International Journal of
Offender Therapy and
Comparative Criminology
55(4) 587–604

DOI: 10.1177/0306624X10366960
http://ijo.sagepub.com

Implementation Outcomes of Multidimensional Family Therapy–Detention to Community: A Reintegration Program for Drug-Using Juvenile Detainees

Howard A. Liddle[1], Gayle A. Dakof[1], Craig Henderson[2], and Cindy Rowe[1]

Abstract

Responding to urgent calls for effective interventions to address young offenders' multiple and interconnected problems, a new variant of an existing empirically-validated intervention for drug-using adolescents, Multidimensional Family Therapy (MDFT)–Detention to Community (DTC) was tested in a two-site controlled trial. This article (a) outlines the rationale and protocol basics of the MDFT-DTC intervention, a program for substance-using juvenile offenders that links justice and substance abuse treatment systems to facilitate adolescents' postdetention community reintegration; (b) presents implementation outcomes, including fidelity, treatment engagement and retention rates, amount of services received, treatment satisfaction, and substance abuse–juvenile justice system collaboration outcomes; and (c) details the implementation and sustainability challenges in a cross-system (substance abuse treatment and juvenile justice) adolescent intervention. Findings support the effectiveness of the MDFT-DTC intervention, and the need to develop a full implementation model in which transfer and dissemination issues could be explored more fully, and tested experimentally.

[1]University of Miami Miller School of Medicine, Florida
[2]Sam Houston State University, Huntsville, Texas

Corresponding Author:
Howard A. Liddle, Department of Epidemiology and Public Health, Center for Treatment Research on Adolescent Drug Abuse, Miller School of Medicine, University of Miami, 1120 NW 14th Street, Suite 1018, Miami, FL 33136
Email: HLiddle@med.miami.edu

Keywords

Multidimensional Family Therapy–Detention to Community, implementation outcomes, juvenile detainees

A grim research-based portrait of justice-involved youth has materialized in recent years. Psychiatric disorders are common among these adolescents (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002), with comorbidity prevalence rates exceeding those in the general population by as much as 60% (Cocozza & Skowyra, 2000). Co-occurring problems among samples of juvenile offenders are associated with significant psychosocial impairments, including poorer family functioning, school and academic problems, and additional mental health difficulties, including affective disorders (Belenko & Dembo, 2003). Substance abuse disorders are highly prevalent among justice-involved samples. In one study, 62% of juveniles met criteria for an alcohol or other drug use disorder (Aarons, Brown, Hough, Garland, & Wood, 2001). The prevalence and severity of substance abuse has increased steadily among justice-involved youth (Golub & Johnson, 2001), with the majority of these teens (60% to 80%) requiring addiction treatment (Farabee, Shen, Hser, Grella, & Anglin, 2001). Risk for acquiring sexually transmitted diseases (STDs) and the human immunodeficiency virus (HIV) is pronounced among justice-involved youths (approximately 15% to 20% of youth test positive for STDs in detention centers; Pack, DiClemente, Hook, & Oh, 2000). Most adolescents enter justice facilities having experienced victimization and trauma (Lederman, Dakof, Larrea, & Li, 2004). For instance, more than 90% of juvenile offenders in an urban detention center had one or more traumas such as witnessing violence or being threatened with a weapon (Abram et al., 2004).

Juveniles in justice facilities are among the least adequately served high-risk populations. Disconnection and the lack of cross-system collaboration between substance abuse treatment and justice services; poor coordination of assessment, referral, and treatment; and resource shortages spanning multiple systems of care are normative. These service delivery system gaps contribute to increasingly severe mental health, substance use, and delinquency problems for many youth, their impairments often going unaddressed until they are deeply entrenched in the juvenile, and sometimes adult, criminal justice systems (Garland, Hough, Landsverk, & Brown, 2001). Although research and policy manifestos have raised consciousness about the ethical, legal, and public health dimensions of these circumstances and the risks they present for future offending, systemic change has been slow. Diverse reform efforts, including legal action (lawsuits) to prompt incorporation of evidence-based approaches, are under way in a variety of realms. But overall the juvenile justice system fails to address the multiple and interlinked psychosocial needs of youth under their supervision (Gallagher & Dobrin, 2007; United States Department of Justice, 2005).

Family-based therapies have responded to numerous and long-standing juvenile justice recommendations for effective developmentally tailored interventions. Tested in studies judged to be scientifically rigorous (Becker & Curry, 2008), approaches that

successfully target the known determinants of substance abuse and antisocial behavior show consistently favorable outcomes with drug-using and juvenile-involved samples (Williams & Chang, 2000). Multiple-system–oriented family-based interventions have the advantage of directly targeting the well-established risk and protective factors for deviant behavior in the youth's family and broader environment.

Detention to Community (DTC) Study Overview

Multidimensional Family Therapy (MDFT) is a family-based, comprehensive treatment system for adolescent drug abuse and related behavioral and emotional problems (Liddle, Dakof, & Diamond, 1992). The model is widely recognized as an effective science-based treatment for teen substance use disorders and delinquency (e.g., Drug and Alcohol Findings, 2002, 2009; National Institute on Drug Abuse [NIDA], 1999; National Registry of Evidence-based Program and Practices, 2008; Vaughn & Howard, 2004; Waldron & Turner, 2008). MDFT is theory driven, and it combines aspects of several theoretical frameworks (i.e., family systems theory, developmental psychology, and the risk and protective model of adolescent substance abuse). It incorporates key elements of effective adolescent drug treatment, including comprehensive assessment, an integrated treatment approach, family involvement, developmentally appropriate interventions, specialized engagement and retention protocols, attention to qualifications of staff and their ongoing training, gender and cultural competence, and focus on a broad range of outcomes (Austin, Macgowan, & Wagner, 2005; Brannigan, Schackman, Falco, & Millman, 2004; Jackson-Gilfort, Liddle, Tejeda, & Dakof, 2001; Liddle et al., 2006).

