Connecticut Judicial Branch
Court Support Services Division

Evaluation of the Connecticut Motivational
Interviewing and Strength-Based Case
Management Initiatives

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Evaluation of the Connecticut Motivational Interviewing and Strength-Based Case Management Initiatives, 2007-10

Final Outcome Evaluation Report

May 2012

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EXECUTIVE SUMMARY

In the spring of 2002, the Court Support Services Division (CSSD) of the Connecticut Judicial Branch developed and launched the Connecticut Probation Risk Reduction Program. The Risk Reduction Program grew out of years of evaluation of both the juvenile and adult probation services in the state, and leveraged national research on best practices and evidence-based programs to design a comprehensive approach to the reduction of recidivism. This approach included improvements of three basic elements of offender treatment: Assessment of risk and criminogenic needs; effective interventions in terms of case management, supervision standards and programming; and evaluation to ensure programs are yielding expected results.[1]

In September 2006, CSSD began planning and implementation of the Motivational Interviewing and Strength-Based Case Management Initiative (MI/SBCM). The Initiative was designed to improve the quality of probation supervision by effectively motivating clients to engage in the pro-social change process, and to move case management away from a deficit focus in order to leverage client strengths and capitalize on resilience factors in his or her community to foster desistance.

Implementation began in 2007, and first included training the administrators, supervisors and lead Juvenile Probation Officers (JPOs). Training was then provided in workshops for JPOs in Motivational Interviewing techniques, Strength-Based Case Management, and the use of the Assessing Individual Motivation (AIM) tool. Additional support and feedback on coaching and reinforcing Motivational Interviewing skills and Strength-Based Case Management to JPOs was also provided.

The Justice Research Center officially commenced its involvement in the project on July 22, 2008 as the program completed the final phases of training. The MI/SBCM research agenda included a process and outcome evaluation. *The Process Evaluation of Connecticut's 2008-2010 Motivational Interviewing and Strength-Based Case Management Initiatives* contained the results of the process evaluation. The present document is the Justice Research Center final report on the outcomes of the Motivational Interviewing and Strength-Based Case Management Initiative. This report provides an overview of the impact of the implementation of Motivational Interviewing and Strength-Based Case Management practices in the Connecticut Juvenile Parole system and recommendations for continued improvement.

FINDINGS:

The purpose of this analysis was to answer questions about the effectiveness of the Motivational Interviewing and Strength-Based Case Management Initiative with regard to recidivism, and to determine whether it was more effective with certain types of offenders. The analysis revealed that:

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[1] Connecticut Judicial Branch. (2002). Connecticut's Probation Risk Reduction Program. In *Sanctions Update*. Retrieved from http://www.jud.ct.gov/external/news/SpringSanctions.pdf

- Controlling for differences in age and offense history, recidivism rates for youth involved in the MI/SBCM Initiative were lower than those for youth supervised under the previous model. The difference in outcomes between the two models was statistically significant.

- The MI/SBCM approach resulted in recidivism reductions for males and females alike, with stronger effects observed with males.

- While youth who started their delinquent behaviors at a younger age were more likely to recidivate, youth who entered the juvenile justice system after the age of 15 years appeared to have a great likelihood to re-offend following MI/SBCM services. It may be that these youth were relatively low risk to re-offend overall, and the MI/SBCM may have resulted in more intensive interventions than were necessary given the risks and needs of this group of youth.

- Justice system characteristics such as court location and length of assignment were not strong predictors of recidivism, when controlling for demographic and offender characteristics. Although court location was not a strong statistical predictor in this analysis, there were a number of differences in performance among the 13 locations. In particular, Torrington, Bridgeport, Willimantic and Hartford all achieved relatively large reductions in recidivism through their implementation of the MI/SBCM model.

RECOMMENDATIONS

This evaluation has implications for the management of the CSSD Motivational Interviewing and Strength-Based Case Management Initiative. Based on the findings, it is recommended that:

- Managers make quality of implementation a priority for the next year, by dissemination of quality assurance tools, universal application of the tools, and careful management analysis of the results, including comparison of recidivism rates by quality of implementation.

- Differences in the effectiveness of the MI/SBCM model with older youth should be further explored to understand the unique risks and needs of these youth, and to identify the appropriate intensity and duration of services for these youth.

- Given the variations in recidivism reduction found among the court locations, further examination should be conducted to review each court's inventory of community-based services accessible to probation youth in order to assess the level and quality of services available to match the criminogenic needs indicated by the JAG assessments to effective interventions. This review should serve as the basis for future requests to modify, eliminate or increase available services.

Outcome evaluations are critical to program success as they provide valuable information on the relative strengths and potential weaknesses of juvenile justice initiatives and can assist policy makers and managers improve program operations and outcomes for youth. This report provides an overview of the impact of the implementation of Motivational Interviewing and Strength-Based Case Management practices in the Connecticut Juvenile Probation system and recommendations for continued improvement.

THE IMPACT OF MOTIVATIONAL INTERVIEWING AND STRENGTH-BASED CASE MANAGEMENT

INTRODUCTION

In the spring of 2002, the Court Support Services Division (CSSD) of the Connecticut Judicial Branch developed and launched the Connecticut Probation Risk Reduction Program. The Risk Reduction Program grew out of years of evaluation of both the juvenile and adult probation services in the state, and leveraged national research on best practices and evidence-based programs to design a comprehensive approach to the reduction of recidivism. This approach included improvements of three basic elements of offender treatment: Assessment of risk and criminogenic needs; effective interventions in terms of case management, supervision standards and programming; and evaluation to ensure programs are yielding expected results.[2]

In September 2006, CSSD began planning and implementation of the Motivational Interviewing and Strength-Based Case Management Initiative (MI/SBCM). The Initiative was designed to improve the quality of probation supervision by effectively motivating clients to engage in the pro-social change process, and to move case management away from a deficit focus in order to leverage client strengths and capitalize on resilience factors in his or her community to foster desistance.

