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Responding to Crossover Youth: A Look Beyond Recidivism Outcomes

Emily M. Wright[1], Ryan Spohn[2], and Michael Campagna[2]

Abstract

Crossover youth are involved in both child welfare and juvenile justice systems. The Crossover Youth Practice Model (CYPM) promotes collaboration between these systems to inform decision making between the two agencies and better serve these youth. Yet, few outcome evaluations of the CYPM exist, especially those that assess outcomes beyond recidivism, such as case dispositions, case closure, or placement or living situations. This study examined whether the CYPM (*n* ¼ 210) decreased recidivism and increased system/case responses and positive outcomes among youth within 9–18 months after the youth's initial arrest relative to a comparison group of crossover youth (*n* ¼ 425) who were arrested 1 year before the CYPM was implemented. Overall, the findings suggest that the CYPM in the jurisdiction under study dismisses or diverts crossover youth more often, closes delinquency cases more often, and leads to more home placements than was previously done in the jurisdiction, but it does not significantly reduce recidivism.

Keywords

crossover youth, recidivism, child welfare, juvenile justice

Crossover youth, or those youth who are involved in both the juvenile justice system (JJS) and child welfare system (CWS), are of increasing concern to society. These youth are higher risk for exposure to violence and family dysfunction, congregate or group home placement, school problems, mental health and/or substance use problems, and adult criminality than at-risk youth who are engaged in only one of the two systems (e.g., Halemba et al., 2004; Herz & Ryan, 2008; Widom & Maxfield, 2001; Young et al., 2015). Crossover youth tend to receive harsher sanctions more often than nondually involved youth (Halemba et al., 2004; Ryan et al., 2007; Young et al., 2015), so they are often highly represented at deep ends of the JJS and CWS (Culhane et al., 2011; Young et al., 2015). Further, crossover youth demonstrate high needs that are costly to society: Over time, they have more jail detentions, use emergency health services at higher rates, engage in more criminal

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justice–related outcomes like crime and deviance, earn less, and are less consistently employed than youth who are only involved in either the JJS or CWS (Culhane et al., 2011).

Historically, crossover youth have been treated separately by the JJS and the CWS, often resulting in worse outcomes and overlapping service delivery (Herz et al., 2012; Lutz et al., 2010). To better identify crossover youth and respond to their dual involvement and various needs via a multisystem response, the Crossover Youth Practice Model (CYPM) was developed (Lutz et al., 2010). The CYPM was designed to provide multisystem response using multidisciplinary teams (MDTs) for dually involved[1] children and recommends collaboration and information-sharing between professionals in the CWS and JJSs in order to better identify crossover youth in each system, process their cases, and provide case planning and management for crossover youth and their families (Bilchik & Tuell, 2011; Lutz et al., 2010). Reports and evaluations from efforts to implement the model demonstrate that the CYPM encourages multiagency coordination and enhanced information sharing regarding crossover cases and often increases service delivery to crossover youth (Haight et al., 2014, 2016; McKinney, 2019; Wright et al., 2017). The existing research has focused on process reforms and recidivism outcomes related to CYPM efforts, and very few external evaluations of the CYPM have been conducted (Haight et al., 2016). However, given the multisystem involvement of these youth, and the multidisciplinary nature of the responses needed, outcomes to determine the "effectiveness" of the approach should not be limited to those of interest to just one agency (e.g., recidivism that is primarily an outcome of interest to those in juvenile justice). This study contributes to the limited external evaluation research regarding the CYPM and examines various outcomes that are relevant to *both* the JJS and CWS, such as multiple case processing (disposition, case closure) and social (living situation) outcomes for crossover youth—as well as recidivism—for youth who have been treated with a CYPM multidisciplinary care team versus those who have not been treated with such a response team.

CYPM

Responding to a youth who has a multitude of problems that have resulted in both child welfare and juvenile justice involvement with a single-system approach is limited in scope and likely fails to address the core problems that resulted in their dual involvement in the first place. The CYPM (Lutz et al., 2010) was developed in part to address these problems and enhance service delivery and/or diversion to crossover youth. The goal for the model is to identify these crossover youth, coordinate and inform decisions made by both CWS and JJSs regarding the youth and their families, and provide enhanced, evidence-based services to them in order to divert them from

further entrenchment into the JJS and CWS. To achieve these goals, the CYPM promotes collaboration between juvenile justice and child welfare personnel and provides techniques to inform decision making between the two agencies in order to better serve crossover youth. As a “practice model,” it provides a conceptual map and organizational ideology regarding how staff can collaborate with families and system personnel to provide effective services to at-risk youth (Lutz et al., 2010) but can be tailored to the needs and goals of each jurisdiction in which it is adopted.