MDFT is both a structured and flexible treatment delivery system and, depending on the needs of the youth and family, can be conducted from one to three times per week over the course of 3 to 6 months, both in the home and in the clinic. Therapists work simultaneously in four interdependent treatment domains—the adolescent, parent, family, and extrafamilial—each of which are addressed in three stages: Stage 1: Building a Foundation for Change; Stage 2: Facilitating Individual and Family Change; and Stage 3: Solidify Changes and Launch. At various points throughout treatment, therapists meet individually with the adolescent and the parent(s) as well as conjointly with the adolescent and parent(s), depending on the treatment domain and specific problem being addressed.

To effectively bridge the juvenile justice and substance abuse treatment systems and achieve multiple outcomes, the DTC study required development of a new variation of MDFT. The study tested a two-stage (in short-term detention and postrelease), cross-system (substance abuse and juvenile justice) adaptation of MDFT, which also included an HIV/STD prevention intervention (Marvel, Rowe, Colon-Perez, DiClemente, & Liddle, 2009). The intervention is unique and builds on the treatment development and empirical results of MDFT in earlier controlled trials (e.g., Liddle et al., 2001; Liddle et al., 2006; Liddle, Dakof, Turner, Henderson, & Greenbaum, 2008; Liddle, Rowe, Dakof, Henderson, & Greenbaum, 2009). Using a single therapist, MDFT concurrently targets youths' substance use, criminal behavior, and HIV/STD risk. In Stage 1,

MDFT is provided to youths and their families in short-term juvenile detention settings. This work builds a platform for postdetention, multisystem interventions with the teen and family in the community. Stage 2 of MDFT occurs after the youth returns home, with family and individual counseling with the teen and parent(s), HIV/STD prevention, and case management for 4 months.

A randomized, controlled trial to test this intervention was conducted at two secure, pretrial or prehearing, short-term detention facilities with youth pending adjudication or disposition. MDFT-DTC was compared with enhanced services as usual (ESAU). Detention center services that were available to youth in both conditions included a school component, crisis intervention for mental health problems, and health care as needed. To conduct the study and implement the new intervention within detention and in the community following release, justice system interventions were begun in the study planning phase and continued throughout the follow-up period. Using guidance from the literature, and previous experience, the Miami and Pinellas research teams followed core principles to minimize participant burden, focus on the youth's welfare by linking provision of the project's services to new potential system changes, and frame study participation as a beginning to improve the system of care for youth. These methods establish working relationships with the detention center administrators and staff and integrate research procedures and the new intervention into the facilities' daily operations.

Implementing evidence-based therapies in nonresearch settings involves identifying and solving normative challenges early on in the process. In the present effort, one of the first tasks involved instituting in-detention screening and recruitment of study participants. 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. It was no small accomplishment in crowded, security-conscious facilities for MDFT clinicians to meet with the youth and with the adolescent's family in detention. Third, detention administrators and staff collaborated with the research teams to integrate the new in-detention HIV prevention groups into the setting's daily programming. Fourth, research personnel developed an efficient process with ESAU providers so that adolescents would receive services as quickly as possible after detention release with the same clinician. For MDFT providers, therapeutic contact began in detention and continued after release. Finally, close collaboration was vital in the community phase of the intervention. Frequent e-mails, phone calls, and impromptu short meetings before or after a court hearing maintained focus, prevented misunderstandings, solved small problems before they escalated or became chronic, and helped to maintain a positive, forward-moving, case-focused collaborative process. This way of working required consistency of effort between the clinician 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, retain the youth in the juvenile system, and avoid or delay transfer to the adult system.

A Cross-Systems Intervention: MDFT-DTC

This intervention is an adaptation[1] of an empirically validated, multiple-system–oriented adolescent drug abuse and delinquency treatment Multidimensional Family Therapy (MDFT; Liddle et al., 2001; Liddle et al., 2008; Liddle, Rowe, Dakof, Ungaro, & Henderson, 2004). Attending to four main intervention areas—teen, parent, family, and the extrafamilial systems (Liddle et al., 2009)—MDFT was adapted for the present study in two ways. First, an in-detention module was added so that the individual and family interventions could begin rapidly after arrest. This module was delivered between 3 and 14 days that youth were held in the detention facilities. Critical ingredients and predictors of postrelease community integration and recidivism reduction include prerelease planning focused on postrelease treatment specifics, family involvement, and effectively addressing legal supervision requirements. The in-detention module involved interventions with detention center staff and juvenile court personnel, including judges and attorneys. These communications briefed justice personnel about the program and launched a collaborative process. Although not therapy training per se, these interventions emphasized model-specific therapeutic principles developed in earlier implementation research (Liddle et al., 2002). Examples of working principles included a reasoned open-mindedness about the possibility of change with focused therapeutic effort and the scientific support for this notion; the MDFT program's commitment to comply with juvenile justice requirements while providing an intensive, comprehensive, parent-involved system of services that push hard to obtain practical, developmentally meaningful outcomes; and rules of collaboration that do not increase the workload of justice personnel.

