

Recidivism, Costs, and Psychosocial Outcomes for a Post-Arrest Juvenile Diversion Program

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Recidivism, costs, and psychosocial outcomes are reported for a postarrest diversion program in Wayne County (Detroit), MI. Program features included: rapid, standardized assessment of psychosocial functioning with the Juvenile Inventory For Functioning[®], an individualized plan for addressing needs, engagement of caregivers, service provision by youth assistance programs in the youth's community, and access to mental health and substance use services as needed. The adjudication rate for new offenses one-year post services was 7.7%, for a program that costs \$1,500 per youth. Significant improvement in functioning was observed for youth with an exit assessment. Functioning at entry predicted recidivism.

KEYWORDS assessment, diversion, functioning, JIFF, juvenile justice, outcomes, recidivism

INTRODUCTION

One component of the transformation of the Wayne County, Michigan juvenile justice system is the development of a community-based, post-arrest

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diversion program. Wayne County encompasses the city of Detroit and the surrounding suburban areas and functions under the auspices of the Wayne County Children and Family Services. Detroit is 89% African American, has high levels of demoralizing poverty, and the presence of environmental factors known to contribute to delinquency. Wayne County has acknowledged disproportionate minority contact as a problem within its juvenile justice population and has appointed a federally funded task force to address the issue. Diversion programming that could demonstrate a low rate of recidivism and improved psychosocial functioning among both Caucasian and African American juvenile offenders, therefore, could potentially result in cost savings for the county and fewer disproportionate minority contacts for the youth.

The current study describes the findings of the initial phase of implementing the diversion initiative, referred to as Correct Course. Components of Correct Course include rapid, standardized assessment which provides an individualized plan for addressing youth needs, engagement of caregivers, service provision by youth assistance programs located in the youth's community, access to mental health and substance use specialized services as needed, general oversight that services are provided, and evaluation of outcomes.

There is widespread recognition of the need to divert troubled youth from deeper penetration into the juvenile justice system. This is based on findings showing the ineffectiveness of traditional juvenile justice services, the evidence on disproportionate minority contacts and confinement, the high cost of detention and out of home placement, and the negative consequences for youth when the system fails to sufficiently differentiate between delinquents and status offenders or low risk youth (Cocozza et al., 2005; Holman & Ziedenberg, 2006; Lipsey, 1992; Center for Juvenile Justice Reform & Chapin Hall, 2009). While these findings make a case for developing diversion programs, there are relatively few evaluation studies reporting recidivism rates for post-arrest diversion programs (i.e., alternatives to adjudication). Before describing Correct Course and the results of its initial implementation, we will begin with a brief review of studies of diversion programs that are somewhat comparable.

Post-Arrest Diversion Programs

Brief summaries of diversion studies with nonfelony offenders, in which recidivism rates are reported, are presented next. Studies conducted exclusively in substance abuse treatment centers or with youth referred out to formal mental health services were excluded. We start with two reviews of multiple programs.

Dunford, Osgood, and Weichselbaum (1982) conducted a national evaluation of diversion projects funded in 1976 by the Office of Juvenile

Justice and Delinquency Prevention. The evaluators concluded that the recidivism rates and outcome for youths' social adjustment did not differ between the diversion programs and traditional court services. Whitehead and Lab (1989) conducted a meta-analysis of evaluation studies of juvenile correction treatments that had a control group. After reviewing journal articles published from 1975 to 1984, they divided the studies into: system diversion programs (i.e., operating as an extension of the formal justice system), nonsystem diversion programs (i.e., youth was referred to nonsystem-related agencies, with no follow up by juvenile services), residential, and community corrections including parole and probation. They concluded that system diversion programs were likely the most promising, with 47% of these programs making mostly modest gains.

Three studies compared post-arrest diversion programs to a control group. McGarrell and Hipple (2007) reported no significant differences in rearrest rates at 24 months follow-up between Family Group Conferencing (48%) and other court-ordered diversion programs (49%). Patrick and Marsh (2005) found no significant differences in recidivism 3 years after arrest for tobacco- or alcohol-related offenses when four conditions were compared: two diversion programs, traditional magistrate court, and a control group (i.e., brief contact). The average recidivism rate was 43.3%, with the least expensive being the nonjudicial diversion program. A diversion program which utilized undergraduate volunteers to provide advocacy and behavioral contracting services to misdemeanant offenders found that at one year follow-up, recidivism (i.e., additional court contact) was lower for this program (22%), compared to traditional juvenile court processing (34%) and release without services (32%; Sturza & Davidson, 2006).

Different diversion programs were compared in studies conducted in Hillsborough County, Florida and Maricopa County, Arizona. Dembo, Wareham, and Schmeidler (2005) compared recidivism for a community based service-oriented diversion program to four other diversion programs that replaced this community program. The Florida legislature eliminated the community-based program in 2000, as part of a "get tougher" judicial approach. Recidivism, which was defined as charged on one or more crimes in the year post intervention, was calculated for the first and second 6-month periods. Results of the regression analysis, which statistically controlled for important covariates, found that the community based service-oriented program had lower recidivism rates (first 6 months, 19%; second 6 months, 16%) than each of the other diversion programs (for first 6 months, ranged from 17%-40%; for second 6 months, 15%-24%). Comparison of imputed costs determined that the community-based program resulted in significantly more cost savings. Rodriguez (2007) compared a restorative justice program (i.e., Community Justice Committees) in Maricopa County to a group composed of other youth who were eligible for diversion. Recidivism was defined as filing of a formal petition, meaning the case was deemed appropriate for adjudication. The rates at 24-months follow-up were 34% for the restorative justice program and 35.9% for the other diversion programs.

