

Implementation Outcomes of a Comprehensive, Cross-Context, Family-Based  
Community Reintegration Therapy for Drug-Using Juvenile Detainees

Howard A. Liddle, Gayle A. Dakof, Craig E. Henderson, & Cynthia L. Rowe

Center for Treatment Research on Adolescent Drug Abuse

University of Miami School of Medicine

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### Abstract

A new generation of promising interventions has addressed how to honor the protection of public safety while providing rehabilitation options for the youth, and specified the contexts in which the new interventions need to be tested and placed. The juvenile detention center is one of these settings. Recent studies reveal the extent to which urgent mental health, substance abuse, and HIV prevention needs of detained youth remain unaddressed. But devising effective juvenile justice setting-specific and setting-connected interventions requires not only creative treatment development and experimental studies, but also an appreciation of and a plan to address the multisystems dynamics activated when change is introduced into criminal justice environments. This article presents the treatment implementation outcomes within a controlled trial that tested a two-stage, juvenile offender community reintegration intervention. A new variant of an existing evidence-based approach for drug-using teens, Multidimensional Family Therapy (MDFT)-Detention to Community (DTC) (Liddle, in press) was developed for a two-site controlled trial within the NIDA-funded CJ-DATS cooperative (Fletcher & Wexler, 2005). The article: (1) outlines the rationale and protocol basics of the MDFT-DTC intervention – a program for substance using juvenile offenders that connects juvenile justice and substance abuse treatment systems and facilitates adolescents' community reintegration post-detention, (2) presents implementation outcomes, including fidelity, engagement and retention rates of the treatment, treatment satisfaction, and substance abuse-juvenile justice system collaboration outcomes, (3) details the research and intervention implementation challenges surmounted during the study period as well as those that were not or only partially handled, (4) discusses sustainability difficulties in the study's two locales, and the study's research, service, workforce development, and policy implications.

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*Despite growing interest in the study of offender reentry and reintegration, the immense need for successful strategies continues to outpace research on the implementation and evaluation of effective reintegration programs. (Chung, Schubert & Mulvey, 2007)*

Introduction: Discoveries Reveal Challenges.

Juvenile justice is a unique specialty in the criminal justice field. It differs from the adult offender criminal justice field in its core mission, nature of the population and the problems that are faced, its internal systems and systems interface issues, offender disposition procedures and policies, and at least theoretically, on its point of view regarding rehabilitation (Grisso, 2004). In the course of its 130-plus years of existence, through its boom and bust and politics-saturated cycles (Krisberg, 2005), the juvenile justice field has progressed significantly. This development occurs despite the fact that controversies launched some time ago continue to roil (Bullington, Sprowls, Katkin, & Phillips, 1978; Hellum 1979; Kempf-Leonard, 2007), success in reform strategies “has often been elusive” (Wordes & Jones, 1998, p. 557), and considerable confusion still exists about if or how it juvenile justice can recover from its punitive turn (Muncie, 2008). This last trend – a controversial, counter-empirical, and publicly-criticized imbalance in favor of punishment versus treatment or rehabilitation (NYT, 2008) is particularly troubling in various jurisdictions. A new wave of legislation and litigation has occurred not dissimilar to what happened in mental health (patients rights) and other areas, as advocacy groups were formed and became mobilized.

Beyond discoveries that some interventions (military style boot camps, wilderness programs [Lipsey & Cullen, 2007]) and policies (juvenile transfer to adult court [Hahn et al, 2007]) have been either ineffective or harmful, many other advances can be identified

(MacArthur Foundation, 2006; Showyra & Cocozza, 2006). For instance, principles of intervention design and execution and program ingredients associated with favorable outcomes have been recognized through a new generation of empirical work (Drug Strategies, 2003; Lipsey, 1992). New knowledge on the developmental ingredients, patterns and course of delinquency, and co-occurring problems such as substance abuse, depression, trauma recovery or previous abuse has expanded our understanding about the causes, correlates and contexts of juvenile crime and delinquency and the complex characteristics of juvenile justice-involved adolescents. This expanded, research-grounded knowledge base has sharpened our focus on the tough clinical challenges in meeting the unique service needs of adolescent offenders. Solid evidence demonstrates that youth in detention centers, for example, have multiple and overlapping medical and biopsychosocial impairments. State of the science services are rarely available in these settings (Mulvey et al., 2004), and some have concluded that “meaningful treatment in juvenile detention remains a sad illusion (Mendel, R. A., 2007). Too often, overworked or poorly trained staff are ill-prepared to address the multifaceted service needs of the youths in their charge.

Over the last decade, concern has escalated over the number of adolescents with significant substance abuse and other mental health needs involved in the juvenile justice system. Delinquent behaviors are normative in our society in that many adolescents commit at least one delinquent act by the time they reach young adulthood (Johnston, O’Malley, Bachman, & Schulenberg, 2005; Snyder, 2004). Over 2.3 million youth are arrested each year, and it is well established that the majority of these troubled youth enter the justice system with a host of mental health service needs (e.g., substance abuse, psychiatric comorbidity, victimization, HIV risk behavior; Nissen & Kraft, in press; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002; Skowyra & Cocozza, 2006). Once incarcerated, youth meet numerous institutional risks including further victimization and violence (Cesaroni & Peterson-Badali, 2005; Connell & Farrington, 1996). Despite the recognition of this major crisis facing the juvenile justice system,

the services typically provided by the system are more often than not ineffective, resulting in youth with severe behavioral and mental health problems being discharged with these needs being inadequately addressed, if at all (Young, Dembo, & Henderson, 2007; Skowrya, & Coccozza, 2006). When released to the community, these youth often show increasingly severe criminal activity (Lipsey & Derzon, 1998; Sealock, Gottfredson, & Gallagher, 1997), perpetuating a life-long cycle of school failure, poor employment options, and more extensive involvement in the criminal justice system (Ridenour et al., 2002).

