent Assessment/Referral System
ACDI-CVII	Adolescent Chemical Dependency Inventory—Corrections Version II
ADAM	Arrestee Drug Abuse Monitoring Program
ADHD	Attention Deficit/Hyperactivity Disorder
ADI	Adolescent Diagnostic Interview
ADIS	Adolescent Drug Involvement Scale
AOD.	Alcohol and Other Drugs
APSI	Adolescent Problem Severity Index
ASI	Addiction Severity Index
BARJ	Balanced and Restorative Justice
BSFT	Brief Strategic/Structural Family Therapy
CAB	Comprehensive Assessment Battery
CASI-A	Comprehensive Addiction Severity Index for Adolescents
CATOR	Chemical Abuse/Addiction Treatment Outcome Registry
CIU	Central Intake Unit
CM	Case Manager
CME	Case Management Enhancements Project
CPHQ	Client Personal History Questionnaire
CSAT	Center for Substance Abuse Treatment
CSI-S	Client Substance Index—Short
CTCR	Center for Therapeutic Community Research
DARP	Drug Abuse Reporting Program
DHHS	Department of Health and Human Services
DSM-III-R	<i>Diagnostic and Statistical Manual of Mental Disorders, Third Edition Revised</i>
DSM-IV	<i>Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition</i>
ESI	Extended Services Intervention
FAM	Family Assessment Measure
FEI	Family Empowerment Intervention
GAO	Government Accounting Office
IPS	Intensive Probation Services
JAC	Juvenile Assessment Center
MCDAAP	Minnesota Chemical Dependency Adolescent Assessment Package
MDFT	Multidimensional Family Therapy
MIS	Management Information System
MOU	Memorandum of Understanding
MST	Multi Systemic Therapy
NA	Narcotics Anonymous
NDCI	National Drug Court Institute
NIDA	National Institute on Drug Abuse

NIJ	National Institute of Justice
OJJDP	Office of Juvenile Justice and Delinquency Prevention
OJP	Office of Justice Programs
PEI	Personal Experience Inventory
PESQ	Personal Experience Screening Questionnaire
POSIP	Problem Oriented Screening Instrument for Parents
POSIT	Problem Oriented Screening Instrument for Teenagers
PTS	Person Tracking System
SSA	Single State Agency
SSSE	Structural Strategic Systems Engagement
TASC	Treatment Alternatives for Safe Communities
TC	Therapeutic Community
TIP	Time Spent in Treatment Program
TOPS	Treatment Outcome Prospective Study
YES	Youth Evaluation Services
YSP	Youth Support Project

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