Dembo et al. (2008) evaluated the Post Arrest Diversion Program, which was part of the Miami-Dade Juvenile Assessment Center (JAC) National Demonstration Project. This diversion program provided case management and follow-up during the 60-day program and all youth received a justice sanction, which usually included monetary restitution and community services. Diversion staff referred out all services (Cocozza et al., 2005). This program was modified before the evaluation began, based on recommendations by consultants. They recommended using evidence-based, standardized screening and assessment instruments and better linkage to services. The rearrest rate of this modified program at 1-year post services was 19.8%, with approximately 8% of the sample escalating to felony offenses (Dembo et al., 2008). There was no control or comparison group. The authors noted that a weakness of the study was the absence of psychosocial outcomes.

These studies yielded mixed results. Additionally, the criteria used for recidivism varied across the studies, precluding direct comparisons of rates. Despite this, some trends emerged. Half failed to show a significant difference between the diversion program(s) and control or comparison groups. The recidivism rates for these programs were mostly in the 43% to 48% range. In contrast, the programs that were superior to control or other programs were community-based, meaning the services were provided by nonjudicial agencies. The recidivism rates for these programs ranged from 19% to 22%. Furthermore, the two studies that reported cost found that the nonjudicial, community-based programs cost the least, with the associated recidivism being as good, or better, than the control or comparison groups.

Youth who completed the diversion programs without reoffending during the program had their cases dismissed, avoiding penetration further into the judicial system. It is important to note that in some of the community-based programs, the juvenile justice system was involved in activities such as administering initial screening assessments of the youth at entry and tracking program completion. Based on the research to date, the extent to which judicial support or oversight enhances diversion programs is not known. However, according to publications from Office of Juvenile Justice and Delinquency Prevention, juvenile (or community) assessment centers should provide initial broad based screening assessments to identify needs covering a wide range of areas, including mental health issues, substance abuse, school problems, family relationships, and peer relationships (Oldenettel & Wordes, 2000). The authors even encouraged these assessment centers to consider creating a nonsecure processing system whereby status offenders or high-risk youth with inappropriate behaviors can be assessed. They asserted that needs assessments "increase consistency in assessing problems and provide results that can serve as a foundation for a service plan" (Oldenettel & Wordes, 2000, p. 5).

It is noteworthy that none of the studies reported on the youths' psychosocial functioning, although Dembo et al. (2008) viewed this omission as a major limitation of the Miami-Dade evaluation. Dembo and his colleagues' (2008) recommendation that studies of juvenile justice programs routinely include both recidivism and psychosocial outcomes is supported by the literature. Youth served by juvenile justice are the most psychosocially impaired, compared to youth accessing care through other agencies (Hodges & Kim, 2000; Walrath, Sharp, Zuber, & Leaf, 2001). Abram, Choe, Washburn, Romero, and Teplin (2009) found that 3 years after detention, most youth had impaired day-to-day functioning in one or more life domains on the Child and Adolescent Assessment Scale (Hodges, 1989) and one in five youth were seriously impaired. In addition, males who were incarcerated at 3 years were significantly more likely to be impaired on some domains. The authors emphasized that failure to provide services aimed at improving the psychosocial functioning of these youth results in ongoing cost to the youth and society. Greater impairment in functioning at discharge from a juvenile justice facility predicted higher recidivism over the following year (Quist & Matshazi, 2000). An effectiveness study comparing MST (Henggeler, Melton, Smith, Schoenwald, & Hanley, 1993) to usual court services demonstrated that greater improvements in functioning and lower recidivism were observed for youth who received MST (Timmons-Mitchell, Bender, Kishna, & Mitchell, 2006). The relationship between psychosocial functioning and offending, as well as recidivism, underscores the importance of providing services aimed at improving functioning and the desirability of using it as an outcome measure.

The current study describes Correct Course, in which youth are diverted to community services. The Wayne County JAC, which is the single access point for all adjudicated and at-risk youth in Wayne County, conducts an assessment at entry and is administratively responsible for the program. The assessment process uses the Juvenile Inventory for Functioning[®] (JIFF[®]: Hodges, 2004b), which is a self-administered, computerized interview that yields a service plan based on the youth's needs. Both youth and caregivers reported on the youths' needs via the JIFF. Recidivism rates and imputed cost savings are presented for the initial phase of this innovative program. In addition, for a subsample of the enrolled youth, psychosocial outcomes are reported.