This paper highlights and operationalizes a new perspective on juvenile offenders' service needs that we now know must address psychiatric comorbidity, substance abuse, HIV/STD risk behavior, and traumatization. Although research and policy statements have raised consciousness on the importance of these needs and the risks they present for future offending, the justice system has failed to adequately address the mental health needs of youth in their care (US Department of Justice, 2005). Psychiatric disorders are common among justice-involved youth (Abrantes, Hoffmann, & Anton, 2005; Teplin et al., 2002), with prevalence rates *exceeding* those in the general population by as much as 60% (Coccozza & Skowrya, 2000; Kazdin, 2000). In addition, substance abuse continues to increase steadily among justice-involved youth (Golub & Johnson, 2001), with a large proportion (60-80%) exhibiting drug problems severe enough to require intervention (Aarons, Brown, Hough, Garlnad, & Wood, 2001; Farabee, Shen, Hser, Grella, & Anglin, 2001). Further, adolescents are the generation most at risk for acquiring sexually transmitted diseases (STDs) and the human immunodeficiency virus (HIV), which are even more prominent among youth involved in the juvenile justice system (approximately 15-20% of youth; Pack, DiClemente, Hook, & Oh, 2000). Finally, many youth enter justice facilities having experienced victimization and trauma (Abram et al., 2004; Lederman, Dakof, Larrea, & Li, 2004); indeed, trauma may predispose youth to developing delinquent behavior (Finkelhor & Dzuiba-Leatherman, 1994). Juveniles in justice facilities are among the least adequately served of high-risk populations due to fragmentation of

treatment and juvenile justice services, poor coordination of assessment, referral, and treatment activities, and a general lack of resources across multiple systems of care (NIDA, 2002; Shelton, 2001). These gaps in the service delivery system lead to increasingly severe substance use and delinquency problems for many youth, their problems often going unaddressed until they are deeply entrenched in the juvenile, and sometimes adult, justice systems (Aarons et al., 2001; Garland, Hough, Landsverk, & Brown, 2001; Nissen, Butts, Merrigan, & Kraft, 2006).

Other formidable challenges present themselves as well. Perhaps paramount among these is the fact that many of the new interventions have been developed only or primarily in research environments (as is the case for instance, in all of psychotherapy, and the mental health and substance abuse specialties). Although dissemination, and more generally, a new specialty, implementation research, have formed, the transfer potential of most empirically-based therapies to real world settings is unknown. Recent work reveals that the implementation and transfer of even well developed and empirically validated interventions is enormously complicated, and that outcomes achieved in one setting are not always achievable in the next (Sweden; Cunningham, 2002; Littell, Popa, & Forsythe, 2008).

Increasingly, the target range and context applicability and generalizability of empirically-based interventions are the subject of discussion and intervention development work. Although a rationale and call for more comprehensive interventions to treat clinically referred youth was sounded some time ago (Kazdin, 1993), most interventions still typically target one, or at the most two problem areas. Even interventions that are included in evidence empirically-validated therapies' registries, such as NREPP (2008), and Blueprints (Mihalic, Irwin, Elliott, Fagan, & Hansen, 2001), need only show effectiveness in a single target area, and for inclusion, do not need to demonstrate effectiveness in "real world" treatment contexts (i.e., generalizability), in the juvenile justice settings, for example.

One of the most compelling science-based advances in youth treatment has been designing interventions that are developmentally and ecologically-oriented. Family-based

therapies have addressed a number of critiques about the paucity of truly developmentally-based interventions for youths (Holmbeck., Greenly, & Franks,2003; Shirk 1999; Weisz & Hawley, 2002), as well as those recommendations from the juvenile justice field for developmentally informed policy and treatment. In their theories, clinical frameworks, interventions, and outcome measures, these therapies exemplify developmentally-appropriate and developmentally-based treatment (Liddle et al, 2000; Liddle, Rowe, Dakof, & Lyke, 1998). Tested in rigorous studies (Becker & Curry, 2008), these approaches show consistently favorable outcomes with drug-using and juvenile justice samples (Austin, Macgowan, & Wagner, 2005; Liddle and Hogue in press; Vaughn & Howard, 2004).

Given the evidence to date, this group of systemic therapies offers promise to be developed and tested with the previously stated needs and progressions in mind. This article aims to contribute to the juvenile justice and implementation literatures by describing the research and clinical implementation issues we encountered in conducting a rigorous community-based RCT. It fits within other U.S. and international efforts to adapt and test established family-based therapies in juvenile justice settings (Schoenwald & Hoagwood, 2001; Rigter, 2005).

Detention to Community (DTC) Study. The “Detention to Community” (DTC) study aims to develop and experimentally test an innovative two-stage, cross-systems (juvenile justice-substance abuse) intervention. First, in the detention setting, then, post-release, a community-based drug abuse treatment setting for juvenile offenders, the new approach uses a family-based intervention for drug-involved juvenile offenders with state-of-the-art HIV/STD prevention. Main case-level outcome variables were drug use, delinquent and high risk sexual behavior, and association with delinquent peers. Outcomes were also assessed at the systems level. We assessed the impact of the MDFT-DTC intervention relative to usual services (e.g., collaboration among therapists, probation officers, and judges). A total of 154 youths recruited from two detention centers (Miami-Dade County in Southeast Florida, and Pinellas County in Central

West Florida) were randomized in detention to one of two study conditions: 1) a cross-systems family-based intervention (Multidimensional Family Therapy, MDFT) or 2) enhanced services as usual (ESAU). The cross-systems integrative model is based on an established family-based intervention for juvenile offenders with drug abuse problems, MDFT (Liddle, 2002; NIDA, 1999, 2006; NREPP, 2008; Drug Strategies, 2005).