A family-oriented HIV/STD prevention module was designed and integrated within the standard MDFT intervention (Marvel et al., 2009). Youth and their parents participate in three 2-hr multifamily groups designed to (a) enhance adolescents' and parents' awareness about the nature of STDs and HIV, (b) personalize their sexual and drug-associated risk behaviors that increase adolescents' likelihood for exposure to and infection with HIV and STDs, and (c) provide communication (parent(s) and partner) and condom-use skills for HIV/STD prevention. These intervention adaptations respond to recommendations from public health experts about the need to develop new treatments that concurrently address substance abuse, mental health of youths, HIV risk, and related problems among juvenile offenders with integrated, comprehensive approaches that involve families (Chassin, Knight, Vargas-Chanes, & Losoya, 2009) and offer these treatments both in and in collaboration with juvenile justice settings (Drug Strategies, 2005; Teplin et al., 2005). A consensus in the field is emerging: Multiple-system–oriented approaches that use integrated treatment continua are needed (Wasserman et al., 2008).

The major components of MDFT-DTC are context and time specific (Stage 1: in-detention; Stage 2: postdetention/community-based), and these intervention stages are conceptually and clinically interdependent as well. Stage 1 focuses on how

postdetention tasks can be met. Initially, using the crisis of the recent arrest and incarceration to mobilize, focus, and motivate youth and parent(s), clinicians focus on in-detention outcome goals of relationship formation and motivation enhancement. Stage 2 uses the orientation and specific outcomes that have been achieved in Stage 1 as building blocks for change that emphasize successful reintegration in the teen's community and family, and overall establishing a life pathway different from the one that the youth has been traveling.

Method

To be eligible for the study, participants had to be (a) between the ages of 13 and 17, (b) incarcerated in one of the two designated juvenile detention facilities, (c) living with at least one parent or legal guardian (e.g., if not a biological parent, a legal guardian such as an aunt, grandparent, or other custodian) who agrees to participate in the assessments and the family intervention if assigned to MDFT-DTC, (d) endorsing substance abuse problems on the MAYSI (Grisso, Barnum, Fletcher, Cauffman, & Peuschold, 2001) or documented substance abuse problems such as previous or current drug charges and arrests as administered in the detention facility, and (e) at low risk for long-term residential placement according to the state Department of Juvenile Justice intake assessment criteria for placement risk. Previous offenses and/or severity of charges were not included as part of study exclusion criteria but were used by DJJ officials to designate placement risk. Treatment services were provided free in both conditions at both sites. Adolescents and their parents were each paid $25 for the 3-month interview and $50 each for the 6- and 9-month interview. Participants were not paid for the baseline or detention discharge interviews.

One hundred seventy youth were referred to the study, 154 of whom (90%) completed an intake interview and agreed to participate in the study. Averaging 15 years of age, youth were primarily male (82%) and ethnically diverse (60% African American, 22% Hispanic, and 18% White, non-Hispanic; Table 1). More than 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% of parents admitted to current or past alcohol or drug problems. Participants averaged 3.9 lifetime arrests before the arrest that resulted in the detention placement. Participants were primarily cannabis users (32% dependence, 29% abuse diagnosis); 12% were alcohol dependent; 8% were alcohol abusers; and 6% were dependent on another drug. Psychiatric diagnoses were also common at intake: 43% had symptoms consistent with conduct disorder; 13% had generalized anxiety disorder; 21% had attention-deficit/hyperactivity disorder; and 9% had major depressive disorder. More than half (53%) of the youths' parents reported a history of mental health and/or substance abuse problems. Most adolescents, 55%, were in the medium- or high-risk range for STDs as defined by POSIT cutoff scores, and 11% tested positive for an STD at detention release. (Sample characteristics are detailed in Table 1.)

Table 1. Sample Characteristics

Variable	MDFT	ESAU	Overall
Age, *M* (*SD*)	15.5 (1.19)	15.4 (1.06)	15.4 (1.12)
Gender			
Male	63 (83)	65 (83)	128 (83)
Female	13 (17)	13 (17)	26 (17)
Ethnicity/race			
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, *Mdn*	$25,000	$19,600	$21,860
Family structure			
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			
<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)
Parent criminal justice involvement	50 (66)	66 (84)	116 (75)
Diagnosis			
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, *M* (*SD*)	2.04 (2.46)	2.79 (2.68)	2.42 (2.59)

Note: Values are *n* (%) unless otherwise indicated. MDFT = Multidimensional Family Therapy; ESAU = enhanced services as usual.

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) Predictive Scales (Lucas et al., 2001).

Retention and service delivery. Treatment enrollment and discharge dates, and the number, length, and type of service provided (e.g., group session, family session), were obtained from the substance abuse treatment providers.

Satisfaction with MDFT-DTC. The Services Satisfaction Scale (SSS-16) 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).

Interorganizational collaboration. The Index of Interdisciplinary Collaboration (IIC) 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).

Implementation Results

Retention and Service Delivery

MDFT demonstrated superior treatment enrollment and retention than ESAU (see Table 2). Two adolescents (3%) assigned to MDFT failed to enroll, whereas 35 (45%) youth assigned to EASU 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 ESAU adolescents, were retained in treatment for 3 months or more, $\chi^2(n = 154) = 63.13$, $p < .001$. Finally, MDFT adolescents received significantly more treatment ($M = 52.27$ hr, $SD = 30.38$) than ESAU youth ($M = 7.64$, $SD = 17.96$), $t(152) = 11.13$, $p < .001$.