MOTIVATIONAL INTERVIEWING

Motivational Interviewing (MI) is a directive, client-centered helping style for eliciting behavior change by helping clients explore and resolve ambivalence. In other words, Motivational Interviewing (MI) is a technique that gets youth to change themselves by increasing their own desire to change. It helps them see the benefits of moving in a new direction by leading the youth through a comparison between his or her goals and his or her current behavior. The goal is to create tension in the youth, and to place the youth in charge of the process of resolving the tension in pro-social ways. The focus is on getting the person to rely on inner motivation rather than external control. Rollnick and Miller (1995) summarize the characteristics of MI:

1. Motivation to change is elicited from the client, and not imposed from without. Other motivational approaches have emphasized coercion, persuasion, constructive confrontation, and the use of external contingencies (e.g., the threatened loss of job or family). Such strategies may have their place in evoking change, but they are quite different in spirit from motivational interviewing which relies upon identifying and mobilizing the client's intrinsic values and goals to stimulate behavior change.

2. It is the client's task, not the counselor's, to articulate and resolve his or her ambivalence. Ambivalence takes the form of a conflict between two courses of action (e.g., indulgence

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[2] Connecticut Judicial Branch. (2002). Connecticut's Probation Risk Reduction Program. In *Sanctions Update*. Retrieved from http://www.jud.ct.gov/external/news/SpringSanctions.pdf

versus restraint), each of which has perceived benefits and costs associated with it. Many clients have never had the opportunity of expressing the often confusing, contradictory and uniquely personal elements of this conflict, for example, "If I stop smoking I will feel better about myself, but I may also put on weight, which will make me feel unhappy and unattractive." The counselor's task is to facilitate expression of both sides of the ambivalence impasse, and guide the client toward an acceptable resolution that triggers change.

3. Direct persuasion is not an effective method for resolving ambivalence. It is tempting to try to be "helpful" by persuading the client of the urgency of the problem about the benefits of change. It is fairly clear, however, that these tactics generally increase client resistance and diminish the probability of change (Miller, Benefield and Tonigan, 1993, Miller and Rollnick, 1991).

4. The counseling style is generally a quiet and eliciting one. Direct persuasion, aggressive confrontation, and argumentation are the conceptual opposite of motivational interviewing and are explicitly proscribed in this approach. To a counselor accustomed to confronting and giving advice, motivational interviewing can appear to be a hopelessly slow and passive process. The proof is in the outcome. More aggressive strategies, sometimes guided by a desire to "confront client denial," easily slip into pushing clients to make changes for which they are not ready.

5. The counselor is directive in helping the client to examine and resolve ambivalence. Motivational interviewing involves no training of clients in behavioral coping skills, although the two approaches not incompatible. The operational assumption in motivational interviewing is that ambivalence or lack of resolve is the principal obstacle to be overcome in triggering change. Once that has been accomplished, there may or may not be a need for further intervention such as skill training. The specific strategies of motivational interviewing are designed to elicit, clarify, and resolve ambivalence in a client-centered and respectful counseling atmosphere.

6. Readiness to change is not a client trait, but a fluctuating product of interpersonal interaction. The therapist is therefore highly attentive and responsive to the client's motivational signs. Resistance and "denial" are seen not as client traits, but as feedback regarding therapist behavior. Client resistance is often a signal that the counselor is assuming greater readiness to change than is the case, and it is a cue that the therapist needs to modify motivational strategies.

7. The therapeutic relationship is more like a partnership or companionship than expert/recipient roles. The therapist respects the client's autonomy and freedom of choice (and consequences) regarding his or her own behavior. (p. 326)[3]

Motivational Interviewing normally is used in conjunction with a "Stages of Change" approach (Prochaska and DiClemente, 1983). This conceptualization of the change process helps staff and mentors understand where the youth is in terms of readiness to change.

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[3] Rollnick S., & Miller, W.R. (1995). What is motivational interviewing? *Behavioural and Cognitive Psychotherapy*, *23*, 325-334.

Pre-contemplation. Offender is not aware of the need to change. "My life would be great if you would just get off my back!" Youth is not interested in change and is resistant to the suggestions that they need to change.

Contemplation. The youth considers and likely rejects change, makes excuses, attempts avoidance, minimization, generally trying to talk himself out of the realization that there is a problem. The task is to "tip the balance" by evoking contradictions and reasons for change, helping the youth discover the risk in not changing, and developing "ends-means reasoning skills."

Determination. "I see the problem—I'm on board to make a change." Commitment takes place here, but commitment and behavior are two different things. Temporarily, the offender wants to change. However, he probably has no idea how to begin, and most likely cannot do it alone.

Action. The youth is doing lots of things to bring about positive change (attending counseling, new support systems, and avoiding criminal associations.) The greatest evidence of change is changing their associations.

Maintenance. New skills and good intentions are not enough to sustain change. Different skills are needed for long-term success.

Relapse. An important task is to differentiate between a genuine failure and the repetition of an old behavior the youth had not really intended to change.[4]

The MI and Stages of Change approach helps eliminate power struggles and conflict that often is the result of direct confrontation through blaming, negative attributions, unsolicited advice, or lecturing. As with other evidence-based treatments and practices, a means of monitoring the skill levels of MI practitioners must be established to ensure fidelity to the treatment model. Repeated refresher training, and an aggressive "train the trainer" program help guarantee that individuals maintain a sharp edge on their skills. Many researchers are now stressing the importance of continued training, feedback, monitoring and evaluation as key elements to successfully utilize MI and SBCM approaches with at-risk populations.

STRENGTH-BASED CASE MANAGEMENT

An important feature of the Recidivism Reduction program is the emphasis on neighborhood supervision. Probation officers were to be assigned to specific geographical areas and neighborhoods to network, build partnerships and leverage the assets present there. This strategy is a part of an overall Strength-Based Case Management (SBCM) approach to probation services. The goal is to move away from a deficit perspective or seeking insight into how the client's problems developed toward the discovery of the client's assets to address how to cope with criminogenic needs within the community setting.

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[4] Prochaska, J. O. & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *J Consult Clin Psychol 51*(3), 390–395. See also Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *Am Psychol 47*(9), 1102–1114.