The CYPM in this study was adopted and implemented in 2012 in an urban county in a Mid- western state with technical assistance from the Center for Juvenile Justice Reform at Georgetown University. Agencies involved in implementing the CYPM initiative included the county attorney’s office, Department of Health and Human Services, juvenile assessment center (diversion), probation department, private welfare provider, a family advocacy center, a youth advocate, and a facilitator. Representatives from these agencies came together every week to consider crossover cases in the county. Ultimately, the county attorney, with input from these team members, made decisions on how to precede with cases by choosing one of the four potential options: nolle pros, file charges, provide enhanced child welfare services, or divert the case. The team then worked collaboratively to provide appropriate services and interventions for each youth until the case was closed. The current study reports findings from an outcome evaluation of this model.

CYPM: MDTs for Crossover Youth

In the county under study, the CYPM can be thought of as an MDT that seeks primarily to divert crossover youth from further system involvement. Generally, the goals of MDTs are to improve system responses to their target population (in this case, crossover youth) through communication and collaboration in an effort to reduce redundancies and increase efficiencies for the systems that are involved (Herbert & Bromfield, 2019). Similarly, the goals of the CYPM in the current study were to increase diversion and dismissals for crossover youth, reduce recidivism, improve case coordination between agencies, improve social and living situations for the youth, and reduce duplication and efforts across the JJS and CWS (e.g., close cases more quickly). Currently, evaluations of the CYPM and research on MDT effectiveness in child abuse cases are somewhat scarce, with most studies primarily focusing on juvenile justice outcomes instead of child protection out- comes and very few studies reporting on the effectiveness of MDTs relative to some type of a comparison group (Herbert & Bromfield, 2019). Given the limited research on MDTs and CYPMs, the current study aimed to examine multiple outcomes of interest to juvenile justice and child welfare in order to determine whether the CYPM reached its goals regarding case dispositions, case closures, recidivism, and youth social living situations. We did this using an historical

comparison group of crossover youth who were arrested 1 year before the CYPM was implemented in the jurisdiction under study.

Early research on CYPM and the multidisciplinary nature of the teams centered around descriptive analyses of crossover youth and team processes (Culhane et al., 2011; Haight et al., 2014, 2016; Herz et al., 2010) and generally reported that crossover youth were at higher risk than other system- involved youth to experience family hardship and dysfunction, were viewed as higher risk by system personnel, and were more likely to be deeply system involved (Halemba et al., 2004; Herz & Ryan, 2008; Young et al., 2015). The research on process-related outcomes among these models has, overall, been supportive of the model, suggesting that multidisciplinary collaboration in CYPM teams can improve service delivery to at-risk youth (Chuang & Wells, 2010; Dickerson et al., 2012; Haight et al., 2014), decision making and relationships among team members (Wright et al., 2017), tracking of offenders, and sharing information across agencies (Haight et al., 2014).

The general research regarding recidivism, case processing, and placement decisions among crossover youth—but not formal evaluations of the CYPM—suggests that crossover youth are at higher risk than other groups (justice-only involved, child welfare-only involved) for harsher court dispositions, subsequent recidivism, and worse placement decisions (Baglivio et al., 2016; Culhane et al., 2011; Herz et al., 2010; Huang et al., 2012; Ryan et al., 2007). In fact, Huang et al. (2012) reported that over 50% of youth in their crossover sample recidivated within 5 years. Demographic factors, prior criminal and delinquent behaviors, and ongoing treatment needs appear to be relevant predictors of subsequent criminal behavior for crossover youth (Haight et al., 2016; Herz et al., 2010; Huang et al., 2012; Ryan et al., 2013). However, less is known about case dispositions for crossover youth. For example, Herz et al. (2010) reported that only 10% of crossover youth had their cases dismissed in court, while Ryan et al. (2007) reported that dually involved youth were less likely to receive “home on probation” disposition than nondually involved youth. Importantly, Huang et al. (2012) found that outcomes received in delinquency court predicted subsequent rereporting of maltreatment and further recidivism among crossover youth, suggesting that such outcomes are consequential for recidivism as well. Likewise, placement and living situations among child welfare-involved youth may impact their likelihood of subsequent criminal behavior (DeGue & Widom, 2009; Goodkind et al., 2013; Ryan et al., 2010; Ryan & Testa, 2005), making these outcomes of interest to CYPM—which strive to achieve placement permanency among crossover youth—too.