Satisfaction With Services

A key aspect of intervention implementation pertains to youth and parent 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: $t(146) = 3.23$, $p = .002$ (see Table 2).

Substance Abuse Treatment Provider and Juvenile Probation Collaboration

Cross-system professional collaboration, specifically between substance abuse treatment provider and the juvenile justice system, was an articulated goal of MDFT-DTC.

Table 2. Descriptive Statistics for Retention and Service Delivery, Satisfaction With Services, and Collaboration With Juvenile Probation Officers

Variable	MDFT	ESAU
Retention and service delivery		
Enrollment, *n* (%)	74 (97)	43 (55)
Treatment retention, *n* (%)	66 (87)	18 (23)
Hours of treatment in detention	3.4	0.9
Hours of treatment in community	52.27 (30.38)	7.64 (17.96)
Service satisfaction[a] (Youth report)	26.39 (9.60)	30.91 (11.44)
Service satisfaction[a] (Parent report)	24.52 (7.87)	30.42 (13.75)
Collaboration with Junior Professional Officer[b]	73.48 (12.96)	N/A

Note: Values are *M* (*SD*) unless otherwise indicated. MDFT = Multidimensional Family Therapy; ESAU = enhanced services as usual; Treatment enrollment = Proportion of adolescents receiving any treatment following detention discharge. Treatment retention = Proportion of adolescents remaining in treatment for three or more months.
a. Lower scores reflect greater satisfaction.
b. Data collected from MDFT therapists only.

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], and judges). MDFT clinicians reported high levels of collaboration with juvenile justice professionals (detention center staff, lawyers, and judges), 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 (see Table 2).

Furthermore, repeated measures ANOVA indicate that when youth were discharged from detention, higher levels of collaboration (i.e., more in-person meetings than when working on non-MDFT cases, more phone conversations, more agreement on treatment goals, 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

A minimally acceptable amount of service delivered for each treatment was defined a priori. MDFT families needed to receive at a minimum of 6 hr of treatment per month to be considered having received an adequate treatment dose, and ESAU youth were required to receive a minimum of 4 hr of treatment monthly.

Youth in MDFT-DTC received an average of 9.79 hr of treatment per month ($SD = 5.39$), which was more than the minimum required dose. Ninety-two percent of

adolescents received a full dose of MDFT (6 hr or more per month), and 8% received a partial dose of treatment.

ESAU youth received slightly lower than the targeted number of treatment hours per month, averaging 3.93 (*SD* = 3.56) hr of group treatment per month. In ESAU, 24% received a full dose of treatment (4 hr or more per month), and 36% received a partial dose. Because MDFT is a multicomponent intervention, we also prescribed number of hours of family, parent, adolescent, and extrafamilial sessions required per month. Participants received a monthly average of (a) 2.74 (*SD* = 1.60) hr of family sessions defined as being composed of the youth and at least one parent, (b) 2.01 (*SD* = 1.60) hr of sessions alone with the parent(s), (c) 2.35 (*SD* = 0.95) hr of individual adolescent sessions, and (d) 2.22 (*SD* = 2.81) hr of extrafamilial systems work for each MDFT participant per month.

Discussion

Engagement, Retention, Service Hours, and Treatment Satisfaction

Too many youth-based therapies fail to achieve their first essential task—engagement and retention. The earliest adolescent therapy studies revealed a 40% to 60% drop-out rate (Kazdin, Holland, & Crowley, 1997). More recently, in a national study only 27% of adolescents completed 3 months of outpatient substance abuse treatment (i.e., NIDA recommended dose; Grella, Hser, Joshi, & Rounds-Bryant, 2001), whereas in another adolescent treatment evaluation, slightly more than one in three teens (35%) completed a standard course of outpatient counseling (Dennis, Ives, White, & Muck, 2008). Overall, approximately 5% of justice-involved youths in need of specialized services receive them.

Clinicians and researchers frequently assert that teenagers must be pressured or coerced in one way or another to participate in treatment. For Waldron, Kern-Jones, Turner, Peterson, and Ozechowski (2007), 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" (p. 133). Yet the intervention described here did not involve court or school mandates; the study was conducted with preadjudicated youth. Thus, 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 postdetention treatment. This engagement and retention rate is consistent with previous MDFT studies. For instance, in another MDFT study with clinically referred early adolescents in which youth received services once or twice a week over 4 months, MDFT retained 96% of its participants (Liddle et al., 2004, 2008). In another study testing MDFT as outpatient alternative to residential

treatment (i.e., justice-involved, multiply impaired teens with largely comorbid diagnoses), 87% of MDFT participants were retained for 3 or more months of treatment compared with 59% in a residential program.

Client satisfaction is included as an integral outcome in treatment and services research (Carroll & Rounsaville, 2003; McLellan & Hunkeler, 1998). Reducing barriers to treatment attendance by introducing home-based therapy was a signature feature of early family preservation interventions. Patterned on the Homebuilders service delivery model, Multisystemic Therapy (MST) provides all of its services in the family's home. In this study, although the MDFT program was 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 juvenile justice–involved. Ratings are low when adolescents and families receive services that are experienced as off the mark, ineffective, and unresponsive to practical needs. Parents and adolescents routinely tell their MDFT therapists that they appreciate the program's outcome-oriented stance. Families report they value how the program balances a focus on each family member's concerns and complaints, as well as those of outside parties, notably school and juvenile justice personnel.