The effectiveness of SBCM is supported by a growing body of evidence that supervision from a control orientation is less effective than approaches characterized by a social control or rehabilitative perspective.[5] Social control is enhanced by the neighborhood supervision approach. Rehabilitation is enhanced through the use of a risk/needs tool that not only scores the level of criminogenic needs, but resilience factors as well. Coupled with evidence-based treatments and probation practices, the MI/SBCM approach is a theoretically strong strategy toward reducing juvenile recidivism.

The Justice Research Center was contracted to complete a two-year process assessment and a three-year outcome evaluation of CSSD's Motivational Interviewing and Strength-Based Case Management approaches. The process evaluation of Connecticut's MI/SBCM model examined the program's development, implementation and management for factors that impact program operation and youth outcomes. The evaluation found that:

- Staff were well qualified and they received continuous training boosters.

- There was strong support for the model throughout all agency levels.

- Validated assessments of risk and need were being conducted to properly serve and assess youth.

- Treatment was driven by youths' individual needs.

- Officers were skilled in MI and in the SBCM approach.

- There was strong supervision and management in place to support the officers.

- A quality assurance system has been established to ensure model fidelity.

The goal of the Motivational Interviewing/Strength-Based Case Management Initiative outcome evaluation is to determine the impact of the new approach to supervision on subsequent justice system involvement for delinquent youth. After the completion of the supervision term the recidivism risk scores, criminogenic needs, offense histories, demographic and justice system involvement information of youth supervised under the new model were collected. These data were used to answer the following outcome questions.

1. Are MI and SBCM Probation services more effective than the prior model of Probation services that did not incorporate these approaches to reducing recidivism?

2. Does the effectiveness of MI and SBCM services vary with the demographic and delinquency characteristics of juvenile offenders?

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[5] Andrews, D., & Bonta, J. (2006). *The Psychology of Criminal Conduct* (4th ed.). Newark, NJ: LexisNexis/Matthew Bender. Bonta, J., Rugge, T, Scott, T., Bourgon, G., & Yessine, A. (2008). Exploring the black box of community supervision. *Journal of Offender Rehabilitation, 47*(3), 248-270.

Multiple measures of the prevalence and severity of reoffending are examined including rates of re-arrest, felony arrest, re-adjudication, felony adjudication, and adult processing. It was hypothesized that MI/SBCM youth would achieve lower rates on each of these outcomes compared to youth released to prior aftercare services.

EVALUATION METHODOLOGY

MI AND SBCM OUTCOME EVALUATION RESEARCH DESIGN

Because the Initiative was implemented state-wide in 2007, an experimental research design was not possible. Instead, a quasi-experimental design was used, featuring a comparison group identified through official records of youth disposed to probation and released prior to the implementation period which began January 1, 2007. Given the system wide implementation of these approaches the comparison group was drawn from clients who received services prior to the onset of these initiatives that did not receive MI and SBCM services.

DATA SOURCES

The evaluation data included official youth, program and justice system data from the CSSD Case Management and Information System (CMIS), including information on referral and offense history, dispositions and assignments. The CMIS data set also contained information on youth demographic characteristics such as home community, age and gender. Prior research demonstrates the importance of risk and needs characteristics (substance use, family functioning, peers, education, mental health, pro-social attitudes) in understanding juvenile offender outcomes. This type of information is essential in controlling for offender characteristics during the statistical modeling process. Therefore risk and needs data was drawn from CSSD assessments (Assessing Individual Motivation - AIM, Juvenile Assessment Generic - JAG), CSSD information systems and youth case files. Finally, juvenile justice system involvement after release such as arrest/re-arrest and adjudication/re-adjudication was provided by CSSD. Adult arrest and conviction data were generated from the Connecticut Computerized Criminal History (CCH) records system.

MEASURES

Demographics. The analysis includes measures of age at disposition to Probation, gender and race/ethnicity (African American, White, Hispanic), as reported to CSSD. The evaluation also incorporates age at first offense. Information on court location is also available for regional analysis.

Placements. Unique probation placement and assignment duration were calculated using standardized criteria. Disposition dates were used to define the beginning of supervision. The completion of services was established by the close date which captured when the youth actually completed services (as opposed to the probation end date which could change over the course of a probation term). Subsequent placements which overlapped or began within 30 days of the previous term were considered a continuous placement. CSSD data systems do not record

completion reasons, only release or end dates with the assumptions that those with an end date successfully completed their probation term. Therefore completion was defined as any youth released from probation supervision, and not placed into a residential setting or supervision term within 30 days of program end date. Establishing a completion date ensures that the study captures subsequent justice system involvement after the youth completes the full intervention. Measuring youth outcomes from assignment date does not allow time for the program to impact behavior; and inflates recidivism rates.

Offense History. Offense history data prior to disposition to probation is summarized in terms of prior arrests and convictions by offense type (felony, misdemeanor, other, etc.). The analysis also includes seriousness index scores for prior referrals and adjudications. These measures capture offense gravity for both prior referral/arrest and adjudication/conviction. A weighted system assigns point values to specific offense types. As crime seriousness increases, so does the index score (violent felony = 8, property or other felony = 5, misdemeanors = 2, and other offenses = 1). Data on prior detention stays and the length of assignment to probation is also included.

Risk and Needs. CSSD evaluates juvenile risk and needs using the Juvenile Assessment Generic (JAG), a validated risk measurement instrument. The JAG measures criminal history, substance use, risk-taking behaviors, family functioning, peer relationships, the client's stake in conformity, and personal values. Scores are aggregated into total protective and risk values. Summary risk and protective scores are presented for criminal, substance use, family, peer and personal domains. More than 70 percent of all study participants selected from the data had complete JAG information; however, the other 30 percent did not have this data available for the analysis.

Justice System Outcomes. Juvenile referrals, adult arrests, and adjudications and convictions are common indicators of involvement in the justice system. Referrals and arrests demonstrate client contact with law enforcement, and may point to deviant or delinquent behaviors. Adjudication or conviction is generally considered more accurate measures of delinquent behavior and involvement with the juvenile or criminal justice systems than referral or arrest. Justice system outcomes include subsequent juvenile referrals or adult arrests, adjudications/convictions. Recidivism as applied throughout this report is operationally defined as any adjudication or conviction within one year of program completion, and as such is the primary focus of the assessment. However, analyses of both juvenile and adult arrests twelve months post completion are also presented in the discussion below.