However, outcome evaluations of the CYPM which examine these outcomes are scarce (but see Haight et al., 2016). In their evaluation of a local CYPM in Minnesota, Haight et al. (2016) used propensity matching to compare a CYPM treatment group to historical and contemporary matched

comparison groups and found that the CYPM treatment group was significantly less likely to recidivate than the comparison groups. Yet, no outcome evaluations of the CYPM that we are aware of have examined case dispositions, case closure across the JJS and CWS, or placement or living situations, as outcomes of the CYPM. Each of these outcomes could point to "successes" of the CYPM (e.g., case closures) or to better (nonrecidivism) outcomes—such as living situations among youths—and should be examined as potential outcomes of the model. Excluding these outcomes from evaluation research fails to "tell the full story" of a greater range of activities in which CYPM engage. Perhaps the limited evaluation research in this area is due to the difficulty of tracking the data across two systems or relying on jurisdictions with scarce research support and resources. Indeed, Dierkhising et al. (2019, pp. 323–324) note that problems with data collection through MDT processes, like the CYPM, include high amounts of missing data, given that the data collection is often conducted by team members in addition to their regular duties and that most data are used to "inform case management and service recommendations" rather than for traditional research and evaluation purposes.

Thus, outcome research studies regarding CYPM utilizing an MDT approach are limited in both number and scope. The nascent evidence in the area is primarily limited to process-related outcomes (such as information sharing; Haight et al., 2014; Wright et al., 2017) and juvenile justice recidivism (Haight et al., 2016), with virtually no attention given to outcomes related to case dispositions, case closures, or youth living situations. Our study attempts to extend this line of inquiry by examining a greater range of outcomes (i.e., recidivism, case disposition, living situation) than have previously been examined.

Data

The CYPM under study was implemented in November 2012. A 2-year process and outcome evaluation of the initiative began on September 1, 2014.[2] Results from the process evaluation have been reported elsewhere (Wright et al., 2017) The current article focuses on the quantitative outcomes of the evaluation which represent a broad range of outcomes that were reported by team members as important goals for the CYPM under study. Quantitative data were collected for two
separate groups: First, the comparison group (n ¼ 425) consists of crossover youths 1 year prior to the implementation of the CYPM in the county under study; these youth did not receive an intervention and represent a "business as usual" approach to responding to dually involved youth (processed between November 2011 and November 2012). Second, the CYPM treatment group (n ¼ 210) received the full intervention, including a CYPM team/decision meeting, case plan, interagency meeting, and multidisciplinary meeting (processed between November 2012 and

November 2014). As such, our data represent the full population of crossover youth at two time periods within the same jurisdiction. These two groups differed on some of the control variables used here, though the comparison group consisted of more males, fewer Hispanic youths, and had higher prior criminal history scores. As expected, they also differed on the outcomes: significantly more youths in the comparison group recidivated at 9 months postarrest, and they were rearrested more often during this time frame than youths in the treatment group. Further, comparison group youths were less likely to have their cases dismissed, their delinquency cases closed, or to be living at home 9 months postarrest (see Appendix, for more details). The outcome evaluation of the initiative reported here examined whether the CYPM decreased recidivism and increased system/case responses and positive outcomes among youth within 9–18 months after the youth's initial arrest (full sample ¼ 635).

Measures

Outcome variables of interest included recidivism (number and prevalence of arrests[3] at 9 and 18 months postinitial arrest), case disposition, case closure (for dependency and delinquency cases), and living situation of the youth. *Number of arrests at 9 months* indicates how many times the youth was arrested in the first 9 months after their initial arrest (top coded as 3 to reduce the effects of outliers), while *any arrest at 9 months* is a dichotomous variable indicating whether the youth was arrested during this time frame. *Number of arrests at 18 months* indicates how many times the youth was arrested in the first 18 months after their initial arrest (also top coded as 3), while *any arrest at 18 months* is a dichotomous variable indicating whether the youth was arrested during this time frame. *Case disposition* is a dichotomous variable that denotes whether the case against the youth was dismissed or the youth received diversion for the offense (coded as 1), whereas whether the youth received home probation for the offense, was placed in a group institution for the offense, or was given some other punishment for their offense was coded as 0.