The engagement and retention rates achieved in this and other MDFT studies, as well as in some other empirically validated family-based approaches (e.g., Henggeler, Clingempeel, Brondino, & Pickrel, 2002), can be interpreted in the context of how these interventions focus on practically important therapeutic objectives and do so in ways that use family relationships as a key source of motivation enhancement and indeed a context of adolescent and parent change.

There are other important aspects of treatment that likely contribute to effectiveness, including its focus not only on changing individual and family functioning but also interactional processes that concern influential others outside the family (Liddle, IN PRESS). This article presents preliminary evidence of MDFT clinician effectiveness in establishing and maintaining working collaborations, which are focused on the immediate and practical needs and best interests of the youth and family. MDFT therapists created and used these therapeutic alliances in much the same way that they established, maintained, and worked the relationships with various family members (Robbins et al., 2006). Using empirically supported MDFT techniques (Diamond & Liddle, 1996), clinicians helped family members to focus on important issues in family sessions, managed conflict and negativity, and prevented interactions from escalating to extreme stances and precipitous decisions about enormously consequential matters (e.g., adult transfer, residential placement).

Therapists attended court and school hearings alongside family members. They systematically prepared the adolescent and parents for these meetings, always with an eye on helping participants influence the outcomes so that the best possible results could be achieved. It is not unreasonable to suggest that the positive, proactive,

agency-oriented multiple-system, professional collaboration, and direct help provided to the family (i.e., so they could effectively engage in and maintain these relationships and their intersystem circumstances) might be related to bottom-line case outcomes.

The outcomes on the satisfactory collaborations reflect on therapist skills in this regard, and justice and legal professionals' responsiveness to clinicians' intentions. We believe this is similar to the way we understand the youths' and parents' responsiveness to the MDFT approach, as evidenced in our engagement and retention rates. Interpreting low treatment engagement and retention rates in terms of client characteristics ("treatment refusers," "this client is unsuitable for or unable to benefit from therapy") are characterizations that offer conclusions about teens and omit therapist or program factors. We prefer to turn these interpretations around and frame treatment termination or nonengagement more in terms of what clinicians and treatment programs offer, or fail to offer, as more complete explanations for retention and engagement. As part of the MDFT therapists' collaborative set that is established among themselves, the youths and parents, and the other professionals, the mindset, method, and clinician skill also contribute to the study's positive collaborative outcomes. When these relationships are formed and maintained by means of a therapist's "outcome orientation" (clinicians feel and are seen in the middle of these relationships and systems), our experience is that professionals, youths, and families alike respond well in kind.

Implementation Success: Necessary But Not Sufficient for Program Sustainability

Systems-level interventions were required to implement MDFT-HIV within detention and in the community following release. These activities included enlisting cooperation from substance abuse treatment providers, juvenile detention facilities, and juvenile probation departments. Facilities needed to institute identification, screening, and referral procedures to the study itself and as part of that, to substance abuse treatment while youths were in the detention facility. Also, in detention, MDFT-DTC individual and family sessions had to be authorized by detention administrators and staff. The in-detention HIV group protocol had to be integrated into the standard detention programming. Post detention, MDFT-DTC had to be implemented by community substance abuse providers. Substantive collaboration was required between clinicians and juvenile probation personnel, the public defender's office, state attorneys, and juvenile court judges to facilitate youths' progress in treatment. As the project progressed, juvenile justice stakeholders at both sites frequently expressed to the study investigators, treatment providers, state commissions (e.g., Florida Department of Juvenile Justice Blueprint Commission, 2008), and local juvenile justice advisory boards (e.g., 11th Circuit Juvenile Justice Board) their enthusiasm for the MDFT-HIV.

Nevertheless, although successfully implemented in two jurisdictions once the study ended, the MDFT-DTC program was not sustained in whole or in part. Particular components survived in each county, however. For instance, prior to MDFT-DTC

program implementation, no HIV prevention intervention services were provided by the Pinellas County Detention Center. Because of staff shortages, the detention center failed to maintain the state-of-the-science HIV prevention group that it implemented during the MDFT-DTC study in the Criminal Justice–Drug Abuse Treatment Studies. Still detention staff acknowledged the importance of providing such services, and they reached out to a local HIV prevention community organization to conduct STD testing and run HIV prevention groups. So although the precise in-detention HIV intervention was not sustained, it seems reasonable to assume that the MDFT-DTC experience influenced program decision making to some extent in that one of the detention centers added in-detention HIV services to its programming.

In both communities, certain juvenile justice partners and substance abuse treatment providers involved in the MDFT-DTC were impressed by the program's effectiveness and committed themselves to keeping family-based services in their community. After realizing that no funds were available to retain the MDFT-DTC program beyond the study, administrators worked on a local level to sustain the inclusion of parents in the youth's treatment. Stakeholders in both communities were able to obtain funds to sustain an MDFT program, albeit without the MDFT-DTC detention services.

Conclusions and Next Steps

We draw three conclusions from the findings. First, the new intervention, to the best of our knowledge, is the first protocol of its kind to target the multiple outcomes of substance abuse, delinquency, mental health, and high-risk sexual behavior. It is also the first intervention, also as far as we know, to begin these comprehensive services in the detention facility and then to continue the family-based services with the same clinicians on an aftercare basis.