METHODS

Participants

The sample included youth referred to the Correct Course diversion program from May 2007 to May 2009. Youth were post-arrest and were under the jurisdiction of the Wayne County Juvenile Justice system. During this period, 1,017 youth enrolled in Correct Course and completed an entry assessment, the youth version of the JIFF. The sample also included 1,000 caregivers who completed the caregiver version of the JIFF upon their youth's entry into the program. A subset of the participants were administered an exit JIFF upon completion of the diversion program. This subsample included 259 youth and 244 caregivers. Alcohol and drug screening was done for all cases, except for 12 who did not consent.

Measures

INITIAL DRUG SCREEN

Every youth referred to the diversion program is asked to consent to a urine alcohol and other drug screening (AOD) test. The results are instantly available to staff and the family, with lab verification within 24 hours. The drugs that can be detected include alcohol, marijuana, cocaine, and opiates. The rationale for conducting AOD screening is that over 80% of youth adjudicated in Wayne County have recently used illegal substances, which appears to be a major influence on the youth's active participation in other illegal activity resulting in arrest.

For the youth who are referred after the pre-petition hearing, the AOD is done immediately after leaving the courtroom and immediately before the JIFF assessment. For youth who were early releases from detention, the AOD was done as part of the detention intake. Determination of substance use is a critical intervention priority because other needs cannot be as successfully assessed or addressed until the cognitive influence of mind-altering substances is attended to.

JIFF

The JIFF (Hodges, 2004b; 2005) is an assessment process that starts with the JIFF Interviewer[®] and ends with a JIFF Service Plan. The Interviewer is a self-guided computerized interview that identifies the youth's needs across 10 domains of functioning: school, picked on by peers, noncompliance in the home, family environment (reflects on undesirable behavior by others in the home, not the youth), unsafe community behavior, feelings (trauma, depression, anxiety), self-harm potential, thinking (irrational thought), substance use, and health-related concerns. There are two versions: one in which the youth's functioning and needs. The caregiver version has an additional subscale, burden of care, which inquires about the effect of the youth's behavior and needs on the family. The duration of the interview ranges from 15 to 30 minutes. A major use of the JIFF is to determine need for more in-depth mental health evaluation or services, as well as to identify and prioritize other specialized service needs.

Upon completion of the interview, the JIFF software application generates an individualized list of goals to address the needs indicated by the respondent's answers. The assisting staff member, in collaboration with the youth and caregiver, selects goals for the youth, matches services to each goal, and prioritizes them. This is a quick process because, for each goal, the application displays the respondent's answers that led to triggering each goal, including answers to open-ended questions. In addition, goals are tagged as critical if the associated youth behavior potentially endangers the youth or others. Staff may ask clarifying questions and can add customized goals. A one-page service plan is rapidly generated via the software program and contains the goals-services matrix as well as a graph showing the youth's extent of problems by subscale. The matrix indicates whether the goal was generated from the youth's JIFF, the caregiver's JIFF, or added by staff. Staff may add a summarizing statement to the Plan that further guides the direction of service or identifies reported needs. Depending on the circumstances, staff may involve the youth and caregivers directly, by having them participate in this process of goal and service selection, which results in a mutually agreed upon plan for action, customized for that youth and family.

For each administration of the JIFF, scores are generated for each subscale and are summed to produce a JIFF total score. A higher total or subscale score indicates more impairment in day-to-day functioning, with specific elevated scores identifying a need for a more in-depth assessment in that subset domain. The internal consistency of the JIFF total score in the present study was high, as indicated by a Cronbach's alpha was 0.88. In the current study, 95% of the youth reported being comfortable with being "interviewed by a computer."

The JIFF was derived from the Child and Adolescent Functional Assessment Scale[®] (CAFAS[®]: Hodges, 1989), which has extensive evidence of reliability, validity, and sensitivity to change (See Hodges, 2004a for a review). The JIFF contains many of the same behavioral descriptors that appear in the CAFAS and inquires about each of the domains of functioning (i.e., subscales) in the CAFAS. Numerous studies assessing functioning with the CAFAS have found a relationship between impairment and offending or recidivism (Abram et al., 2009; Hodges & Kim, 2000; Quist & Matshazi, 2000; Timmons-Mitchell et al., 2006; Walrath et al., 2001).

Description of Correct Course

The JAC, via contract with Wayne County Children and Family Services, is the single access point for all adjudicated and at-risk youth in Wayne County, MI, and is administratively responsible for Correct Course. This diversion program is a unique initiative aimed at diverting youth at the earliest point of contact from further penetrating the juvenile justice system. The goal is to connect these youth and families with local resources outside of the judicial system,

whenever possible. This initiative works as a partnership between the youth and their families, the juvenile justice system (prosecutor's office, family court judges, and the JAC), and local youth assistance programs (YAPs), which provide services to the youth and families in their own neighborhoods. The results of the IIFF assessments inform prosecutors, court officials, and community-based providers about the youth's needs for a variety of services and supports. The youth enrolled in the Correct Course diversion program are assigned to an appropriate YAP, primarily based on the family's zip code. They typically receive services for approximately 3 months, but can continue for up to 6 months. The YAPs work with the youth and the parents, providing a wide array of services meant to improve the youth's functioning across various life domains. One of the greatest strengths of the diversion program is this ability to collaborate with local community-based organizations that are as diverse as the neighborhoods in which they operate. While all of the YAPs are required to offer several common core components, they have the freedom to vary widely in their approaches as to how these goals are accomplished. Within the 1-hour process of JIFF screening to completion of the JIFF Service Plan, the JAC staff is able to rapidly triage and assign families to the YAP and to other locally based services.