Case closure in both the CWS and JJS was also measured. *Dependency case closure* is a dichotomous variable indicating whether the youth's dependency case was closed in the CWS within 9 months after their initial arrest, whereas *delinquency case closure* is a dichotomous variable indicating whether the youth's delinquency case was closed in the JJS within this time frame. Finally, the dichotomous variable of *living at home* indicates that the youth was living in their home 9 months after their initial arrest (coded as 1), whereas all other living situations (e.g., the youth was living at a shelter, residential treatment center, correctional facility or detention center, foster care, adoptive care, relative or kinship placement, living independently, or had runaway) during the 9 months after their initial arrest were coded as 0.

The main independent variable of interest was *treatment group* status,

which was a dichotomous variable indicating whether the youth was in the treatment group (and thus received the MDT meetings, response, and services offered by the CYPM team members; coded as 1) or whether they were crossover youth (involved in both the JJS and CWS) but were processed in the systems before the CYPM was implemented (coded as 0). Control variables follow from the discussion of existing research, above. *Male* indicated that the youth was male (coded as 1). *Age* reflected the youth's age at arrest (standardized in the analyses). Race/ethnicity was captured with four separate dichotomous variables: *Hispanic*, *African American*, *Other race* (including Native Americans, Alaska Natives, Asian, and mixed race), and *White*. To ascertain potential needs, we included *physical neglect* indicating that physical neglect was the reason for the youth's involvement in the CWS (coded as 1).[4] Finally, we included a control variable for *prior criminal history*, giving weight to prior felonies, where the following indicators were summed: prior arrest for criminal offense
(¼ þ2), referral arrest was for a felony (¼ þ2), prior arrest for status offense (¼ þ1), and referral arrest was for a misdemeanor (¼ þ1).

Analysis

Data were analyzed using multivariate logistic and negative binomial regression techniques. For dichotomous outcomes (any 9-month recidivism, any 18-month recidivism, delinquency case closure, dependency case closure, case disposition, and living situation), logistic regression was used. For the prevalence measures of recidivism at 9 and 18 months postinitial arrest, we analyzed the sample using negative binomial regression. Checks for multicollinearity and outliers indicated no problems with the data (i.e., tolerance values, variance inflation factors, and Cook's *d* indicators).

Results

Table 1 demonstrates that approximately 31% of youths in the sample recidivated within 9 months of their initial arrest, while 45% recidivated 18 months after the initial arrest. About 65% of youth had their case dismissed or diverted. Regarding case closures, 35% of cases in the CWS were closed within 9 months of the initial arrest, while 69% of juvenile justice cases were closed in this time frame. Almost one half of youth were placed in a home setting (47%) within 9 months of their initial arrest. One third (33%) of the sample received the full CYPM treatment, while 60% were male. On average, youths were almost 15 years old at the time of their arrest. The majority of youths were White (37%) and African American (44%), followed by Hispanic (9%) and Other (8%). Most youths experienced physical neglect (77%) as the reason for their involvement in the CWS. Finally, most youths in the sample scored moderate on the prior

criminal history scale (3.49 of the 5).

Table 1. Descriptive Statistics for Dependent and Independent Variables.

Variables	Description	Mean	*SD*	Minimum–Maximum
Dependent variables				
Recidivism				
Number of arrests at 9 months	Number of times youth was arrested during 9 months after arrest (winsorized)	0.45	0.79	0–3
Any arrest at 9 months	Dichotomous measure of whether the youth was arrested during 9 months after arrest	.31	0.46	0–1
Number of arrests at 18 months	Number of times youth was arrested during 18 months after arrest (winsorized)	0.38	0.76	0–3
Any arrest at 18 months	Dichotomous measure of whether the youth was arrested during 18 months after arrest	0.45	0.42	0–1
Case disposition	Youth was diverted or dismissed	0.65	0.48	0–1
Case closure				
Dependency case closure	Youth's dependency case was closed in the child welfare system 9 months after arrest	0.35	0.48	0–1
Delinquency case closure	Youth's delinquency case was closed in the juvenile justice system 9 months after arrest	0.69	0.46	0–1
Living at home	Youth was at home 9 months after arrest	0.47	0.50	0–1
Independent variables				
Treatment group	Youth was in the treatment group	.33	0.47	0–1
Male	Youth is male	0.60	0.49	0–1
Age	Age of youth	14.69	2.18	5–18
Hispanic	Youth is Hispanic	.09	0.29	0–1
African American	Youth is African American	0.44	0.50	0–1
Other race	Youth is other race/ethnicity (including Native American, Alaska Native, Asian, and mixed race)	0.08	0.28	0–1
White (reference)	Youth is Caucasian	0.37	0.48	0–1
Physical neglect	Physical neglect was the reason for the youth's involvement in the CWS	0.77	0.42	0–1
Prior criminal history	Youth's prior criminal history, where prior status arrest ¼ þ1, prior criminal arrest ¼ þ2; referral for arrest was misdemeanor ¼ þ1; referral arrest was felony ¼ þ2	3.49	1.26	2–5