Second, the MDFT-DTC implementation outcomes are consistent with other research demonstrating the benefits of particular family-based treatments (Hogue & Liddle, 2009; Williams & Chang, 2000). Researchers and panels of experts (Drug Strategies, 2005) concur with unambiguous critiques—"juvenile justice systems too often ignore the crucial role of families in resolving delinquency" (Annie E. Casey Foundation, 2008). Although our drug abuse, HIV prevention, and delinquency outcomes are being prepared for a separate presentation, the implementation findings offered here are significant; they highlight the capacity of a new treatment to engage and retain the mostly ethnic minority sample, a group that is overrepresented in the juvenile justice system, thought to be difficult to engage in treatment, and in documented need of effective services (Poe-Yamagata & Jones, 2000).

Finally, although this and other MDFT adaptations have been implemented in juvenile justice, substance abuse, and mental health settings, program sustainability of any evidence-based practice requires macrosystem commitment, personnel, and adequate funding. Fresh thinking about collaboration among diverse but like-minded stakeholders is being defined in much the same way that clinical interventions were defined—in

terms of fundamental working principles, a theoretical framework, action steps for change, and a fierce commitment to effecting improved outcomes.

The next step of this research has been to further specify the implementation aspects of the DTC approach—to articulate a theory-driven parallel implementation model that handles the incorporation of all of the clinical demands of the therapy approach in addition to addressing the multiple systems issues such as funding and intersystem coordination and collaboration, that are known to influence a jurisdiction's capacity to incorporate and sustain evidence-based interventions.

Acknowledgements

This study was funded under a cooperative agreement from the National Institute on Drug Abuse, Grant U01DA15412-01, as well as R01DA13298-01A1, National Institutes of Health (NIDA/NIH), with support from the Center for Substance Abuse Treatment, SAMHSA; the Centers for Disease Control and Prevention (CDC); the National Institute on Alcohol Abuse and Alcoholism (all part of the U.S. Department of Health and Human Services); and from the Bureau of Justice Assistance of the U.S. Department of Justice. The authors gratefully acknowledge the collaborative contributions by NIDA, the Coordinating Center (George Mason University/University of Maryland at College Park), and the Research Centers participating in Criminal Justice–Drug Abuse Treatment Studies (CJ-DATS) (Brown University, Lifespan Hospital; Connecticut Department of Mental Health and Addiction Services; National Development and Research Institutes, Inc., Center for Therapeutic Community Research; National Development and Research Institutes, Inc., Center for the Integration of Research and Practice; Texas Christian University, Institute of Behavioral Research; University of Delaware, Center for Drug and Alcohol Studies; University of Kentucky, Center on Drug and Alcohol Research; University of California at Los Angeles, Integrated Substance Abuse Programs; and University of Miami Miller School of Medicine, Center for Treatment Research on Adolescent Drug Abuse). The contents are solely the responsibility of the authors and do not necessarily represent the views of the Department of Health and Human Services, the Department of Justice, NIDA, or other CJ-DATS participants. Thanks are gratefully extended to Linda Alberga and Rocio Ungaro, research coordinators on the DTC Study, their research teams, study clinicians, Pinellas and Miami-Dade County juvenile justice personnel, Mark Vargo and Nancy Hamilton at Operation PAR in Pinellas County, Steve Saffron at Here's Help in Miami, and as always, to the adolescents and families who participated in the study.

Note

1. See the Vaughn, Wallace, Davis, Fernandes, & Howard (2008) recommendation in this regard.

Declaration of Conflicting Interests

The author(s) declared no conflicts of interests with respect to the authorship and/or publication of this article.

Funding

The research reported in this article was supported by National Institutes of Health/National Institute on Drug Abuse grants 1R01DA027216-01, 1R01DA026126-01, 2U01DA16193-01, and 2U01DA16193-06.

References

Aarons, G. A., Brown, S. A., Hough, R. L., Garland, A. F., & Wood, P. A. (2001). Prevalence of adolescent substance use disorders across five sectors of care. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 419-426.

Abram, K. M., Teplin, L. A., Charles, D. R., Longworth, S. L., McClelland, G. M., & Dulcan, M. K. (2004). Posttraumatic stress disorder and trauma in youth in juvenile detention. *Archives of General Psychiatry, 61*, 403-410.

Annie E. Casey Foundation. (2008). *Juvenile detention alternatives initiative (JDAI).* Retrieved from http://www.aecf.org/MajorInitiatives/JuvenileDetentionAlternativesInitiative.aspx

Attkisson, C. C., & Greenfield, T. K. (1994). The Client Satisfaction Questionnaire–8 and the Service Satisfaction Questionnaire–30. In M. Maruish (Ed.), *Psychological testing: Treatment planning and outcome assessment* (pp. 402-420). San Francisco, CA: Lawrence Erlbaum.

Austin, A. M., Macgowan, M. J., & Wagner, E. F. (2005). Effective family-based interventions for adolescents with substance use problems: A systematic review. *Research on Social Work Practice, 15*, 67-83.

Becker, S. J., & Curry, J. F. (2008). Outpatient interventions for adolescent substance abuse: A quality of evidence review. *Journal of Consulting and Clinical Psychology, 76*, 531-543.

Belenko, S., & Dembo, R. (2003). Treating adolescent substance abuse problems in the juvenile drug court. *International Journal of Law and Psychiatry, 26*, 87-110.