SAMPLE

The development of the sample for the current analysis began with the records of 8809 youth who were disposed to probation between January 2006 and August 2010. Many youth had duplicate or overlapping probation periods, resulting in a total of 15,453 records. A probation assignment was defined as the time between disposition to closure date. Overlapping assignments were treated as one continuous episode, and subsequent assignments which commenced within 30 days after the prior closure were treated as continuous as well. In order to evaluate the effects of the MI/SBCM Initiative, youth with assignments that were closed prior to the implementation of the Initiative (January 1, 2007) were selected as a comparison group. Youth who were assigned to probation between January 1 and December 31, 2008 were selected as the treatment group, to provide a group whose supervision was less likely to be affected by program ramp-up. The sample initially

was composed of 949 pre-implementation cases and 2086 post-implementation cases, for a total of 3035 probation cases. No youth was included in the sample more than once.

Assessment (JAG) data within six months of the disposition date was not available for all youth. The sample containing JAG data was reduced to 666 (70%) pre-implementation youth and 1,543 (74%) MI/SBCM youth, for a total of 2209 cases. Comparisons were made between the 826 youth without JAG assessments and the 2209 who had been assessed for differences in age, race, gender and prior offense records (see Table 1, below).

In general, the assessed group tended to have slightly higher percentages of males, minorities and were slightly older, although their average age at first offense was slightly younger. Their histories also indicated that they were detained more, and their average number of prior offenses and index of the seriousness of prior adjudicated offenses was higher. With the exception of the differences between prior detention stays, most of the differences were small and evident in both the Pre-implementation and MI/SBCM groups. This seems to indicate that the priority for full JAG assessments tended to be youth who were at slightly higher risk for future offending. Because the recidivism analysis will control for factors only accessible from the JAG data, the sample of youth who were assessed with the JAG will be used for the outcome analysis. Demographic characteristics and summary data on offense histories of these youth will be presented in the profile of sample youth below.

TABLE 1. COMPARISONS OF PRE-IMPLEMENTATION AND MI/SBCM YOUTH BY JAG ASSESSMENT STATUS

	Pre-Implementation		MI/SBCM		Total	
Variable	Not Assessed (N = 283)	Assessed (N = 666)	Not Assessed (N = 543)	Assessed (N = 1543)	Not Assessed (N = 826)	Assessed (N = 2209)
White	41.3%	34.2%	37.9%	36.4%	39.1%	35.8%
Black	36.4%	38.4%	31.1%	36.7%	32.9%	37.2%
Hispanic	16.6%	26.1%	18.2%	24.5%	17.7%	25.0%
Other	0.0%	0.3%	0.9%	0.6%	0.6%	0.5%
Missing Data	5.7%	0.9%	11.8%	1.7%	9.7%	1.5%
					0.0%	0.0%
Males	67.5%	71.9%	70.9%	72.0%	69.7%	72.0%
Females	32.5%	28.1%	29.1%	28.0%	30.3%	28.0%
Avg. Age at First Offense	13.49	13.01	13.71	13.20	13.63	13.14
Avg. Age at File Date	14.30	14.59	14.48	14.53	14.42	14.55
Percent Detained	17.0%	21.8%	14.7%	20.4%	15.5%	20.8%
Average Prior Adjudications						
Violent Felonies	0.26	0.57	0.29	0.52	0.28	0.53
Property Felonies	0.22	0.60	0.44	0.60	0.36	0.60
Other Felonies	0.07	0.26	0.15	0.24	0.12	0.25
Misdemeanors	0.84	1.86	0.81	1.65	0.82	1.71
Other Adjudications	0.14	0.60	0.10	0.36	0.12	0.43
Seriousness Index	11.41	14.08	11.91	13.52	11.76	13.70

The outcome evaluation incorporates the following analytic techniques: descriptive statistics, simple hypothesis testing (using Mann-Whitney *U* statistics) and logistic regression. Descriptive statistics demonstrate baseline sample characteristics and outcome measures. Simple hypothesis tests highlight differences in the two groups (pre-implementation probationers and MI/SBCM probationers); and help determine which factors potentially affect youth outcomes.

Logistic regression, a more complex statistical tool, allows for more robust modeling of recidivism that controls for potential confounding factors known to impact justice system involvement. The logistic regression results demonstrate the expected outcomes (or predicted probability) of recidivism, given the juveniles' demographics, risks, needs, legal factors, offense histories and other extra-legal factors. Analyses can then be conducted to predict the likelihood for future system involvement based on factors found in the research literature to be correlated with delinquency.

YOUTH PROFILE

This section profiles the outcome evaluation sample of youth assigned to MI/SBCM or pre-implementation probation supervision. This analysis provides a basic description of these youth, their risk levels, needs and prior offending.

DEMOGRAPHICS

Table 2 (below) contains summary data on the demographic characteristics of the pre-implementation (PI) and MI/SBCM groups. Both groups were comprised of 72% males and 28% females. The racial distribution for the MI/SBCM group had a smaller percentage of minorities, but the difference was only about 2%, and the MI/SBCM sample had a higher percentage of youth whose race was missing or unknown. A comparison of average ages of the group at several points in processing revealed small differences in age between the two groups. The average age at first offense was 13.1 years, and for the current offense that resulted in the probation assignment, the average age was 14.6 years. Average age at the current disposition to probation was 14.8 years, and at release from probation supervision, the average age was 15.4 years. Differences between the averages for the two groups on all of these measures were approximately 30-40 days. The similarities in gender and age are of particular importance because they tend to be highly predictive of subsequent offending behavior.