The two secure detention facilities detain youth who are pending adjudication, disposition or placement in commitment facility. Services for youth in both detention centers include education, crisis intervention for mental health problems, and health care as needed. In order to conduct the study and implement the new intervention within detention and in the community following release, systems-level interventions were begun in the study planning phase, and they continued throughout the follow-up period. Using principles and protocols from the literature, and our previous experience, the research teams in Miami and Pinellas established strong working relationships with the detention center administrators and staff to integrate research procedures and interventions within the daily operations of the facilities. The first challenge was screening and recruitment of study participants in detention. We established a process with the detention intake workers that permitted researchers to review files and interview potential study participants within hours of intake processing. Second, detention administrators created new procedures and made space available (no small accomplishment in crowded facilities), to allow MDFT providers to meet with the teens, and with the youths' family in detention. Third, detention administrators and staff collaborated with the research teams to integrate the new in-detention HIV groups into the daily detention programming. Fourth, the research teams developed an efficient process with ESAU providers so that adolescents would receive services as quickly as possible after detention release (for MDFT providers, therapeutic contact began in detention and continued after release). Finally, in the outpatient phase of intervention when youth were in the community, close collaboration (e.g., frequent "touch base" meetings, e-mails, phone calls, impromptu appointment before or after a court hearing) was required between the

therapist and family and stakeholders from juvenile probation, the public defender's office, state attorneys, and juvenile court judges to support youths' treatment participation, reduce recidivism, and, in some cases, keep the youth in the juvenile system and avoid transfer to the adult system ("until the program's results can be felt").

Cross-systems intervention: MDFT-DTC. This cross-systems intervention model is an adaptation (see the Vaughn et al 2008 recommendation in this regard) of an existing empirically-supported multiple-systems oriented adolescent drug abuse treatment Multidimensional Family Therapy (MDFT) (Liddle, 2002). MDFT has demonstrated clinical and cost effectiveness in a series of clinical trials in comparison to a range of active treatments with drug-abusing juvenile offenders (Liddle et al., 2001; Liddle, Rowe, Dakof, Ungaro, & Henderson, 2004; Liddle, Dakof, Turner, Henderson, & Greenbaum, 2008; 2009). We adapted MDFT for this study in two ways. First, we added an in-detention module so that the individual and family interventions could begin while the youth was in detention. Pre-release planning is a known critical ingredient, a predictor of post-release community integration and recidivism reduction. This in-detention module also included interventions with detention center staff and juvenile court personnel, including judges and attorneys, to inform them about the program and begin the collaborative process. Second, we designed and integrated a science-based family-oriented HIV/STD prevention module into the MDFT intervention. These advances respond to strong recommendations from public health experts about the need to develop new treatments that concurrently address substance abuse, HIV risk, and related problems among juvenile offenders with comprehensive approaches (Drug Strategies, 2005; Teplin et al., 2005), and to offer these treatments both in, and in collaboration with, juvenile justice settings.

MDFT-DTC addresses the well-documented multiple impairments of drug-using juvenile justice-involved adolescents. Change is targeted in the core problem areas of drug use, delinquent behavior, and high-risk sexual behaviors, yet these impairments are not reduced to a function of criminal thinking or other individual risk factors. Using developmental

psychopathology research, these interrelated adolescent problems are understood within a network of familial, peer, environmental, as well as intrapersonal influences (Brook, Brook, Zhang, Cohen, & Whiteman, 2002). Thus, risk and protective processes in important developmental domains of individual functioning, family relationships, peer relations, and school are considered fundamental to case conceptualization and planning. Among the strongest and most consistent empirical findings in the delinquency and drug abuse fields are those linking conflict and disconnection in family relationships, and deficits in parenting practices to a range of adolescent problems, including sexual risk-taking (Dishion & Medici-Skaggs, 2000; Donenberg, Paikoff, & Pequenat, 2006). High-risk sex is increasingly recognized as an important target for these potent interventions (Perrino, Gonzalez-Soldevilla, Pantin, & Szapcznik, 2000).

Combating a long standing public health dilemma (U.S. Department of Health and Human Services, 1999), and the fragmented nature of existing juvenile justice services (Henderson et al., 2006; Teplin et al., 2002; Lederman et al., 2004), this model combines coordinated and comprehensive interventions at two points, established as critical in the youth's juvenile justice involvement--detention entry and release to home and community. By working with teens and parents while in short-term detention (a juvenile justice setting that has been underutilized in the past as a context of assessment, stabilization, and intervention), this approach motivates and helps prepare youth and their parents to participate actively in treatment during the crucial period immediately following incarceration. The post-detention period is a time during which many youth relapse and return to criminal behavior (Wasserman et al., 2003). Intervening at this juncture serves as a bridge that connects and coordinates the multiple systems involved with juvenile offenders' reintegration in their community and family. The ultimate aim is to reduce drug abuse, reoffending, risk for STDs/HIV, and ultimately chronic addiction and involvement in the criminal justice system (Altschuler & Armstrong, 1994; Lipsey & Wilson, 1998).