Procedures

The prosecutor's office has the option of recommending the Correct Course program for youth whose case might have otherwise been dismissed. In addition, the prosecutor and jurist can make a referral at the pre-petition hearing for youth who are not in custody or refer youth directly to the program, avoiding the pre-petition hearing for some youth. When the family agrees to participate in Correct Course, the youth waives the right to a trial regarding the pending charges. If youth complete the program, they benefit by having their charges dismissed. Immediately after the hearing, staff members from the JAC work with the youth and caregivers to complete the JIFF at the courthouse. Youth who are referred to the diversion program, but were in custody at the detention center, were administered the JIFF within 24 hours of their intake. The results of the JIFF are available to the jurist at the youth's 24-hour hearing. During this implementation phase, not all youth who were in detention and eventually enrolled in the diversion program could be assessed because of the short window of opportunity before the hearing and the volume of youth being processed.

The JAC is responsible for formally enrolling the youth in the program, administering the JIFF prediversion and postdiversion participation, providing consultation when issues arise, and tracking whether services are received. Upon completion of the JIFF interview at the courthouse, staff from the JAC reviews the results with the family. The focus is on needs reported by the youth and caregiver in the interview and practical goals to address them, using

the results instantaneously generated by the JIFF software. The result is a software-generated, one page JIFF Service Plan that is individualized for the youth and includes a list of goals, the name of the service agency responsible for addressing each goal, and a chart detailing the percent endorsement of items for each JIFF subscale. At the 24-hour hearing, this chart, which is a visual representation of the extent of problems in each of the areas of functioning, helps inform the jurist. At any point, if the JIFF results bring to light an area of concern (e.g., reported cocaine use), the JAC staff informs the prosecutor's office, and the case can be further reviewed.

The family is given a copy of their service plan and is told that their YAP will immediately be faxed a copy and the YAP will contact them. If the JIFF results indicate a need for further mental health or substance abuse assessment, access to these evaluations are coordinated the same day. The JIFF Service Plan informs the YAP about the specific needs and goals of each youth as they work with the family.

Figure 1 lists the general types of services that the YAPs offer (see Column 3). These services, aimed at promoting the youth's development and psychosocial skills, are similar to those recommended for incorporation in justice interventions, based on the concepts of positive youth development (Butts, Bazemore, & Meroe, 2010). Figure 1 also shows how the goals selected on the JIFF provide the YAPs with guidance in terms of the specific services they should provide for a given youth. JIFF goals are associated with a domain (subscale) of functioning. An example of a goal in the school domain is increase school attendance, and for the home subscale, increase monitoring of youth's activities. In Figure 1, an arrow in Column 2 signifies that if one or more goals in that domain are endorsed, the YAP will likely provide one or more of the corresponding services. Thus, if a given youth needs to increase school attendance, the YAP will at minimum monitor school attendance. In addition, the JIFF results may indicate the need for further evaluation, such as for mental health or substance abuse concerns. The evaluation results may recommend specialized mental health treatment (e.g., for self-harmful behavior, trauma, substance use, etc.) or substance abuse services, which will be added to the service plan, because it will be an agency other than a YAP. The youth may participate in a YAP program simultaneously, denoted by the dotted lines between the evaluation and the arrow to the YAP services. The YAPs also link families to local resources so that they can utilize them even after their youth's participation in Correct Course is complete.

When the youth's service provision is coming to an end, the YAP informs the JAC, which arranges for an exit JIFF to be administered. Some of the YAPs celebrate the youth's "graduation" with the family and review the youth's progress. During this initial implementation phase of Correct Course, some youth and caregivers did not receive an exit JIFF because the family made a decision to conclude services before the initial 12 weeks,



FIGURE 1 Juvenile Inventory For Functioning (JIFF) results guide service provision and referral for further evaluation. *Note*. Dotted line shows that after evaluation, youth can be enrolled in Correct Courses and/or referred directly for treatment by mental health or substance use providers.

or because the coordination between the JAC and YAP was not successful. However, the current JIFF application, which is Web-hosted and can be accessed from any site, has been used subsequently, resulting in an improved post JIFF collection rate and better coordination between the JAC and the YAPs at the completion of service provision.

Analyses

All statistical analyses were completed using PASW Statistics 18 (formerly SPSS). Binary logistic regression was conducted to identify predictors of recidivism. For the subset of youth who had an exit JIFF upon completion of the diversion program, mean differences of the JIFF total and each of the subscales were computed, and a paired *t* test investigated the significance of change observed over time. If a statistically significant change was observed, then Cohen's d-statistic can be generated, which reflects the magnitude of change observed. Cohen's d-statistic, which indicates the amount of difference between two groups on a construct based on standard deviation units, was calculated. The d-statistic provides a common metric on which to compare significant effects when outcome variables are measured on different scales, such as the JIFF total score and subscale scores. Cohen (1988) categorized the magnitude of effect sizes as small (d = .2), moderate (d = .5), and large (d = .8). It is reported in conjunction with the *t*-test significance.