DELINQUENCY HISTORY

With the exception of the average number of total prior charges and adjudications, the delinquency histories of the two groups were also fairly similar. The average number of total charges for the combined sample was 6.6 prior charges. The average for the PI group was 7.4 prior charges, whereas the average for the MI/SBCM group was 6.2. The average number of prior adjudicated charges yielded a similar pattern: the overall average number of prior adjudicated charges was 3.5, with the PI average of 3.9 and the MI/SCBM average of 3.4. The percentages for the prior charges and adjudications were fairly similar. Of the PI group charges, 46.2% were felonies and 51.5% were misdemeanors, whereas the MI/SBCM group charges were 42.7% felony and 55.3% misdemeanor. Percentages do not sum to 100% due to other types of offenses or administrative

procedures in the data, transfers of youth from other state jurisdictions, and the fact that some youth who commit serious or multiple offenses are sometimes placed on probation without a prior history. In general, the MI/SBCM group tended to have a slightly less extensive history, with small differences in the average number of total charges. The tendency toward less serious histories is also evident in the Adjudication Index score, which is an additive scale of scores for prior charges that is weighted by their seriousness (violent felony = 8, property or other felony = 5, misdemeanors = 2, and other offenses = 1). These differences, although small, may be controlled for in the Logistical Regression procedures.

TABLE 2. DEMOGRAPHIC AND OFFENSE HISTORY CHARACTERISTICS OF MI/SBCM YOUTH AND PRE-IMPLEMENTATION COMPARISON YOUTH

Variable	Pre-Implementation (N = 666)	MI/SBCM (N = 1543)	TOTAL (N = 2209)
Males	71.9%	72.0%	72.0%
Females	28.1%	28.0%	28.0%
White	34.2%	36.4%	35.8%
Black	38.4%	36.7%	37.2%
Hispanic	26.1%	24.5%	25.0%
Other	0.3%	0.6%	0.5%
Unknown	0.9%	1.7%	1.5%
Average Age at:			
First Offense	13.0	13.2	13.1
Referral (File Date)	14.6	14.5	14.6
Disposition to Probation	14.9	14.8	14.8
Release from Probation	15.3	15.4	15.4
Average Number of Prior:			
Total Charges	7.4	6.2	6.6
Adjudicated Charges	3.9	3.4	3.5
Adjudicated Violent Felonies	0.6	0.5	0.5
Adjudicated Property Felonies	0.6	0.6	0.6
Adjudicated Other Felonies	0.3	0.2	0.3
Adjudicated Misdemeanors	1.9	1.7	1.7
Adjudicated Other Offenses	0.6	0.4	0.4
Average Adjudication Index[1]	14.1	13.5	13.7
Percentages Where Worst Prior:			
Referral was a Felony	46.2%	42.7%	43.8%
Referral was a Misdemeanor	51.5%	55.3%	54.2%
Adjudication was a Felony	3.3%	3.0%	3.1%
Adjudication was a Misdemeano	19.8%	20.6%	20.4%
Percent with Prior Detention Stay	21.8%	20.4%	20.8%
Average JAG Total Risk Score	15.4	14.9	15.1
Average JAG Total Protective Score	33.6	34.3	34.1

[1]The adjudication index is an additive scale based upon a weighted system. Each adjudicated charge receives a point value specific to the offense types: violent felony = 8, property or other felony = 5, misdemeanors = 2, and other offenses = 1.

RISK AND NEEDS

The Juvenile Assessment Generic (JAG) assessment provides summary scores for risk and protective factors present in the lives of youth entering the delinquency system. Average total risk scores were 15.4 for the PI group and 14.9 for the MI/SBCM group. The total protective score averages were 33.6 for the PI group and 34.3 for the MI/SBCM group. These results are consistent with the differences in measures of prior offending history, and indicate the need for statistical controls. Slightly fewer of the MI/SBCM group had a prior placement in detention (20.4%) than did the PI group (21.8%).

RESULTS

JUSTICE SYSTEM OUTCOMES

The following analysis examined data gathered on PI and MI/SBCM youth from CSSD data systems. The purpose of the evaluation was to determine whether the MI/SBCM Initiative successfully decreased the recidivism rates for youth in comparison to their pre-implementation counterparts with regard to recidivism within a year post-release. It also was intended to examine whether the new probation model to date is more successful depending upon the demographic or delinquency characteristics of the youth involved.

LENGTH OF ASSIGNMENT

Length of assignment was defined as the number of days between disposition to probation and the completion of services. The date for services completion was established by the close date which captured when the youth actually completed services (as opposed to the probation end date which could change over the course of a probation term). As noted earlier, the close date is more stable than the probation end date. It is the date the probation officer physically closes (clicks the button) the probation case in CMIS. Subsequent placements which overlapped or began within 30 days of the previous term were considered a continuous placement. The total average length of assignment was 192.2. The average length of assignment for pre-implementation youth was 161.0 days, which was significantly shorter than the average of 205.6 days for MI/SBCM youth. Because of the unequal sample sizes, differences between the PI and MI/SBCM groups were tested using the non-parametric Mann-Whitney U Test, which yielded a statistically significant difference $U = 366,919$, $Z = -10.680$, $p < .000$. Differences in length of assignment were also evident among the twelve court locations.

TABLE 3. AVERAGE LENGTH OF ASSIGNMENT BY COURT LOCATION AND GROUP

Court Location	Pre-Implementation		MI/SBCM		Total	
	Average	N	Average	N	Difference	N
Torrington	160.0	24	162.3	47	2.4	71
New Britain	176.3	56	187.6	137	11.4	193
Stamford	197.5	13	217.1	48	19.6	61
Norwalk	198.4	12	223.4	50	25.0	62
Hartford	152.1	165	185.4	270	33.3	435
Waterbury	171.7	52	212.4	145	40.7	197
Rockville	155.8	54	198.2	48	42.4	102
Waterford	157.7	26	202.2	91	44.5	117
Bridgeport	177.6	47	224.1	147	46.5	194
Willimantic	153.7	21	201.0	61	47.3	82
Danbury	119.9	27	179.1	63	59.3	90
New Haven	162.9	145	223.1	360	60.2	505
Middletown	150.6	24	219.9	76	69.3	100
Total	**161.0**	**666**	**205.6**	**1543**	**44.6**	**2209**

RECIDIVISM

Recidivism was defined as adjudication for an offense which occurred within one year of release from probation. The recidivism rate for the entire sample taken together was 34.3%. Again, because of the unequal sample size, differences between the PI and MI/SBCM groups were tested using the Mann-Whitney U Test. The non-parametric procedure yielded a significant difference $U = 485,690$, $Z = -2.487$, $p = .013$, with the MI/SBCM group recidivating at a lower rate (32.6%) compared to the PI group (38.1%). This was true for recidivism when measured as re-arrest $U = 485,667$, $Z = -2.365$, $p = .018$, with 50.2% of the MI/SBCM group re-arrested compared with 55.7% of the PI group. No significant differences were found between the groups for either adult arrests or convictions within 12 months after release.