MDFT-DTC is context and time-specific (Stage 1: in-detention; Stage 2: post-detention/community-based), but these two intervention stages are conceptually and clinically interdependent as well. Stage 1 serves as a foundation for post-detention work. During this stage, in-detention outcome goals, such as relationship formation motivation enhancement, are created using the crisis of the recent arrest and incarceration. Stage 2 uses the orientation and specific outcomes that have been achieved in stage 1 as building blocks for change that is oriented toward reintegration in the teen's community and family. Treatment works in the four main intervention areas – teen, parent, family, and with extrafamilial systems which aim to accomplish particular, small changes which are used as foundations to request and shape more complex changes. This intervention responds to a consistent recommendation in the criminal /juvenile justice and substance abuse literatures – the need for a multisystems oriented and integrated continuum of intervention philosophy and method, particularly as the needed services would occur in each system and then link to or be continued from one system to the next (Wasserman et al., 2008).

The second major innovation of the MDFT-DTC model is its integration of a family-based HIV/STD prevention component. Evidence-based HIV prevention approaches with adolescents have been almost exclusively targeted towards the individual level, and most are delivered in a peer group format. However, the need for more comprehensive interventions, and therefore presumably more powerful interventions, has been specified as a next step (Perrino et al., 2000; DiClemente, Salazar, & Crosby, 2007). Recognizing the importance of parents as the primary sex educators and influences for their children (Pequegnat & Bray, 1997), the family context has emerged as a prominent focus for researchers and health educators as they develop the next generation of HIV prevention models (DiClemente, Salazar, & Crosby, 2006; Donenberg et al., 2006). Accordingly, this family-based HIV prevention module, integrated within the full course of MDFT, targets parental monitoring, parent-adolescent relationships, and effective family communication about sexuality and safer sexual behaviors, which are

among the most important predictors of teen sexual behavior (Kotchick, Dorsey, Miller, & Forehand, 1999; St. Lawrence et al, 1995). Youth and their parents, who have already been engaged in MDFT and have been in therapy for 1 to 2 months, participate in three 2-hour multi-family groups. These sessions (1) enhance adolescents' and parents' awareness about the nature of STDs and HIV, (2) personalize their sexual and drug-associated risk behaviors that increase adolescents' likelihood for exposure and infection with HIV/STDs, and (3) provide communication (parent(s) and partner) and condom-use skills for HIV/STD prevention. Teen, parent, and family sessions in ongoing MDFT also prepare the participants for the group meetings, process their experiences between the groups, and reinforce what was learned in groups.

## **METHODS**

### Participants

To be eligible for the study, participants had to be: (1) between the ages of 13 and 17; (2) incarcerated in one of the two designated juvenile detention facilities; (3) living with at least one parent or guardian who could participate in the family therapy if assigned to MDFT-DTC; (4) endorsing substance abuse problems on the MAYSI as administered in the detention facility; and (5) at low risk to receive long-term residential placement directly from detention. One-hundred seventy youth were referred to the study, 154 of whom (90%) completed an intake interview and agreed to participate in the study. Youth were primarily male (82%) and ethnically diverse (60% African-American, 22% Hispanic, and 18% White, Non-Hispanic), with an average age of 15. Over 60% were from single-parent homes, with an annual family income of approximately \$18,000. Seventy-seven percent of parents had a history of involvement with the criminal justice system, and 39% admitted to current or past alcohol or drug problems. Participants averaged 3.9 arrests before the arrest that brought them to the detention. Participants were primarily cannabis users (32% dependence, 29% abuse diagnosis); 12% were alcohol dependent; 8% were alcohol abusers; 6% were dependent on another drug. Psychiatric

diagnoses were also common at intake: 43% had symptoms consistent with conduct disorder, 13% generalized anxiety disorder, 21% attention-deficit/hyperactivity disorder, and 9% major depressive disorder. Over half, 55%, were in the medium or high risk range for STDs and 11% tested positive for a STD at detention release. Finally, over three quarters of the sample, 77%, have parents who were at the time of study enrollment, or in the past, involved in the criminal justice system.

## Measures

### *Intake Interview*

Demographic and background information was obtained in the intake interview, including youth age, gender, race/ethnicity (African American, Hispanic, White Non Hispanic, Other), juvenile justice history, risky sexual practices, family composition and income, and parent history of substance use, as well as criminal justice involvement. Diagnoses of youth were obtained from the Diagnostic Interview for Children (DISC).

### *Retention and Service Delivery*

The date of treatment enrollment and discharge, and the number, length, and type of service provided (e.g., group session, family session), were obtained from the substance abuse treatment provider.

### *Satisfaction with MDFT-DTC*

The Services Satisfaction Scale (SSS-16) (Greenfield & Attkisson, 1989) was used to assess adolescent and parent satisfaction with MDFT – DTC treatment services. The SSS-16 is designed to measure several components of satisfaction with mental health outpatient services. It consists of five subscales (Manner and Skill, Perceived Outcome, Procedures, Accessibility, Waiting) and a total satisfaction score derived from all items. We used the total satisfaction scale in the current study. The SSS-16 has been widely used, including with substance abusers, and has excellent psychometric properties (Attkisson & Greenfield, 1994; Parr & Greenfield, 2000).

### *Inter-organizational Collaboration*

The Index of Interdisciplinary Collaboration (ICC) was used to assess collaboration among professionals from interdisciplinary backgrounds. The IIC was adapted to reflect collaboration between therapists and juvenile justice personnel. The measure has demonstrated satisfactory reliability and validity (Bronstein, 2002).