RESULTS

Demographics

The demographic characteristics of the participants with an entry JIFF (N=1,017) and the subset of youth who completed an entry and a second JIFF (N=259) are summarized in Table 1. As seen in the table, the ages of the youth ranged from 8–19 years (M=14.65 years), with 62% of the sample being male. The sample was 62% African American, 31% Caucasian, 4% Hispanic, and 3% other. The marital status of the caregivers was as follows: 49% never married, 21% married, 16% divorced, 5% separated, and 9% did not report their marital status. Regarding offenses, 93% of the youth were charged with lesser felonies, misdemeanors, or status offenses. Example offenses within these groups are: lesser felonies (e.g., retail fraud, breaking and entering with intent to commit larceny), misdemeanors (e.g., consumption or possession of alcohol, possession of a fake ID, indecent exposure, domestic violence), and status offenses (e.g., incorrigibility, truancy from school).

Comparatively, the subset of youth who were included in the JIFF outcomes analysis were marginally older (14.85 compared to 14.65) and consisted of a higher percentage of African Americans (68% compared to 62%). Regarding offenses, youth in the outcomes sample consisted of a higher percentage of Class 3 felony charges (17% compared to 13%) and fewer status offenses (21% compared to 32%). These differences reached statistical significance. There were no significant differences on any other demographic variables or the initial JIFF total score.

Demographics	Youth with entry JIFF $N = 1,017$	Subset of youth with entry and exit JIFF $N=259$
Age		
M	14.65	14.85*
Range	8–19	9–17
Sex		
Males	62%	64%
Females	38%	37%
Race		
Black/African American	62%	68%**
White (non-Hispanic)	31%	27%**
Hispanic	4%	2%
Other	3%	3%
Parent's marital status		
Married	21%	24%
Divorced	16%	17%
Never married	49%	45%
Separated	5%	5%
Not reported	9%	9%
Charge class		
1 (Major felonies: Person)	1.5%	2%
2 (Major felonies: Nonperson)	1%	1%
3 (Lesser felonies)	13%	17%*
4 (Misdemeanor)	48%	50%
5 (Status offense)	32%	21%*
Unknown	5%	10%

TABLE 1 Participant Demographic Characteristics

*Significant at $p \le .05$. **Significant at $p \le .001$.

Reoffense

Recidivism was tracked for all youth who were enrolled in the Correct Course Diversion Program. There is much debate in the literature surrounding the most appropriate methods to use when measuring recidivism. In the current study, the criterion used was adjudication for another offense within 1-year post-YAP service. The rationale is that adjudication ensures that the court was satisfied that the youth committed a crime. The criterion of rearrest would be more sensitive to potential subsequent delinquent acts or status offenses; however, it would also be more vulnerable to factors underlying disproportionate minority contact, which is a concern in Detroit. The operational definition was adjudication for an offense within 455 days from the day of enrollment into the Correct Course program, which allows for a 1-year follow-up after 3 months of service. For all 1,017 youth with an initial JIFF, the rate of adjudication was 7.7%. The percent of youth whose charge class escalated from a status offense or misdemeanor to a felony level crime was 1.3% of the total sample, or 14 individuals.

Logistic regression was conducted to explore which, if any, variables could be used to predict subsequent adjudication. Covariates in the model

included: sex (coded female = 0; male = 1), age, race (coded as 1 = African American/Black; 0 = not African American/Black), caregiver marital status, offending charges, initial drug screen results, and the initial JIFF total score. The odds of reoffending increased for youth with greater impairment at intake, as measured by the JIFF, OR 1.03 (95% CI 1.012–1.058). Being male also increased the odds of re-offense, OR 2.32 (95% CI 1.309–4.109). Race effects were nonsignificant, with the racial breakdown for the recidivists being very similar to the total sample: African American (60.3%), white (34.6%), Hispanic (4%), and other (1%).

A comparison of rates of adjudication between the total sample and the subset of youth with exit JIFF revealed lower recidivism in the latter.

Cost Savings

The cost of 6 months of services in a YAP, including assessment and administration coordination via the JAC, was \$1,500 per youth. Correct Course was almost assuredly cost-effective, meaning the program saved more money than it cost. The vast majority of the participants had reached the judicial process of a pre-petition hearing before enrollment and only 7.7% were recidivists. The exact amount of cost savings cannot be computed because it is not known how many diverted youth, without the availability of the diversion program, would have received any of the following costly services: continued court processing, remained longer in detention rather than released early, assigned to probation or other post adjudication services, or placed in residential care. Even so, we can provide information on the costs of these services as well as an accounting of the cost savings realized during the same time period that this program was implemented.