Because there were some differences between the groups with regard to age and prior offenses, it was decided to further examine the differences using Logistic Regression. Logistic Regression allows for a robust analysis of factors related to recidivism for those released from probation services by controlling for factors known to impact juvenile recidivism when differences are observed, including age, risk and needs, and prior record. To ensure an unbiased estimate of the effectiveness of the MI/SBCM model, forward stepwise logistic regression techniques were employed. The logistic regression results (Table 4, below) demonstrate that probation treatment featuring Motivational Interviewing and Strength-Based Case Management resulted in a significant reduction in recidivism controlling for age at first offense, age at release, the number of prior adjudicated misdemeanors and the JAG Total Risk Score. (Age at release was not a significant predictor and fell out of the model.)

TABLE 4. JUVENILE OR ADULT CONVICTION WITHIN 12 MONTHS OF RELEASE

Juvenile or Adult Conviction for an Offense Occurring within 12 Months of Release.

	Coefficient	S.E.	Sig.	Exp(B)
Group (0=PI, 1=MI/SBCM)	-.197	.098	.045	.821
Age at First Offense	-.137	.026	.000	.872
Prior Adjudicated Misdemeanors	.044	.022	.046	1.045
JAG Total Risk Score	.024	.007	.001	1.025

The analysis of alternate measures of recidivism, including combined juvenile and adult arrests, adult arrests and adult convictions failed to demonstrate better outcomes for MI/SBCM youth when forward stepwise logistic regression techniques were employed (Table 5). When age, offense history and risk were taken into account, group membership dropped out of the significant predictors, as illustrated in the table.

TABLE 5. ALTERNATE MEASURES OF RECIDIVISM

	Coefficient	S.E.	Sig.	Exp(B)
Juvenile and Adult Arrests Combined				
Age at First Offense	-.170	.026	.000	.844
JAG Total Risk Score	.040	.007	.000	1.041
Adult Arrests				
Age at First Offense	-.120	.033	.000	.887
Age at Release from Probation	1.481	.092	.000	4.396
Prior Adjudicated Misdemeanors	.059	.025	.018	1.061
JAG Total Risk Score	.023	.008	.005	1.023
Adult Convictions				
Age at First Offense	-.087	.037	.017	.916
Age at Release from Probation	1.174	.100	.000	3.236
Prior Adjudicated Misdemeanors	.097	.027	.000	1.101
JAG Total Risk Score	.026	.009	.006	1.026

Although there was a significant relation between the MI/SBCM model and reduced arrests taken alone, when logistic regression was used controlling for age, prior offense history and overall risk, the analysis yielded no significant relation between the new Probation model and subsequent arrests or adult convictions.

Given the differences observed in length of assignment, post-hoc analyses were also performed on recidivism by length of assignment and by location. These analyses yielded weak or insignificant relations between these factors and recidivism when controlling for the age of the offender and their prior adjudication history.

RECIDIVISM BY GENDER, AGE, RACE/ETHNICITY AND RISK AND PROTECTIVE FACTORS

The second evaluation question was whether the effectiveness of MI and SBCM services varies with the demographic and delinquency characteristics of juvenile offenders. Recidivism generally decreases with age, and females tend to re-offend less frequently than males. Table 6 (below) displays rates of recidivism by gender and age.

TABLE 6. RECIDIVISM BY GENDER AND AGE

Gender	Pre-Implementation		MI/SBCM		Total	
	Recid Pct	N	Recid Pct	N	Recid Pct	N
Females	28.9%	187	25.7%	432	26.7%	619
Males	41.8%	479	35.4%	1111	37.3%	1590

Age at First Offense	Pre-Implementation		MI/SBCM		Total	
	Recid Pct	N	Recid Pct	N	Recid Pct	N
6 to 10 Years	55.9%	93	41.5%	171	46.6%	264
11 to 12 Years	41.1%	192	36.9%	428	38.2%	620
13 to 14 Years	37.7%	302	31.2%	749	33.1%	1051
15 Years and Older	11.4%	79	21.0%	195	18.2%	274

Gender by Age	Pre-Implementation		MI/SBCM		Total	
	Recid Pct	N	Recid Pct	N	Recid Pct	N
Females						
6 to 10 Years	40.0%	10	40.0%	35	40.0%	45
11 to 12 Years	32.8%	58	33.6%	122	33.3%	180
13 to 14 Years	30.6%	98	23.0%	222	25.3%	320
15 Years and Older	4.8%	21	9.4%	53	8.1%	74
Males						
6 to 10 Years	57.8%	83	41.9%	136	47.9%	219
11 to 12 Years	44.8%	134	38.2%	306	40.2%	440
13 to 14 Years	41.2%	204	34.7%	527	36.5%	731
15 Years and Older	13.8%	58	25.4%	142	22.0%	200
Total	38.1%	666	32.7%	1543	34.3%	2209

Recidivism rates by gender displayed the expected patterns. Males recidivated at a higher percentage than females, and the MI/SBCM model seemed to have a greater impact on males as the group at higher risk. Youth who began their offending at an earlier age had higher rates of recidivism, consistent with other research. In the case of those youth whose offending began later, the expected effect of the MI/SBCM model seems to be reversed.