## **RESULTS**

### *Retention and Service Delivery*

MDFT demonstrated better treatment enrollment and retention than ESAU. Only two adolescents (3%) assigned to MDFT failed to enroll, while 35 (45%) youth assigned to ESAU failed to receive even one treatment session ( $\chi^2_{n=154} = 72.52, p < .001$ ), despite considerable effort from both research and clinical staff to facilitate youths' participation in treatment (e.g., providing transportation, follow-up phone calls). Eighty-seven percent of adolescents and their families assigned to MDFT-DTC, in contrast to 23% of adolescents assigned to ESAU, were retained in treatment for 3 months or more ( $\chi^2_{n=154} = 63.13, p < .001$ ). Finally, adolescents in MDFT received significantly more treatment ( $M = 52.27$  hours,  $SD = 30.38$ ) than youth receiving ESAU ( $M = 7.64, SD = 17.96$ ) ( $t[152] = 11.13, p < .001$ ).

### *Satisfaction with Services*

Implementation of the intervention also pertains to youth and parent reports of their satisfaction with services. Independent sample t-tests revealed that as hypothesized, youth and parents receiving MDFT were more satisfied with their treatment services than those receiving ESAU (youth:  $t[149] = 2.63, p = .010$ ; parents:  $t[146] = 3.23, p = .002$ ).

### *Substance Abuse Treatment Provider and Juvenile Probation Collaboration*

Inter-organizational collaboration, specifically between substance abuse treatment provider and the juvenile justice system, was an articulated goal of the MDFT-DTC cross-system intervention. Thus, we evaluated the extent to which MDFT-DTC therapists established collaborative relationships with diverse justice system personnel involved in the youth's case (e.g., Detention Center Staff, Probation Officers, Court and Case Managers, Various Attorneys

[State, Public Defenders, private], Judges). MDFT therapists reported high levels of collaboration with juvenile justice professionals, achieving average values of 4 or higher (on a 5-point scale, with higher scores being associated with more collaboration), on each of the Interdisciplinary Index of Collaboration (IIC) items.

Further, Repeated Measures Analysis of Variance (RMANOVA) indicate that when youth were discharged from detention, higher levels of collaboration (i.e., more in-person meetings than when working non-MDFT cases, more phone conversations, more agreement on goals of treatment and support for the MDFT work with the teen and family), were associated with improvement in adolescent outcome, specifically: decreases in substance use ( $F [3, 138] = 3.54, p = .017$ ), marginally greater decreases in delinquency ( $F [3, 138] = 2.40, p = .070$ ), and the number of times participants reported having unprotected sex in the previous 90 days ( $F [3, 138] = 2.63, p = .062$ ).

### *Treatment Fidelity*

In this study, on an a priori basis, we prescribed a minimally acceptable amount of service delivered for each of the two treatments. For MDFT, families needed to receive at a minimum, six hours of treatment per month to be considered having received an adequate dose of treatment, and ESAU youth were required to receive a minimum of four hours of treatment per month.

Youth in MDFT-DTC received an average of 9.79 hours of treatment per month ( $SD = 5.39$ ), more than the minimum required dose. Ninety-two percent of adolescents received a full dose of MDFT (6 hours or more per month), and 8% received a partial dose of treatment.

Youth receiving ESAU received slightly lower than the targeted number of treatment hours per month, averaging 3.93 ( $SD = 3.56$ ) hours of group treatment per month. In ESAU, 24% received a full dose of treatment (4 hours or more per month), and 36% received a partial dose. Moreover, because MDFT is a multicomponent intervention, we also prescribed number of hours of family, parent, adolescent, and extrafamilial sessions. Participants received an average

of: (1) 2.74 ( $SD = 1.60$ ) hours of family sessions defined as being composed of the youth and at least one parent; (2) 2.01 ( $SD = 1.60$ ) hours of sessions alone with the parent(s); (3) 2.35 ( $SD = 0.95$ ) hours of individual adolescent sessions; and (4) 2.22 ( $SD = 2.81$ ) hours of extrafamilial systems work for each MDFT participant per month.

## **DISCUSSION**

These findings suggest that a comprehensive, family-based treatment can: (1) be implemented within a juvenile justice detention center; (2) continue post-offender release in community-based substance abuse treatment settings; (3) demonstrate client and professional satisfaction; and (4) be delivered with protocol adherence by a single clinical provider across these settings. Additionally, these results indicate that the new treatment (a variant on an empirically-based, family-based therapy for drug-using adolescents), can engage and retain multiply impaired, clinically referred, juvenile justice-involved teenagers and their families in a several-month, post-detention community reintegration-oriented therapy at superior rates than community treatments and many existing evidence-based therapies.

### *Engagement, Retention, Service Hours, and Treatment Satisfaction.*

Although many treatments for youths have been developed over the years, surprisingly, many of these therapies have failed to achieve treatment's first essential task – engagement and retention. The earliest adolescent therapy studies in the field revealed a 40-60% drop-out rate (Kazdin, Holland, & Crowley, 1997). Unlike many adults, certainly adults who consult a private practitioner or their HMO for psychological counseling, the circumstances of adolescents coming to therapy are distinct. When drug use or juvenile justice involvement is present, youth generally enter treatment "...in response to external pressures from families, schools, or the legal system...and without external pressure, treatment entry is unlikely" (Waldron, Kern-Jones, Turner, Peterson, & Ozechowski, 2007).