Cost analysis for the fiscal year 2008, the first full year the program was in place, shows that probation adjudications were reduced by 32.6% over 2007 numbers with a corresponding savings of 53.1% for probation costs. In 2008, 6 months of intensive juvenile justice probation services cost the county \$50 per day, or \$9,000 per youth. Before the diversion program, youth were detained an average of 45 days between adjudication and release to juvenile services, costing Wayne County approximately \$26,000 per youth, depending on the placement facility. The availability of diversion permitted some detained youth to be released much earlier than typically accomplished, with rapid enrollment in treatment interventions achieved post release. During the initial implementation of this diversion option, two alternative detention facilities with capacity of 58 beds were able to be closed. To house a youth in a residential care facility for six months of service costs an average of \$200 per day or \$36,000 for 6 months per youth. Without the diversion program, it is likely that many youth would have continued to be processed by the court or detained for a longer period of time. In 2008,

JIFF scales	M difference	SD	t(258) ^a	d-stat
Total JIFF score	6.26	8.67	11.42*	0.72
JIFF subscales				
School	2.47	3.89	10.04^{*}	0.64
Home	0.92	1.69	8.75*	0.54
Picked on by peers	0.16	0.55	4.65	0.29
Peer influences	0.09	0.87	1.64*	0.10
Unsafe community behavior	0.53	1.26	6.72*	0.42
Feelings	0.63	1.78	5.76*	0.36
Self harmful potential	0.29	1.17	3.94*	0.25
Substance use	0.39	1.34	4.75*	0.30
Health-related needs	0.31	1.05	4.69*	0.30
Family environment	0.46	1.16	6.35*	0.40

 ${}^{a}N$ = 249 for JIFF total score and school due to exclusion of youth who were no longer enrolled in school. ${}^{*}p < .001$.

the potential savings to Wayne County was estimated to range between \$7,500 and \$22,000 per youth.

Changes in JIFF Total and Subscale Scores

Paired *t* tests were conducted to determine whether the entry and exit JIFF scores differed significantly for youth respondents (N= 259) and for caregivers (N= 244). For the youth (Table 2), significant improvements (p < .001) were observed for the JIFF total score and all subscales, with the exception of peer

JIFF scales	M difference	SD	$t(243)^{a}$	d-stat
Total JIFF score	9.35	12.55	11.19*	0.74
JIFF Subscales				
School	3.78	5.33	10.65*	0.71
Home	1.59	2.79	8.89*	0.57
Picked on by peers	0.19	0.59	4.68*	0.31
Peer influences	0.43	1.16	5.86*	0.37
Unsafe community behavior	0.43	1.27	5.31*	0.34
Feelings	0.86	1.77	7.57*	0.49
Self harmful potential	0.20	0.94	3.35*	0.21
Substance use	0.50	1.50	5.24*	0.34
Health-related needs	0.31	1.12	4.35*	0.28
Family environment	0.36	1.06	5.27*	0.34
JIFF subscale for caregivers only				
Burden of care	0.80	2.74	4.58^{*}	0.29

TABLE 3 Caregiver Juvenile Inventory For Functioning (JIFF) Outcomes—Entry JIFFCompared to Exit JIFF

 ${}^{a}N$ = 225 for JIFF total score and school due to exclusion of youth who were no longer enrolled in school. ${}^{*}p < .001$.

influences (p = .10). The highest d-statistics were observed for the total score (.72), school (.64), and home (.54). Caregivers reported that their child made significant improvements (p < .001) on the total score and all of the subscales (Table 3). As with the youth, the highest d-statistics were observed for the total score (.74), school (.71), and home (.57). Caregivers reported improvement in the youth's peer influences, however, youth did not.

DISCUSSION

The results of this study are consistent with the post-arrest diversion literature—community-based services provided outside the court had relatively low recidivism rates and were less expensive than judicial alternatives. The Correct Course diversion program enjoyed low recidivism and cost effectiveness. At the 1-year follow-up of the cohort group, only 7.7% of the participants had been adjudicated for an offense. Even more encouraging, only 1.3% of the sample experienced an escalation in type of crime committed. The cost for the YAP program was \$1,500 per youth, which pales in comparison to the cost of additional court proceedings, days in detention, and various levels of probation and/or out of home placement. Almost assuredly, Correct Course resulted in cost saving because of the low rate of post diversion adjudication and the low cost of the program, especially given that most of the diverted youth had already progressed judicially to a pre-petition hearing.

The results of the logistic regression, conducted to predict subsequent adjudication, revealed that greater impairment in functioning at entry increases the odds of recidivism. This is consistent with studies that have demonstrated a relationship between greater psychosocial impairment and greater likelihood of offending or reoffending. The literature also supports another regression finding, that males are more likely to reoffend than females (Baffour, 2006; Dembo et al., 2008; Rodriquez, 2007). It is noteworthy that race was not a predictor of recidivism and that the racial distribution for recidivists was comparable to that of the total sample.

This is the first post-arrest diversion study to present outcomes on psychosocial functioning. Significant improvement was observed for the JIFF total score and each subscale for youth and caregivers, with one exception. Youth did not progress on the peer influences subscale, which has practical implications for improving programming within the YAPs. In addition, large to moderate impacts were observed for overall functioning (i.e., JIFF total score) and for the school and home domains. These are critically important findings given that poor school functioning (i.e., in attendance, grades, and behavior) is a predictor of poor adjustment as an adult and that high noncompliance in the home puts the youth at risk for out-of-home care. However, post JIFF data were only available for a subset of youth, and these youth were less likely to recidivate and included a higher percentage of African Americans. Thus, the level of gains observed for these youth may not be generalizable to the larger sample. In any case, the findings in this study strongly support the recommendation by others that psychosocial functioning be assessed for all youth and be reported as an outcome indicator. Poorer psychosocial functioning at entry predicted recidivism, and change in psychosocial functioning was successfully measured.