Note. 635 cases. Age normalized in multivariate regressions. CWS ¼ child welfare system.

Table 2. Recidivism.

	Model 1		Model 2		Model 3		Model 4	
	Any Arrest at 9 Months [a]		# Arrests at 9 Months [b]		Any Arrest at 18 Months [a]		# Arrests at 18 Months [b]	
Variables	*b* (*SE*)	Exp(*B*)	*b* (*SE*)	Exp(*B*)	*b* (*SE*)	Exp(*B*)	*b* (*SE*)	Exp(*B*)
Treatment group	−.212 (.225)	0.809	−.166 (.158)	0.817	.004 (.210)	1.004	0.123 (.119)	1.130
Male	.596** (.198)	1.814	.595*** (.144)	1.813	.562** (.183)	1.755	0.202 (.107)	1.223
Age	−.036 (.056)	0.964	−.042 (.037)	0.959	−.037 (.053)	0.963	−0.025 (.029)	0.975
Hispanic	.147 (.354)	1.158	−.096 (.264)	0.908	.444 (.327)	1.559	0.023 (.199)	1.023
African American	.232 (.212)	1.261	.184 (.146)	1.202	.570** (.198)	1.768	0.242* (.115)	1.274
Other race	.500 (.344)	1.649	.519* (.211)	1.681	.345 (.338)	1.412	0.171 (.181)	1.186
Physical neglect	−.180 (.218)	0.835	−.174 (.143)	0.840	−.014 (.210)	0.986	−0.053 (.111)	0.948
Prior criminal history	.238** (.086)	1.268	.186** (.059)	1.204	.310*** (.081)	1.363	0.122* (.048)	1.129
Case disposition	−.175 (.197)	0.839	−.070 (.130)	0.933	−.173 (.190)	0.841	−0.034 (.100)	0.966
Any arrest at 9 months	—	—	—	—	— [c]	—	1.716*** (.108)	5.563
Intercept	−1.367 (.871)	—	−1.179* (.586)	—	−1.293 (.827)	—	−1.461** (.450)	—
Hurvich and Tsai's Criterion (AICC)	555.947		1,064.795		606.955		1,113.400	
Omnibus w^2	32.776***		54.054***		48.224***		365.080***	
N	596		596		584		584	

[a]Logistic regression. [b] Negative binomial regression. [c] Not included due to multicollinearity.
*p < .05. **p < .01. ***p < .001.

Table 2 presents the results regarding recidivism. Model 1 demonstrates that males and youths with higher prior criminal history scores are more likely to be rearrested within 9 months of their initial arrest. Model 2 shows that males, youth of other races, and those with higher scores on criminal history are arrested more times within 9 months than females, White youth, or those with lower criminal history scores. Regarding arrests at 18 months, males, African American youth, and youths with higher criminal history scores are more likely to be arrested 18 months after initial arrest than females, White youth, or those with lower criminal history scores (Model 3). African American youth, those with higher prior criminal history scores, and those who had been arrested within 9 months were also rearrested more often (Model 4) during this time. Notably, treatment group status was not related to any of the recidivism outcomes.

Table 3 shows the case outcomes and youth's living situation that were measured 9 months after their initial arrest. Regarding child welfare case closure (Model 1), youths in the treatment group were less likely than youths in the comparison group to have their dependency case closed 9

months after their initial arrest, most likely so that the CYPM team could provide the youths with more services. Regarding juvenile justice delinquency case closure (Model 2), youths in the treatment group were more likely than the comparison group to have their delinquency case closed 9 months after their initial arrest, while youths whose cases were dismissed or diverted were more likely to have their delinquency case closed.

