

Evaluation of Maine's Statewide Juvenile Drug Treatment Court Program

Fourth Year Outcome Evaluation Report

September 18, 2003

Prepared for:

Kimberly Johnson, Director
Maine State Office of Substance Abuse
Division of Behavioral and Developmental Services
A.M.H.I. Complex, Marquardt Building
159 State House Station
Augusta, ME 04333-0159

Prepared by:

Donald F. Anspach, Ph.D.
Andrew S. Ferguson
Laura L. Phillips
College of Arts and Sciences

Acknowledgements

The Research Team at the University of Southern Maine and would like to give a special thanks to everyone for whom otherwise, this work would not have been possible. Special thanks, undoubtedly, are deserved to every member of the six drug court teams involved in this study. In particular we would like to thank:

Portland

Hon. Keith Powers
Mike Lymneos
David Ward
Nicole Peeney
Brian MacDougall
Tina Vermiglio
Mike Mack
Andy Moore
Ned Chester
Neale Duffett
Steve Dessatti
Deb Fegans
Chris Bather
Shelley Baldwin

Lewiston

Hon. Paul Cote
Hon. John McElwee
Paula Rioux
Ken McCullough
Dawn Mills
Lynn Campbell
Tonya Hart
Susan Gagnon
Sue Smith
Julio Martinez
Jessica McNaboe
Melanie Petrarca
Steven Brochu
Heather Seasonwine
Alicia Giftos
Thom Peters
Kelly McMorran

Bangor

Hon. Ann Murray
Jim Au'Coin
Laurie Aldrich
Carolyn Adams
Joseph Hunt
Norman Kominsky
Gerri Plourde
Dwayne Hogan

Bangor

Sheila Pelletier Thibodeau
Gerard Pepin
Karen Dittman
Donna Miles
Tom Pailes
Bob Boober
Alison Smith
Debbie Reynolds

Biddeford

Hon. Christine Foster
Tanya Pierson-Sweeney
Thad West
Patti Britt
June Coravos
John Dana
Linda Tiffany
Don Burke
Jay Pennell
Roy Curtis
Greg Masalsky
John Nevers
Leah Poisson
Chris Northrop
Vicki Mathews
Skip Shain

West Bath

Hon. Joseph Field
Kendra Potz
Gail Peabody
William Avantaggio
Richard Becker
Michele Hylen
Pierre Shevenell
David McCloud
Margie Knight
Willo Wright
Kevin Chute
Chris Libby
Eric Powell
Martha Takatsu
Josh Ash

Augusta

Hon. Vandeem Vafiades
Carol Mitchell
Peter Wohl
Lisa Torrey
Phil Ramu
Cassie Slisher
Bobbi Ogborn
Peter Griffin
Cheryl McKenney
Patricia Kelley
Steve Chandler
Michele Cooper

USM

Michelle Baker
Edith Hale
Jody Giambattista

Day One

Jane Clark
Ron Anton
Elaine Curtis

Juvenile Services

Dan Harfoush Region I
Cynthia Brann, Region II
Mark Boger, Region III
Dyane Beckmin, Region III
David Barrett, Region IV
Bartlett Stoodley
Roxy Hennings
Joseph Fitzpatrick
Rosemary Kooy

Office of Substance Abuse

Kim Johnson
Linda Frazier
Jamie Clough

Department of Public Safety

Mike Cantera
Lt. Jackie Theriault
Lt. Col. Jeffrey Harmon

EXECUTIVE SUMMARY

By

Donald F. Anspach, Andrew S. Ferguson, and Laura L. Phillips

Maine is one of the pioneer states to have implemented a statewide drug court program for both adult and juvenile offenders. These programs have also received national attention from a variety of institutes, publications and funding sources. For example, Maine's two statewide drug court systems were among three programs selected to be reviewed and highlighted in the most recent issue of the official journal of the field – The National Drug Court Institute Review. More recently, the Bureau of Justice Assistance awarded Maine \$300,000 to further develop the MIS systems of the two drug court programs.

In 1999, Maine's legislature authorized the use of funds to implement a statewide juvenile drug treatment court program. The program became operational when the first adolescent was admitted to the Bangor Juvenile Drug Court on January 26, 2000. Six District Court Judges are assigned to six juvenile drug courts in York, Cumberland, Androscoggin, Kennebec, Penobscot and Sagadahoc counties serving over two-thirds of Maine's population. As of September 1, 2003, a total of 246 adolescents have been admitted into these drug court programs, 62 have successfully completed the program and graduated, 116 were expelled and 68 are still currently active.