Brannigan, R., Schackman, B. R., Falco, M., & Millman, R. B. (2004). The quality of highly regarded adolescent substance abuse treatment programs. *Archives of Pediatrics & Adolescent Medicine, 158*, 904-909.

Bronstein, L. R. (2002). Index of interdisciplinary collaboration. *Social Work Research, 26*, 113-126.

Carroll, K. M., & Rounsaville, B. J. (2003). Bridging the gap: A hybrid model to link efficacy and effectiveness research in substance abuse treatment. *Psychiatric Services, 54*, 333-339.

Chassin, L., Knight, G., Vargas-Chanes, D., & Losoya, S. H. (2009). Substance abuse treatment outcomes in a sample of male serious juvenile offenders. *Journal of Substance Abuse Treatment, 36*, 183-194.

Cocozza, J., & Skowyra, K. (2000). Youth with mental health disorders: Issues and emerging responses. *Office of Juvenile Justice and Delinquency Prevention Journal, 7*, 3-13.

Dennis, M. L., Ives, M. L., White, M. K., & Muck, R. D. (2008). The Strengthening Communities for Youth (SCY) initiative: A cluster analysis of services received, their correlates and how they are associated with outcomes. *Journal of Psychoactive Drugs, 40*, 3-16.

Diamond, G., & Liddle, H. A. (1996). Resolving a therapeutic impasse between parents and adolescents in multidimensional family therapy. *Journal of Consulting and Clinical Psychology, 64*, 481-488.

Drug and Alcohol Findings. (2002). *Nugget 7.8: Holistic therapy preferable for troubled teens.* Retrieved from http://findings.org.uk/docs/nug_7_8.pdf

Drug and Alcohol Findings. (2009). *Multidimensional family therapy for young adolescent substance abuse: Twelve-month outcomes of a randomized controlled trial.* Retrieved from http://www.findings.org.uk/count/downloads/download.php?file=Liddle_HA_6.txt

Drug Strategies. (2005). *Bridging the gap: A guide to drug treatment in the juvenile justice system*. Washington, DC: Author.

Farabee, D., Shen, H., Hser, Y., Grella, C. E., & Anglin, M. D. (2001). The effect of drug treatment on criminal behavior among adolescents in DATOS-A. *Journal of Adolescent Research, 16*, 679-696.

Florida Department of Juvenile Justice Blueprint Commission. (2008). *Getting smart about juvenile justice in Florida.* Retrieved from http://www.djj.state.fl.us/blueprint/documents/Report_of_the_Blueprint_Commision.pdf

Gallagher, C. A., & Dobrin, A. (2007). Can juvenile justice detention facilities meet the call of the American Academy of Pediatrics National Commission on Correctional Health Care? A national analysis of current practices. *Pediatrics, 119*, 991-1001.

Garland, A. F., Hough, R. L., Landsverk, J. A., & Brown, S. A. (2001). Multi-sector complexity of systems of care for youth with mental health needs. *Children's Services: Social Policy, Research and Practice, 4*, 123-140.

Golub, A., & Johnson, B. D. (2001). *The rise of marijuana as the drug of choice among youthful adult arrestees. National Institute of Justice Research in Brief.* Washington, DC: National Institute of Justice, Office of Justice Programs.

Grella, C. E., Hser, Y. I., Joshi, V., & Rounds-Bryant, J. (2001). Drug treatment outcomes for adolescents with comorbid mental and substance use disorders. *Journal of Nervous and Mental Disease, 189*, 384-392.

Grisso, T., Barnum, R., Fletcher, K. E., Cauffman, E., & Peuschold, D. (2001). Massachusetts Youth Screening Instrument for mental health needs of juvenile justice youths. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 541-548.

Henggeler, S. W., Clingempeel, W. G., Brondino, M. J., & Pickrel, S. G. (2002). Four-year follow-up of multisystemic therapy with substance-abusing and substance-dependent juvenile offenders. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 868-874.

Hogue, A., & Liddle, H. A. (2009). Family-based treatment for adolescent substance abuse: Controlled trials and new horizons in services research. *Journal of Family Therapy, 31*, 126-154.

Jackson-Gilfort, A., Liddle, H. A., Tejeda, M. J., & Dakof, G. A. (2001). Facilitation engagement of African American male adolescents in family therapy: A cultural theme process study. *Journal of Black Psychology, 27*, 321-340.

Kazdin, A. E., Holland, L., & Crowley, M. (1997). Family experience of barriers to treatment and premature termination from child therapy. *Journal of Consulting and Clinical Psychology, 65*, 453-463.

Lederman, C. S., Dakof, G. A., Larrea, M. A., & Li, H. (2004). Characteristics of adolescent females in juvenile detention. *International Journal of Law and Psychiatry, 27*, 321-337.

Liddle, H. A. (IN PRESS). Treating adolescent abuse using Multidimensional Family Therapy. In J. Weisz & A. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents* (2nd ed., pp. 416-432). New York, NY: Guilford.

Liddle, H. A., Dakof, G. A., & Diamond, G. (1992). Adolescent substance abuse: Multidimensional family therapy in action. In E. Kaufman & P. Kaufman (Eds.), *Family therapy of drug and alcohol abuse* (2nd ed.). Needham Heights, MA: Allyn & Bacon.