Model 3 in Table 3 provides the results of the logistic regression regarding case disposition— whether the youth's case was dismissed or diverted. Findings reveal that treatment group youth were more likely than comparison group youths to have their cases dismissed or diverted, as were Hispanic youth compared to White youth. Notably, having been arrested within 9 months was not significantly related to this outcome. Regarding whether the youth was living at home 9 months after their arrest (Model 4), results indicate that the treatment group youth were more likely to be living in this environment than comparison group youth.

Discussion and Conclusions

Crossover youth are youths who are involved with both the JJS and CWS, demonstrate high service needs, and may have somewhat complicated cases due to their dual status. Simply put, responding to them, their families, and their needs necessitates a multisystem response. The research on crossover youth and CYPM employed in jurisdictions across the country suggests that multidisciplinary response teams hold much promise in adequately identifying, processing, and providing case management to these youth (Herz & Fontaine, 2013; McKinney, 2019). However, the research on CYPM is relatively new and is limited to a few studies that primarily focus on process outcomes (Dierkhising et al., 2019; Haight et al., 2014; Wright et al., 2017), with fewer evaluations of recidivism (Haight et al., 2016) or other outcomes that might be relevant to the model (e.g., case closure). The current study sought to address some of these gaps by examining multiple outcomes of interest to *both* JJS and CWS, including recidivism, case outcomes, and placement outcomes. Overall, the findings suggest that the CYPM in the jurisdiction under study, as intended, dismisses or diverts crossover youth more often, closes delinquency cases more often, and leads to more home placements than was previously done in the jurisdiction when the CYPM was not in place, although it does not reduce recidivism. Thus, the findings presented here suggest that the CYPM represents a useful model for changing a variety of outcomes for crossover youth.

Table 3. Case Outcomes and Living Situation. [a]

	Model 1		Model 2		Model 3		Model 4	
	Dependency Case Closure		Delinquency Case Closure		Case Disposition		Living at Home	
Variables	*b* (*SE*)	Exp(*B*)	*b* (*SE*)	Exp(*B*)	*b* (*SE*)	Exp(*B*)	*b* (*SE*)	Exp(*B*)
Treatment group	−1.134** (.333)	0.322	.975** (.285)	2.651	1.166*** (.233)	3.208	.561** (.198)	1.753
Male	−0.110 (.272)	0.896	−.170 (.215)	0.844	0.204 (.190)	1.226	−.077 (.174)	0.926
Age	0.132 (.079)	1.141	.032 (.061)	1.072	−0.067 (.057)	0.935	.042 (.051)	1.043
Hispanic	0.516 (.450)	1.676	−.591 (.379)	0.554	1.014* (.420)	2.755	.468 (.316)	1.597
African American	−0.193 (.305)	0.824	.207 (.229)	1.230	−0.045 (.205)	0.956	.070 (.191)	1.072
Other race	−0.321 (.500)	0.725	.154 (.389)	1.166	−0.302 (.336)	0.740	−.199 (.327)	0.819
Physical neglect	0.056 (.340)	1.057	.184 (.237)	1.203	0.115 (.218)	1.122	−.100 (.201)	0.905
Prior criminal history	−0.215 (.136)	0.806	−.021 (.092)	0.819	0.005 (.085)	1.005	−.067 (.078)	0.935
Case disposition	0.594 (.331)	1.812	.724*** (.207)	2.063	—	—	−.119 (.183)	1.127
Any arrest at 9 months	—	—	—	—	−0.158 (.198)	0.854	—	—
Intercept	−1.501 (1.265)	—	−.319 (.944)	—	1.144 (.871)	—	−.674 (.791)	—
AICC	313.606		477.681		589.319		626.527	
Omnibus w^2	19.292*		35.298***		51.469***		19.750*	
N	276		502		596		601	

[a]Logistic regression.
*$p < .05$. **$p < .01$. ***$p < .001$.