It is important to note that the treatment offered in this study was not mandated by the courts or schools in any way. These were pre-adjudicated youth and given this circumstance, a premium was placed on the treatment and providers to engage and retain the teens, and in the case of the experimental condition, the families as well. The family-based treatment retained 87% of its participants compared to 13% in the services as usual condition for at least 3 months of post-detention treatment. This engagement and retention rate is consistent with previous MDFT studies. Two examples to consider include a 4-month, once a week outpatient MDFT study with early adolescents that retained 96% of its participants (Liddle, 2004, 2008); and an intensive outpatient version of MDFT with juvenile justice-involved, multiply-impaired teens (with largely co-morbid diagnoses), which retained 95% of its cases at four months, and 88% at six months. These rates should be understood in the context of recent nationally representative treatment studies. In one study, only 27% of adolescents completed 3 months of treatment (NIDA recommended dose) (Grella, Hser, Josi, & Rounds-Bryant, 2001), while in another, the retention rate was 35% for 3 months of outpatient treatment (Dennis, 2008).

Client satisfaction has become a core variable in treatment and services research (Garland Burns?). Reducing practical barriers to treatment attendance by introducing home-based therapy was a signature feature of early interventions such as the Homebuilders family services model; and treatment models such as Multisystemic Therapy (MST) provide all of its services not in a clinic, but in the youth's and family's home. In this study, although the MDFT services were considered by some to be potentially burdensome (given the intensity of the treatment compared to usual services), the teens and families did not experience their participation as such. This is noteworthy given what we are learning about the difficulties and burdens that families experience when their children are involved in juvenile justice. We do know that when adolescents and families receive services that are experienced as off the mark, ineffective, and not addressing their expressed needs, that satisfaction ratings are low.

Adolescents have told us that they appreciate the practical, “let’s get something done” therapeutic stance of their therapists and the approach. Notably, they value the way that MDFT balances a focus on their concerns and complaints, rather than what standard treatments focus on – the desires and concerns of adults who are pressuring the teen to enter a treatment program. Over the years, MDFT process studies refined our therapeutic model and protocols, making the approach adolescent-, parent-, therapist-, and system-friendly (e.g., school and juvenile justice professionals involved with the case). These studies have illuminated fundamental therapeutic areas such as the creation and therapeutic use of *multiple therapeutic alliances* in MDFT (Diamond, Liddle, Hogue, & Dakof, 2000; Robbins et al., 2008; Shelef, Diamond, Diamond, & Liddle, 2005), how to change parenting practices (Schmidt, Liddle & Dakof, 1996), productively addressing in-session conflict (in part as a hedge against treatment disengagement) (Diamond & Liddle, 1996), and tailoring treatment by using culturally-specific content themes to enhance engagement and treatment participation (Jackson-Gilfort, Liddle, Tajeda, & Dakof, 2001).

We interpret the outstanding engagement and retention rates achieved in this and other MDFT studies, as well as in other family-based approaches (Henggeler, Clingempeel, Brondino, & Pickrel, 2002; Santisteban et al., 1996), in the context of how these therapies have learned to focus on practically important therapeutic objectives, in ways that utilize family relationships as a key source of motivation of and indeed a context of adolescent and parent change. However, there are other important aspects to a treatment such as MDFT, including its focus not only on internal familial processes, but also interactional processes that concern influential others outside the family (Liddle, in press). We have presented preliminary evidence of MDFT clinician effectiveness in establishing and maintaining working collaborations, which are always focused on the needs and best interests of the youth and family. The MDFT therapist established and worked these relationships, frequently managing conflict and negativity, which prevented interactions from escalating to extreme

stances and precipitous decisions (typically about moving the case to adult transfer or toward residential placement). Clinicians attended court and school hearings alongside family members. Indeed, they systematically prepared teen and parent for these meetings, always with an eye on helping the case to manage the outcomes so that the best possible results could be achieved at that particular point in time. Critically, the positive, proactive, agency-oriented multiple-system, professional collaboration, and direct help provided to the family (so they could effectively engage in and manage these relationships and their inter-system circumstances), seem related, on the basis of data presented here, to bottom line case outcomes. While these outcomes might be understood in terms of therapeutic skill and the protocols developed to foster these clinically influential collaborations, these outcomes about the positive aspects of the collaborations are also a comment on the responsiveness of the many juvenile justice and legal professionals who were involved with the cases. We believe this is similar to the way we understand youth's and parent's responsiveness to the MDFT approach, as evidenced in our engagement and retention rates. That is one way to understand the historically high dropout rates from adolescent treatment; another is in terms of client characteristics. Treatment refusers, unsuitable for or unable to benefit from therapy, are descriptors that focus on conclusions about teens rather than including therapist or program factors. We prefer to turn these interpretations around and understand treatment termination or non-engagement more in terms of what the therapist and the treatment program offer, or fail to offer, as additional and necessary explanatory variables in accounting for retention and engagement. Just so, in the case of the collaborative set that MDFT therapists engender to establish between themselves, the youth and parents, and the other professionals, it is the mindset, method, and skill that clinicians employ, that can help us understand the positive collaborative outcomes demonstrated in this study. When these relationships are formed and maintained through the organizing and outcome orientation of

the therapist, who frequently feels and is seen in the middle of these relationships and systems, our experience is that professionals, youths, and families alike respond.