The Correct Course program emphasizes a combination of features that are recommended in the literature, but are not commonly implemented together. The assessment process is systematic and standardized, both in the presentation to the families and in the interpretation and scoring. Both the youth and caregivers are engaged in evaluating the youth's functioning. In fact, the youth and caregivers are given a "direct and active voice" in a nonjudgmental format, which is a new experience for them. The JIFF process communicates to caregivers that the system is interested in the same things that they are concerned about-school, behavior at home, risk for substance abuse, coping with stresses-not just delinquent behavior. Caregivers and youth become more knowledgeable about the youth's needs and leave with a plan that is based on their "direct voice." This assessment process imposes more objectivity into the assessment process, allows for identification of needs that may be contributing to delinquency, identifies youth who may have mental health and/or substance use disorders that warrant treatment, and engages families in the process of promoting their youth's positive development. These features have value for all families that touch the juvenile justice system, but are doubly important for those residing in areas where disproportionate minority contact is a concern.

The services are delivered literally in the youth's neighborhood, as families are assigned by zip code. This strategy is intended to reduce transportation as a barrier and enhance cultural competency in the delivery of services. Timeliness and efficiency are emphasized, with the youth and caregivers having completed their initial assessments within approximately an hour after leaving the courtroom after the pre-petition hearing. The Wayne County JAC plays an active role in supporting the YAPs and the families, yet families are not formally involved with the court during the process. If the initial assessment suggests the need for additional evaluation or specialized services, such as mental health or substance use, the JAC facilitates these.

Given the success of Correct Course, other communities may wish to adopt a similar model. We offer several basic implementation strategies to consider:

• Identify any potential impetus for change. Recognition of common goals or values can be used to facilitate collaboration among the essential partners. Examples might include: need for cost savings because of budget cuts or increased demand for services, reducing disproportionate minority contact, commitment to a more proactive approach to prevent deeper penetration into the system, desire to engage the family's cooperation and make them part of the solution, or address issues of inadequate screening and/or treatment for mental health or substance use problems among youth in juvenile justice.

- Foster a sense of "buy-in" from the prosecutor, the court, and other key entities by clearly describing the conditions for participation in the program. This could include a set of guidelines for selection of youth, instituting a formal contract between the court and the family, and specifying the consequences of unsuccessful participation and the benefits for successful completion.
- Instill confidence among all parties in the program's capacity to enact positive change for the youth, while maintaining the safety of the community. This sense of confidence can be fostered by: (a) using a standardized assessment, such as the JIFF, to identify "gateway" behaviors and contributing factors, followed by generating an action plan for addressing them, (b) developing a directory of formal and informal community resources, which are then matched to JIFF goals, resulting in a "service matrix," (c) encouraging families to continue utilizing helpful community resources after completing the program, (d) tracking the progress for each youth for program evaluation and program refinement, and (e) maintaining open lines of communication among key parties to handle unanticipated issues that may arise.

Limitations of this study include the lack of a control or comparison group, which is harder to accomplish when studies are conducted in naturalistic settings without external funding. As mentioned previously, the subsample of youth for whom psychosocial outcomes were available was not wholly representative of the larger sample, which is recognized as an important issue to address. Future findings based on a more representative sample can help pinpoint needs for program refinement and potentially improve prediction of recidivism. Extending the follow-up period beyond 1 year may also improve prediction of recidivism patterns. Furthermore, generalizability may be limited to programs conducted with similar youth and community context.

The impact of Correct Course was consistent with the goals of diversion—reduce recidivism, increase system efficiency, reduce costs, and reduce the youth's level of involvement with the juvenile justice system (Cocozza et al., 2005). These accomplishments are even more impressive, given the many challenges and stressors experienced by these families. The potential to improve adult sequela by enhancing psychosocial functioning and promoting youth development is an even more far reaching goal, which appears attainable for at least a substantial portion of these youths. As pointed out by Abram et al. (2009), improving the psychosocial

functioning of youth in the judicial system can reduce the ongoing costs to the youth and to society. Furthermore, it offers another opportunity to contribute to the reduction of disproportionate minority contact. The present findings support diverting youth out of the juvenile court system by providing community-based services in the youth's own neighborhood, which focus on youth development and family engagement.