The distribution of recidivism by age and gender suggests that the MI/SBCM model is working more effectively with males, particularly those who are at a higher risk for recidivating due to early onset of delinquent behavior. The exception to this general rule is the anomalous results of the model when applied to either females or males who have a late onset of offending behavior. It may be that these youth represent low-risk offenders who should be given less intensive services. A post-hoc analysis yielded no statistically significant differences between the two late onset groups in risk to recidivate.
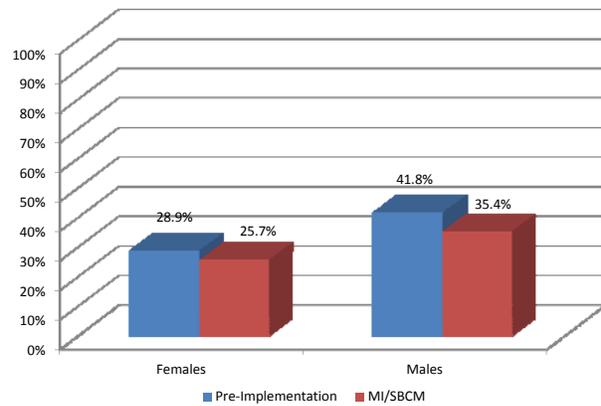
Figure 1. Recidivism by Group and Gender

Figure 2. Recidivism by Group and Age at First Offense
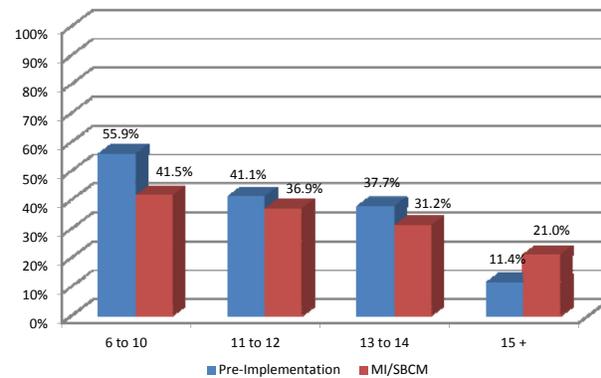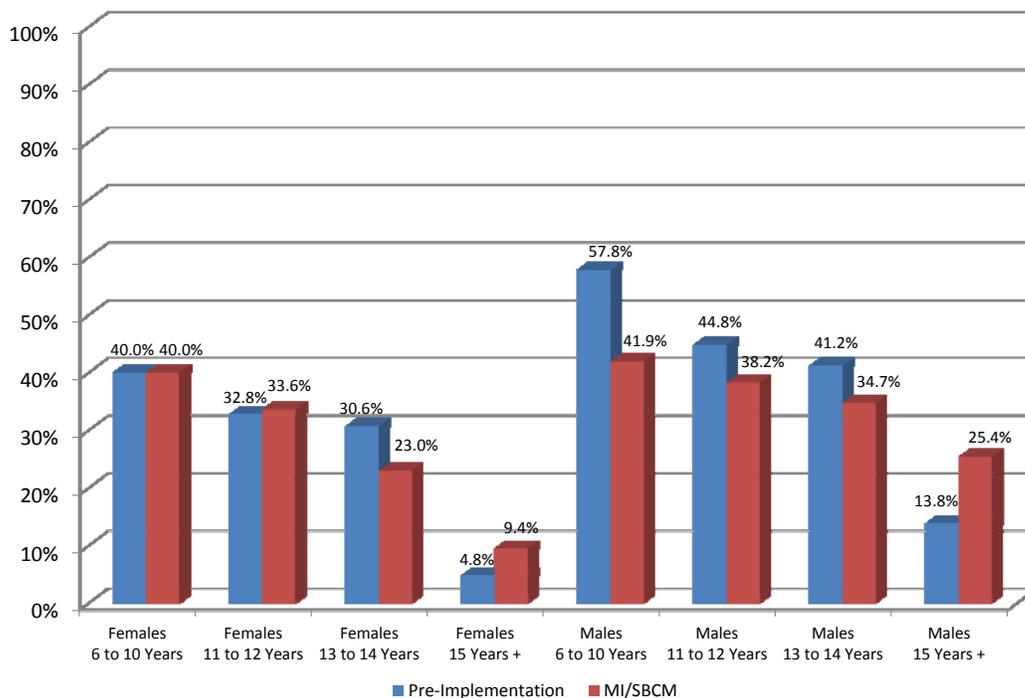

Figure 3. Recidivism by Group, Gender and Age

Recidivism varied by race/ethnicity. Blacks recidivated more frequently than either Hispanics or Whites in either group. However, the positive effects of the MI/SBCM model were observed in all three racial/ethnic groups.

Recidivism also varies with offender characteristics such as offense history and the risk and protective factors at work in the lives of delinquent youth. Table 7 displays recidivism rates by the number of adjudicated misdemeanor charges, total JAG risk score and the total JAG protective scores, factors found significantly related to recidivism in the analysis.
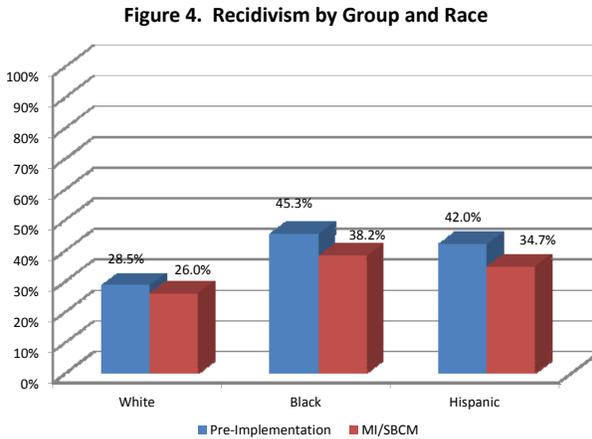

Figure 4. Recidivism by Group and Race

TABLE 7. RECIDIVISM RATES BY OFFENDER CHARACTERISTICS

	Pre-Implementation		MI/SBCM		Total	
Adjudicated Priors	Recid Pct	N	Recid Pct	N	Recid Pct	N
0	34.5%	226	30.8%	578	31.8%	804
1	34.8%	132	30.5%	318	31.8%	450
2	36.9%	122	32.0%	275	33.5%	397
3 or More	45.7%	186	37.9%	372	40.5%	558

	Pre-Implementation		MI/SBCM		Total	
Risk Level Score	Recid Pct	N	Recid Pct	N	Recid Pct	N
0 to 12	34.3%	230	28.8%	570	30.4%	800
13 to 18	39.2%	240	32.6%	531	34.6%	771
18 and Higher	41.3%	196	37.8%	442	38.9%	638