*Implementation Success: Necessary But Not Sufficient for Program Sustainability.*

Many systems-level interventions were required to implement MDFT-HIV within detention and in the community following release. These included gaining the cooperation from substance abuse treatment providers, juvenile detention facilities, and juvenile probation departments in order to achieve the following aims:

1. Identify, screen, and refer youth to substance abuse treatment (and the study itself), while they are in the detention facility.
2. Conduct MDFT-DTC individual and family sessions, provided by non-detention counselors in the detention facility.
3. Integrate the in-detention HIV group protocol into the daily detention programming.
4. Implement MDFT-DTC by community substance abuse providers.
5. Collaborate with juvenile probation, the public defender's office, state attorneys, and juvenile court judges to facilitate youths' progress in treatment.

As summarized above, the MDFT-HIV was by all accounts implemented successfully in two Florida counties. Specifically, youth were identified and screened in detention and referred to treatment, where they received the CDC HIV prevention group intervention while in the detention facility, community providers implemented the MDFT-HIV meeting minimum adherence requirements; there was a high amount of collaboration between the MDFT-HIV providers and juvenile justice partners; youth were successfully enrolled and retained in MDFT-HIV; and youth and parents were satisfied with the services they received. Moreover, juvenile justice stakeholders at both sites frequently expressed to the study investigators, treatment providers, state commissions (e.g. Florida Department of Juvenile Justice, 2008), and local juvenile justice advisory boards (e.g., 11<sup>th</sup> Circuit Juvenile Justice Board), their enthusiasm for the MDFT-HIV.

Nevertheless, once the study ended, the MDFT–DTC program in its original version, was not sustained in whole or in part. Interestingly, however, while the program as it was implemented in the study was not sustained, some version of particular components survived in each county. Prior to the implementation of the MDFT–DTC program, no HIV prevention intervention services were provided by the Pinellas County Detention Center. Although the detention center failed to maintain the state-of-the-science HIV prevention group that it implemented during the CJ-DATS MDFT–DTC study, Center staff acknowledged the importance of providing such services, and reached out to a local HIV prevention community organization to conduct STD testing, and periodically run unstructured HIV prevention groups. So while the precise in-detention HIV intervention was not sustained, it seems reasonable to conclude/assume that the MDFT-DTC experience created system change, in that at least one of the detention centers added an in-detention HIV service to its programming.

Both communities preserved some version, albeit not the specific MDFT-DTC version, of MDFT. Also in both communities, certain juvenile justice partners and substance abuse treatment providers involved in the MDFT-DTC were impressed by the effectiveness of MDFT and committed themselves to keeping MDFT in their community. When they realized that there were no accessible funds to keep the MDFT-DTC program beyond the study, they worked on a local level to sustain at least some version of MDFT. Stakeholders in both communities were able to obtain funds to sustain an MDFT program, albeit with a different focus from MDFT-DTC. The MDFT programs currently in operation no longer focus on youth in detention, are no longer a cross-systems intervention, but rather in-standard MDFT provided in an outpatient setting. In one community, the MDFT program that originated as MDFT-DTC, now serves drug-using youth who are either on probation or in a diversion program; and in the other community, its MDFT program serves behavior-problem and truant youth.

It is striking then, that despite implementation success, the MDFT–DTC was not sustained in its original form at either site. This outcome is consistent with the conclusions of the

developing literature and research on sustainability of evidence-based practices. Consider this recent NIDA announcement, “Implementing research-based drug abuse treatment practices in usual criminal justice practice settings often faces clinical, administrative, organizational, and policy barriers. Many research-based clinical interventions and treatment services have not been adopted for criminal justice populations and consequently few drug-involved offenders benefit from them. While various implementation barriers are often surmounted during the course of research, if the solutions are expedient rather than systemic the intervention may not be sustainable once the study ends – regardless of its clinical effectiveness or cost-effectiveness.” (NIDA, 2007).

Evidence-based interventions cannot be sustained by systematic and successful implementation alone. MDFT-DTC is much more than simply the implementation of an evidence-based adolescent treatment, but also a more demanding cross system (involving juvenile justice and substance abuse treatment) intervention. An equally systematic sustainability intervention must occur as well. The lack of sustainability in both counties brings into relief the necessity of a systematic implementation intervention. Effective evidence-based intervention will not be sustained without a systematic implementation and sustainability intervention.

In sum, we draw four conclusions from the outcomes presented in this paper. First, the new intervention, to our knowledge, is the first of its kind to target the multiple outcomes of substance abuse, delinquency, mental health, and high risk sexual behavior within the same intervention. It is also the first intervention, as far as we know, to provide these comprehensive services both in the detention facility and then, to continue the multi-focused family-based services with the same clinicians on an aftercare basis. All with the goals of reintegrating the youth into the community, and protecting the public from harm while providing substantive rehabilitation opportunities for the youth. Among other aspects, the in-detention service delivery alone is significant, given recent epidemiological and psychiatric co-morbidity data