REFERENCES

- Abram, K. M., Choe, J. Y., Washburn, J. J., Romero, E. G., & Teplin, L. A. (2009). Functional impairment in youth three years after detention. *Journal of Adolescent Healtb*, 44, 528–535.
- Baffour, T. (2006). Ethnic and gender differences in offending patterns: Examining family group conferencing interventions among at-risk adolescents. *Child and Adolescent Social Work Journal*, *23*, 557–578.
- Butts, J. A., Bazemore, G., & Meroe, A. S. (2010). Positive youth justice: Framing justice interventions using the concepts of positive youth development [Monograph]. Retrieved from http://stage.juvjustice.njjn.org/media/resources/public/resource_390.pdf
- Center for Juvenile Justice Reform & Chapin Hall. (2009). *Racial and ethnic disparity and disproportionality in child welfare and juvenile justice: A compendium* [Monograph]. Retrieved from http://cjjr.georgetown.edu/pdfs/cjjr_ch_final.pdf
- Cocozza, J. J., Veysey, B. M., Chapin, D. A., Dembo, R., Walters, W., & Farina, S. (2005). Diversion from the juvenile justice system: The Miami-Dade juvenile assessment center post-arrest diversion program. *Substance Use & Misuse*, *40*, 935–951.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Dembo, R., Walters, W., Wareham, J., Burgos, C., Schmeidler, J., Hoge, R., & Underwood, L. (2008). Evaluation of an innovative post-arrest diversion program: 12-month recidivism analysis. *Journal of Offender Rehabilitation*, *47*, 356–384.
- Dembo, R., Wareham, J., & Schmeidler, J. (2005). Evaluation of the impact of a policy change on diversion program recidivism. *Journal of Offender Rehabilitation*, *41*(3), 29–61.
- Dunford, F. W., Osgood, D. W., & Weichselbaum, H. F. (1982). *National evaluation of diversion projects* [Monograph]. Retrieved from http://eric.ed.gov/PDFS/ ED223925.pdf
- Henggeler, S. W., Melton, G. B., Smith, L. A., Schoenwald, S. K., & Hanley, J. H. (1993). Family preservation using multisystemic treatment: Long-term followup to a clinical trial with serious juvenile offenders. *Journal of Child and Family Studies*, 2, 283–293.
- Hodges, K. (1989). *Child and adolescent functional assessment scale* (1st ed.). Ypsilanti, MI: Eastern Michigan University.
- Hodges, K. (2004a). Child and adolescent functional assessment scale (CAFAS). In M.E. Maruish (Ed.), *The use of psychological testing for treatment planning and outcome assessment* (pp. 405–441). Mahwah, NJ: Lawrence Erlbaum.

- Hodges, K. (2004b). *Juvenile inventory for functioning* (1st ed.). Ann Arbor, MI: Functional Assessment Systems.
- Hodges, K. (2005). Child and adolescent functional assessment scale (CAFAS). In T. Grisso, G. Vincent, & D. Seagrave (Eds.), *Mental health screening and assessment for juvenile justice* (pp. 123–136). New York, NY: Guilford Publications.
- Hodges, K., & Kim, C. S. (2000). Psychometric study of the child and adolescent functional assessment scale: Prediction of contact with the law and poor school attendance. *Journal of Abnormal Child Psychology*, 28, 287–297.
- Holman, B., & Ziedenberg, J. (2006). The dangers of detention: The impact of incarcerating youth in detention and other secure facilities [Monograph]. Retrieved from http://www.cfjj.org/Pdf/116-JPI008-DOD_Report.pdf
- Lipsey, M. W. (1992). Juvenile delinquency treatment: A meta-analytic inquiry into the variability of effects. In T. Cook (Ed.), *Meta-analysis for explanation: A casebook*, (pp. 83–127). New York, NY: Sage.
- McGarrell, E. F., & Hipple, N. K. (2007). Family group conferencing and re-offending among first-time juvenile offenders: The Indianapolis experiment. *Justice Quarterly*, *24*, 221–246.
- Oldenettel, D., & Wordes, M. (2000). *The community assessment center concept* [Monograph]. Retrieved from http://www.ncjrs.gov/pdffiles1/ojjdp/178942.pdf
- Patrick, S., & Marsh, R. (2005). Juvenile diversion: Results of a 3-year experimental study. *Criminal Justice Policy Review*, *16*(1), 59–73.
- Quist, R. M., & Matshazi, D. G. (2000). The child and adolescent functional assessment scale (CAFAS): A dynamic predictor of juvenile recidivism. *Adolescence*, *35*(137), 181–192.
- Rodriguez, N. (2007). Restorative justice at work: Examining the impact of restorative justice resolutions on juvenile recidivism. *Crime & Delinquency*, *53*, 355–379.
- Sturza, M. L., & Davidson, W. S. (2006). Issues facing the dissemination of prevention programs: Three decades of research on the adolescent diversion project. *Journal of Prevention & Intervention in the Community*, 32(1), 5–24.
- Timmons-Mitchell, J., Bender, M. B., Kishna, M. A., & Mitchell, C. C. (2006). An independent effectiveness trial of multisystemic therapy with juvenile justice youth. *Journal of Clinical Child & Adolescent Psychology*, *35*, 227–236.
- Walrath, C. M., Sharp, M. J., Zuber, M., & Leaf, P. J. (2001). Serving children with SED in urban systems of care: Referral agency differences in child characteristics in Baltimore and the Bronx. *Journal of Emotional and Behavioral Disorders*, 9(2), 94–105.
- Whitehead, J. T., & Lab, S. P. (1989). A meta-analysis of juvenile correctional treatment. *Journal of Research in Crime and Delinquency*, *26*, 276–295.