Liddle, H. A., Dakof, G. A., Parker, K., Diamond, G. S., Barrett, K., & Tejeda, M. (2001). Multidimensional family therapy for adolescent drug abuse: Results of a randomized clinical trial. *American Journal of Drug and Alcohol Abuse, 27*, 651-688.

Liddle, H. A., Dakof, G. A., Turner, R. M., Henderson, C. E., & Greenbaum, P. E. (2008). Treating adolescent drug abuse: A randomized trial comparing Multidimensional Family Therapy and Cognitive Behavior Therapy. *Addiction, 103*, 1660-1670.

Liddle, H. A., Rowe, C. L., Dakof, G. A., Henderson, C. E., & Greenbaum, P. E. (2009). Multidimensional family therapy for young adolescent substance abuse: Twelve-month outcomes of a randomized controlled trial. *Journal of Consulting and Clinical Psychology, 77*, 12-25.

Liddle, H. A., Rowe, C. L., Dakof, G. A., Ungaro, R. A., & Henderson, C. (2004). Early intervention for adolescent substance abuse: Pretreatment to posttreatment outcomes of a randomized controlled trial comparing multidimensional family therapy and peer group treatment. *Journal of Psychoactive Drugs, 36*, 2-37.

Liddle, H. A., Rowe, C. L., Gonzalez, A., Henderson, C. E., Dakof, G. A., & Greenbaum, P. E. (2006). Changing provider practices, program environment, and improving outcomes by transporting multidimensional family therapy to an adolescent drug treatment setting. *American Journal on Addictions, 15*, 102-112.

Liddle, H. A., Rowe, C. L., Quille, T. J., Dakof, G. A., Mills, D. S., Sakran, E., & Biaggi, H. (2002). Transporting a research-based adolescent drug treatment into practice. *Journal of Substance Abuse Treatment, 22*, 231-243.

Lucas, C. P., Zhang, H., Fisher, P. W., Shaffer, D., Regier, D. A., & Narrow, W. E., . . . , Friman, P. (2001). The DISC Predictive Scales (DPS): Efficiently screening for diagnoses. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 443-449.

Marvel, F., Rowe, C. L., Colon-Perez, L., DiClemente, R. J., & Liddle, H. A. (2009). Multidimensional family therapy HIV/STD risk-reduction intervention: An integrative family based model for drug-involved juvenile offenders. *Family Process, 48*, 69-84.

McLellan, A. T., & Hunkeler, E. (1998). Alcohol & drug abuse: Patient satisfaction and outcomes in alcohol and drug abuse treatment. *Psychiatric Services, 49*, 573-575.

National Institute on Drug Abuse, National Institutes of Health (1999). *Principles of drug addiction treatment: A research-based guide* (NIH Publication No. 09-4180). Retrieved from http://www.drugabuse.gov/PODAT/PODATIndex.html

National Registry of Evidence-based Program and Practices. (2008). *Multidimensional Family Therapy (MDFT).* Retrieved from http://www.nrepp.samhsa.gov/programfulldetails.asp?PROGRAM_ID=184

Pack, R. P., DiClemente, R. J., Hook, E. W., III, & Oh, K. M. (2000). High prevalence of asymptomatic STDs in incarcerated minority male youth: A case of screening. *Sexually Transmitted Diseases, 27*, 175-177.

Poe-Yamagata, E., & Jones, M. (2000). *And justice for some.* Washington, DC: Prepared by The National Council on Crime and Delinquency for the Building Blocks for Youth Initiative.

Robbins, M. S., Liddle, H. A., Turner, C. W., Dakof, G. A., Alexander, J. F., & Kogan, S. M. (2006). Adolescent and parent therapeutic alliances as predictors of dropout in multidimensional family therapy. *Journal of Family Psychology, 20*, 108-116.

Teplin, L. A., Abram, K. M., McClelland, G. M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry, 59*, 1133-1143.

Teplin, L. A., Elkington, K. S., McClelland, G. M., Abram, K. M., Mericle, A. A., & Washburn, J. J. (2005). Major mental disorders, substance use disorders, comorbidity, and HIV-AIDS risk behaviors in juvenile detainees. *Psychiatric Service, 56*, 823-828.

United States Department of Justice. (2005). *Department of Justice Activities Under the Civil Rights of Institutionalized Persons Act: Fiscal Year 2004*. Washington, DC: United States Department of Justice. Retrieved from http://www.usdoj.gov/crt/split/document/split_cripa04pdf

Vaughn, M. G., & Howard, M. O. (2004). Adolescent substance abuse treatment: A synthesis of controlled evaluations. *Research on Social Work Practice, 14*, 325-335.

Waldron, H., Kern-Jones, S., Turner, C., Peterson, T., & Ozechowski, T. (2007). Engaging resistant adolescents in drug abuse treatment. *Journal of Substance Abuse Treatment, 32*, 133-142.

Waldron, H. B., & Turner, C. W. (2008). Evidence-based psychosocial treatments for adolescent substance abuse. *Journal of Clinical Child and Adolescent Psychology, 37*, 238-261.

Wasserman, G. A., McReynolds, L. S., Whited, A. L., Keating, J. M., Musabegovic, H., & Huo, Y. (2008). Juvenile probations officers' mental health decision making. *Administration and Policy in Mental Health and Mental Health Services Research, 35*, 410-422.

Williams, R. J., & Chang, S. Y. (2000). A comprehensive and comparative review of adolescent substance abuse and treatment outcome. *Clinical Psychology: Science and Practice, 7*, 138-166.