(Teplin et al., 2005) and the most recent experimental studies in the area (Mulvey, Schubert, & Chung, 2006 [“The level of service provision in detention is low {few adolescents report receiving services in this setting.” p. 541}]). Second, given the engagement and satisfaction rates achieved in this experimental test, the MDFT–DTC intervention is consistent with other studies that have demonstrated the benefits of comprehensive family-based treatments. One recent review of research on family interventions with incarcerated youth echoes the support for family-based interventions that other independent reviews have substantiated (Williams & Chang, 2000; Stanton & Shadish, 1997). These reviewers called for empirically-supported, family-based therapies to be the treatment of choice for adolescent drug abuse and delinquency. Other groups of independent experts (Drug Strategies, 2003) concur with unambiguous critiques - “juvenile justice systems too often ignore the crucial role of families in resolving delinquency” (Annie E. Casey Foundation, 2008). The Drug Strategies (2005, 2003) reports include working with the families of drug-using and juvenile justice-involved offenders as one of its key change recommendations for the field. Perkins-Dock (2001) concluded “... recidivism rates will continue to be high as long as family interventions are not provided during incarceration as well as during the aftercare process” and, “...family therapists should become an integral part of the treatment process for incarcerated juvenile offenders as part of the preventive process prior to and after adjudication and during incarceration” (Perkins-Dock, 2001, p. 620-621). Third, the pattern of results in previous MDFT outcome and process studies is consistent with what we have presented in this paper. Although our drug abuse, HIV-prevention and delinquency outcomes are being prepared for a separate presentation, the findings presented here are significant in many ways, including the capacity of a new treatment to engage the mostly ethnic minority sample, a group that is both overrepresented in the juvenile justice system, yet simultaneously in dire need of service delivery models that speak to their unique requirements (Poe-Yamagata & Jones, 2000). Fourth, while we have successfully implemented this and other versions of the MDFT intervention in juvenile justice, community,

substance abuse and mental health settings, we have not mastered implementation fully and certainly have not reached the field's appropriately high standard of pairing implementation with sustainability of the new evidence-based therapies. There are many signals that we can interpret as hopeful signs in the ebb and flow of juvenile justice reform efforts. International, national and statewide blueprint commissions have met and released their bold, unequivocal and evidence-informed recommendations. Thus far, the findings of the MDFT-DTC approach indicate that this intervention can be part, with other evidence-based interventions, of the new generation of system informing and perhaps juvenile justice system changing interventions. We have said, the more we learn about the terrain to be traversed, the more formidable the journey seems (Henderson et al., 2006). Still, at the same time, this information helps us to plot out our strategy, which indeed does change and become more sophisticated and truly system change-oriented over time. Funders, including government and private foundations, seem savvy to what is needed in this next wave of implementation research. Investigators and program developers, according to recent evidence, seem up to the task. All of this is fortunate, because given the enormity of the task, the stakes for the youths and families and for the public health at large, are indeed great, and our best collective effort will be required.

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Table 1.

*Sample Characteristics*

Variable	MDFT	ESAU	Overall
Age [ <i>M (SD)</i> ]	15.5 (1.19)	15.4 (1.06)	15.4 (1.12)
Gender [ <i>n (%)</i> ]			
Male	63 (83)	65 (83)	128 (83)
Female	13 (17)	13 (17)	26 (17)
Ethnicity / Race [ <i>n (%)</i> ]			
African American	40 (53)	54 (69)	94 (61)
White, non Hispanic	12 (16)	12 (15)	24 (16)
Hispanic	22 (29)	12 (15)	34 (22)
Other	2 (2)	1 (1)	3 (1)
Family Income (Median)	\$25,000	\$19,600	\$21,860
Family Structure [ <i>n (%)</i> ]			
Single Parent	50 (66)	50 (64)	100 (65)
Two Parent	14 (18)	9 (12)	23 (15)
Blended	4 (5)	6 (8)	10 (6)
Other	8 (11)	13 (16)	21 (14)
Age First Used Cannabis			
[ <i>n (%)</i> ]			
<12	14 (19)	16 (21)	30 (19)
12-14	39 (51)	39 (50)	78 (51)
15-17	20 (26)	22 (28)	42 (27)
Never Used	3 (4)	1 (1)	4 (3)
Adolescent on Probation	28 (37)	34 (44)	62 (40)

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Parent History of Criminal	50 (66)	66 (84)	116 (75)
Justice Involvement			

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	MDFT	ESAU	Overall
Diagnosis [ <i>n</i> (%)]			
Cannabis Abuse	25 (33)	19 (24)	44 (29)
Cannabis Dependence	22 (29)	27 (35)	49 (32)
Alcohol Abuse	7 (9)	6 (8)	13 (8)
Alcohol Dependence	10 (13)	8 (10)	18 (12)
Other Substance Abuse	1 (1)	3 (4)	4 (3)
Other Substance Dependence	3 (4)	6 (8)	9 (6)
Number of Comorbid [ <i>M</i> ( <i>SD</i> )]	2.04 (2.46)	2.79 (2.68)	2.42 (2.59)

Table 2.

*Descriptive Statistics for Retention and Service Delivery, Satisfaction with Services, and Collaboration with Juvenile Probation Officers*

Variable	MDFT	ESAU
<b>Retention and Service Delivery</b>		
Enrollment [ <i>n</i> (%)]	74 (97)	43 (55)
Treatment Retention [ <i>n</i> (%)]	66 (87)	18 (23)
Hours of Treatment in Detention [ <i>M</i> ( <i>SD</i> )]	3.4	0.9
Hours of Treatment in Community [ <i>M</i> ( <i>SD</i> )]	52.27 (30.38)	7.64 (17.96)
Service Satisfaction <sup>a</sup> (Youth report) [ <i>M</i> ( <i>SD</i> )]	26.39 (9.60)	30.91 (11.44)
Service Satisfaction <sup>a</sup> (Parent report) [ <i>M</i> ( <i>SD</i> )]	24.52 (7.87)	30.42 (13.75)
Collaboration with JPO <sup>b</sup> [ <i>M</i> ( <i>SD</i> )]	73.48 (12.96)	N/A

*Note.* Treatment enrollment=Proportion of adolescents receiving any treatment following detention discharge. Treatment retention=Proportion of adolescents remaining in treatment for three or more months.

<sup>a</sup>Lower scores reflect greater satisfaction

<sup>b</sup>Data collected from MDFT therapists only