Recall that a main goal of the CYPM in this study was to divert crossover youth from further system involvement when possible. Although bivariate tests indicated that youths in the CYPM treatment group were less likely to recidivate at 9 months (see Appendix), our multivariate results revealed that the CYPM treatment group was no different than the comparison group regarding recidivism once controls were included. The research on diversion programs among juveniles is mixed with respect to whether they are effective at reducing recidivism. For instance, Schwalbe et al.'s (2012) meta-analysis reported that the effect of diversion programs on recidivism was not significant, although Wilson and Hoge's (2013) meta-analysis of diversion programs demonstrated that diversion is more effective at reducing recidivism than conventional judicial interventions. It is possible that program-level variables (e.g., design quality, program characteristics) influenced the effectiveness of the CYPM program in this study (Wilson & Hoge, 2013). In fact, the process evaluation was designed to provide the team with informational feedback loops to improve team decision making and service delivery, so it is likely that the team's decision making improved over time. The results of the process evaluation of this CYPM (authors, blinded) indicated that the team members felt that they made better decisions regarding the youth's case and service needs because they were able to share more information about the youth's "whole story" prior to making a filing decision. As each CYPM is jurisdictionally specific, this team preferred to divert youths or enhance their services when possible over filing the case in court. This preference may have diluted the treatment effect, thus explaining the null results on recidivism uncovered here. Unfortunately, as every case has a different life span in the CYPM, we were unable to examine whether the team's decisions improved over time and cannot test this possibility with the data at hand. Additionally, when outcome data for the current study were collected, the CYPM team was in the process of implementing the "full" case management portion of the model, meaning that while cases were receiving enhanced services, the *full* case management service delivery was not in place. In fact, team members reported that it took about a year to get case management implemented to the degree the team desired and, even then, was amended every so often. We acknowledge the potential problem this creates for our recidivism analyses but maintain that it also underscores the importance of examining a range of nonrecidivism related outcomes for CYPM across the country. We also see this as an avenue for future research; we might expect that a full implementation of the case management would lead to lower recidivism among treated youth, but more research is needed.

Further, some have suggested that behavioral health treatment, such as that which might be provided in the case management of the CYPM, might actually identify youth with behavioral health needs, instead of serving as a

protective factor. That is, instead of suggesting that treatment is related to recidivism, Dierkhising and colleagues (2019) have suggested that treatment functions as a proxy for need for services. Similarly, they have suggested that programs offering enhanced services are in the process of reducing risk factors when outcomes are assessed, which might also explain the null relationship between treatment status and recidivism in this study. Finally, it is also possible that the treatment effect was reduced by controlling for risk (prior criminal history and arrest at 9 months); there is a plethora of research indicating that risk is highly relevant to continued criminal behavior and can impact treatment effects (Lowenkamp & Latessa, 2005; Lowenkamp, Latessa, & Holsinger, 2006; Lowenkamp, Latessa, & Smith, 2006). In fact, we found that prior criminal history was the most consistent predictor in all models of recidivism.

However, the results do indicate that crossover youth in the CYPM treatment group demonstrated better case outcomes and living situations than the comparison group. We found that delinquency cases were closed more often, which means that more crossover youth were getting out of involvement with the JJS sooner. This reduces court costs as well as the human costs related to system involvement (e.g., court appearances, etc) and speeds up the efficiency of the system (e.g., time between hearings, time from affidavit to disposition to case closure; Juvenile Delinquency Guide- line, 2005). Dependency cases were not closed as quickly, most likely so that the youth could receive more services from child welfare. Again, this finding is consistent with the goals of the CYPM, which were to provide more necessary services for crossover youth. Regarding case dispositions, the CYPM treatment group was more likely to be dismissed or diverted than the comparison group. This is also consistent with the purpose of the CYPM that is in place within the jurisdiction. Finally, treatment youth's placement outcomes/living situations were more favorable than the comparison group: Treatment group youth were more likely to be at home than the comparison group. Again, this is consistent with the goals of the CYPM within the jurisdiction, which seeks to dismiss or divert cases when possible and reunify the family to the greatest extent possible. Taken together, the results of this evaluation indicate that the CYPM in this jurisdiction successfully impacted a variety of juvenile justice *and* child welfare outcomes for crossover youth, which led to both better life situations for the youth and system-level outcomes for both systems.

Although our study adds to the somewhat limited evaluation literature on CYPM and MDTs in general, it is not without some limitations. As mentioned above, the case management recommended by the CYPM was not fully implemented when we collected recidivism data. This means that the CYPM team was still determining the most effective and efficient modes of coordinated case planning and management for the youth. Although we expect that the team process and decision- making

effectiveness improved over time, we were unable to test this possibility as part of this research project. Subsequent research should include a process evaluation that tracks fidelity to intended coordinated case planning and management model and corresponding outcomes. Second, it is important to note that the data collected during the evaluation were not solely intended for research purposes: CYPM team members collected most of the data and entered it into their system for case management purposes (Dierkhising et al., 2019). They also did this in addition to their regular duties. The authors retrospectively collected data on the comparison group from historical case files, but some of these data were missing because the fields were again intended for case management purposes and not for evaluation research. Even so, Appendix shows that the comparison group was similar to the treatment group on most background variables (i.e., age, African American, other race, White, physical neglect) and only differed in terms of gender, Hispanic youth, and scores on prior criminal history.