	Pre-Implementation		MI/SBCM		Total	
Protective Score	Recid Pct	N	Recid Pct	N	Recid Pct	N
0 to 31	40.8%	233	36.2%	511	37.6%	744
32 to 36	39.3%	224	33.0%	531	34.8%	755
37 and Higher	34.0%	209	28.7%	501	30.3%	710
Total	38.1%	666	32.7%	1543	34.3%	2209

**Figure 5. Recidivism by Group and
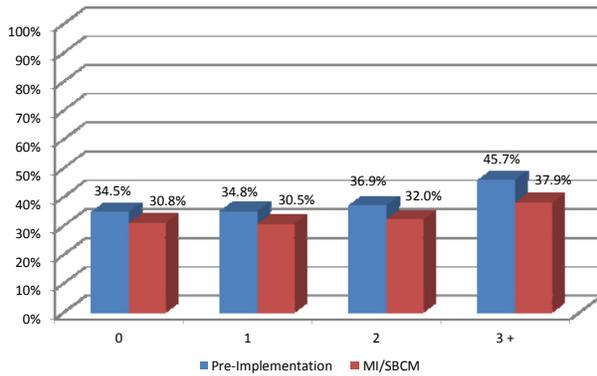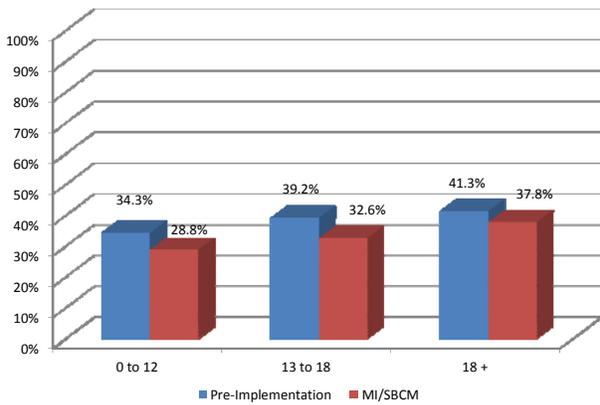Prior Misdemeanor Adjudications**

Figure 6. Recidivism by Group and JAG Risk Score

The results yield expected patterns. Youth with more extensive prior histories exhibit higher rates of re-offending behavior, as illustrated by the rates of recidivism by prior misdemeanor adjudications. The JAG risk score also displays the expected trend in recidivism: as risk increases, recidivism increases. The MI/SBCM model affects the pattern by reducing the rates as expected.

Recidivism was also examined in relation to the Supervision Risk Classification Score, which is a structured decision-making tool based on age at survey and the JAG Risk Score. This tool also displayed expected trends as recidivism increased with the level of supervision. The trend also suggests that the MI/SBCM model is particularly effective with youth under very high levels of supervision.

**Recidivism by Group and
Supervision Risk Classification**
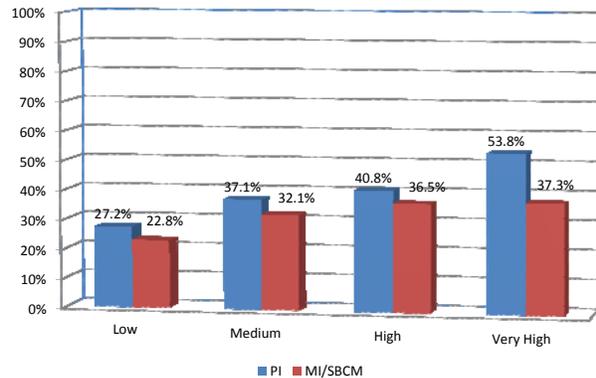
As expected, recidivism also decreases as the level of protective factors present in the home and community increase. The MI/SBCM model displays the expected effect on recidivism at different levels of protective factors, of high importance to the Strength-Based model.

**Figure 7. Recidivism by Group and
JAG Protective Score**
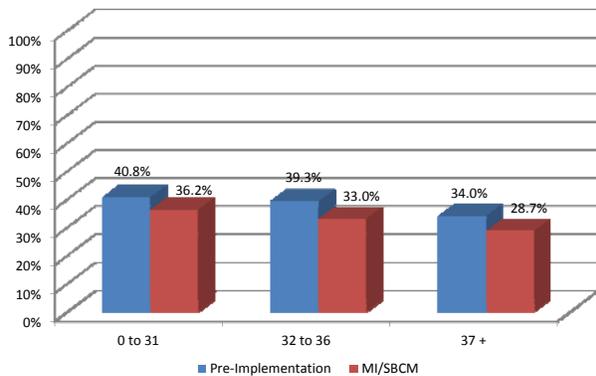
Although logistic regression revealed only weak or insignificant relations between court location and recidivism, differences were evident between court locations. Table 8 displays the recidivism rates for PI and MI/SBCM groups by court.

TABLE 8. RECIDIVISM BY COURT LOCATION

Court Location	Pre-Implementation		MI/SBCM		Total	
	Recidivism	N	Recidivism	N	Recidivism	N
Bridgeport	42.6%	47	28.6%	147	32.0%	194
Danbury	22.2%	27	23.8%	63	23.3%	90
Hartford	43.6%	165	31.1%	270	35.9%	435
Middletown	29.2%	24	36.8%	76	35.0%	100
New Britain	44.6%	56	40.1%	137	41.5%	193
New Haven	40.7%	145	38.9%	360	39.4%	505
Norwalk	16.7%	12	30.0%	50	27.4%	62
Rockville	31.5%	54	31.3%	48	31.4%	102
Stamford	30.8%	13	39.6%	48	37.7%	61
Torrington	25.0%	24	14.9%	47	18.3%	71
Waterbury	34.6%	52	27.6%	145	29.4%	197
Waterford	34.6%	26	26.4%	91	28.2%	117
Willimantic	42.9%	21	32.8%	61	35.4%	82
Total	38.1%	666	32.7%	1543	34.3%	2209

Figure 8. Recidivism by Group and Court Location