Despite these limitations, the overall results of the evaluation of the CYPM are promising. The findings suggest that the CYPM in the jurisdiction under study, as intended, dismisses or diverts crossover youth more often, closes delinquency cases more often, and leads to more home placements than was previously done in the jurisdiction when the CYPM was not in place. Thus, the findings presented here contribute to a limited body of research and suggest that the CYPM represents a useful model for changing a variety of outcomes for crossover youth which led to both better life situations for the youth and system-level outcomes for the JJS and CWS.

Appendix

Table A1. Descriptive Statistics for Dependent and Independent Variables by Group Status.

	Comparison Group		Treatment Group			
Variables	$\bar{x}$ (*SD*)	*n* (% Missing)	$\bar{x}$ (*SD*)	*n* (% Missing)	$\bar{x}$ Diff	*t*
Dependent variables						
Any arrest at 9 months	0.34 (0.47)	423 (0.47)	0.24 (0.43)	207 (1.43)	−0.10	−2.56*
Number of arrests at 9 months	0.50 (0.81)	423 (0.47)	0.35 (0.73)	207 (1.43)	−0.15	−2.34*
Any arrest at 18 months	0.48 (0.50)	418 (1.65)	0.39 (0.49)	200 (4.76)	−0.09	−2.09
Number of arrests at 18 months	0.83 (1.05)	418 (1.65)	0.67 (0.99)	200 (4.76)	−0.17	−1.87
Case disposition [a]	0.56 (0.50)	425 (0)	0.83 (0.37)	210 (0)	0.27	7.74***
Dependency case closure	0.45 (0.50)	97 (77.18)	0.30 (0.46)	193 (8.10)	−0.15	−2.53
Delinquency case closure	0.64 (0.48)	393 (7.53)	0.84 (0.37)	129 (38.57)	0.20	4.94***
Living at home	0.42 (0.49)	425 (0)	0.58 (0.50)	210 (0)	0.16	3.83***
Independent variables						
Group membership	0.67	425	0.33	210	—	—
Male	0.64 (0.02)	423 (0.47)	0.53 (0.04)	210 (0)	−0.11	−2.69*
Age	15.15 (1.66)	425 (0)	14.18 (1.93)	210 (0)	−0.97	−6.21
Hispanic	0.07 (0.26)	425 (0)	0.13 (0.34)	210 (0)	0.06	2.26*
African American	0.45 (0.02)	425 (0)	0.44 (0.02)	210 (0)	−0.01	−0.16
Other race	0.09 (0.02)	425 (0)	0.06 (0.02)	210 (0)	−0.03	−1.47
White (reference)	0.37 (0.49)	425 (0)	0.36 (0.48)	210 (0)	−0.02	−0.41
Physical neglect	0.75 (0.02)	423 (0.47)	0.80 (0.03)	210 (0)	0.06	1.60
Prior criminal history	3.83 (0.06)	403 (5.18)	2.80 (0.07)	201 (4.29)	−1.03	−10.90***

[a]Case disposition coded: 1 ¼ *case was dismissed or diverted*; 0 ¼ *traditional prosecution.*
*$p < .10$. **$p < .05$. ***$p < .001$.

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Note

1. We use the terms “crossover” and “dually involved” interchangeably throughout this article.
2. The process evaluation was intended to provide short- and long-term feedback to the Crossover Youth Practice Model team in order to improve the model over time and respond to issues as indicated by the

data. As we mention in Discussion section, this means that the decisions of the team and case management process were modified over the course of the project and beyond.

3. Arrests include offenses related to assault, drug, theft, property, weapon, arson, disorderly conduct, driving under the influence (DUI) or driving while intoxicated (DWI), obstruction, robbery, false information or report, criminal mischief, or criminal attempt.
4. Although this dummy-coded variable does not provide information for the full spectrum of types of mal- treatment, physical neglect represents a vast majority of all substantiated maltreatment across the state (*Child Abuse and Neglect Annual Data: Calendar Year 2017*, Nebraska Department of Health and Human Services) as well as the majority of cases of maltreatment in our sample (77%). We were not confident that the data on type of maltreatment for the remaining 23% of the sample representing cases other than physical neglect were coded in a consistent fashion across the treatment group and control group. To err on the side of caution, we adopted this simpler, but accurate measure of maltreatment type.

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