Graduation rates for Maine's juvenile drug court compare favorably with graduation rates of juvenile drug court programs nationally. Overall graduation rates for Maine's juvenile drug court (35%) exceed national estimates (29%).

Table 1: Productivity of Maine's Juvenile Drug Courts

		<i>Juvenile Drug Treatment Court Sites</i>						
		<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
2000 Admissions		10	11	14	-	15	16	66
2001 New Admissions		9	14	12	-	15	14	64
2002 New Admissions		12	10	10	7	16	13	68
2003 Admissions as of September		11	7	9	8	8	9	52
Total Enrollments		42	40	45	15	53	51	246
Discharged- Expelled		24	19	23	6	23	21	116
Discharged- Graduated		8	12	10	1	16	15	62
Currently Active		10	9	12	8	14	15	68
	Phase 1	4	4	3	7	3	7	28
	Phase 2	5	3	5	1	5	5	24
	Phase 3	1	1	2	0	0	2	6
	Phase 4	0	1	2	0	6	1	10
Overall Graduation Rate		25%	39%	30%	14%	30%	44%	35%
National Estimate								29%

The report provides a rigorous assessment of Maine's juvenile drug treatment court program and represents one of the first outcome assessments of juvenile drug court programs nationally that utilizes a quasi-experimental research design. The outcome portion of the evaluation compares arrests for 105 juvenile drug court participants who either completed the program through graduation or were expelled with a control group of 105 similarly situated adolescent offenders traditionally adjudicated.

Overall findings indicate a positive program effect with fewer juvenile drug court participants being arrested than the control group and program graduates being the least likely to re-offend overall. Findings indicate that drug court participants are nearly two times less likely to recidivate than a control group of matched offenders and juvenile drug court participants are also less likely than the control group to be rearrested for alcohol or drug related offenses or for the commission of violent crimes.

Several limitations of the study deserve recognition because they may effect the interpretation of outcomes. First, the data presented in this study about drug court operations do not necessarily reflect current drug court practices. The analyses about the program (e.g.: testing, treatment, sanctions, etc.) is based upon a total of 105 participants who either graduated or were expelled from the drug court program at least 15 months prior to the publication of this report. This was necessitated by the research design measuring rearrest rates over a twelve month post program follow-up. Hence, the findings are skewed towards offenders participating in the initial period of program operations. In an ideal research design information about the initial year of program operations would be excluded to account for issues that often arise during program implementation. At this point in time, there are an insufficient number of cases to conduct a site by site assessment of outcomes. Therefore, it is not possible to determine whether some drug court sites have better outcomes than others.

Key Findings

- ❑ Findings in this study indicate a positive program effect with fewer juvenile drug court participants being arrested than the control group and program graduates being the least likely to re-offend overall. Juvenile drug court participants are also less likely than the control group to be rearrested for alcohol or drug related offenses or for the commission of violent crimes.
- ❑ The juvenile drug treatment court program has produced a reduction in criminal justice related expenditures (costs of detention/jail, probation and averted crimes) and will become cost effective with expanded capacity.
- ❑ Juvenile drug court participants are significantly more likely than non-drug court participants to participate in substance abuse treatment.
- ❑ An analysis of offender characteristics reveals that the majority of participants are moderate to high risk, white males with fairly severe substance abuse histories.
- ❑ Offenders requiring a relatively low level of treatment intervention (scoring at ASAM level 1 or below) are three times less likely to recidivate than offenders requiring more intensive treatment interventions.

Table 2: Participant and Program Characteristics and Recidivism Outcomes

Demographics	<i>N=105</i>		<i>N=105</i>
% Male	85	ASAM % Level 3 +	31
% White	93	% Level II (a & b)	32
% Employed	43	% Level II c	8
% In School	67	% Level II	21
% Living w/ Relatives	88	% Level I and Below	8
% Prior Arrest	88	Summary Score 21+	
% Prior Treatment	69	% Yes	97
% Dual Diagnosis	31	% No	3
% Prior Felony Arrest	25	Drug Score of Five	
Mean Age	16.6	% Yes	67
Mean Age at First Arrest	15.0	% No	33
Mean Age at First Use	11.9	Alcohol Score	
		% Three and Lower	28
Drug of Choice % Alcohol	21	% Four	39
% Marijuana	65	% Five	33
% Heroin	9	Test Taking Attitude Score	
% Other	6	% 18 and greater	24
Yo-LSI Risk % Low	24	% 12-17	27
(n=64) % Moderate	25	% 8-11	26
% High	51	% 0-7	24
		Life Circumstances Evaluation	
		% Less than 5.6	29
		% Greater than 5.6	71
Program Information	<i>N=105</i>		<i>N=105</i>
Tx Sessions per Week (avg.)	2.6	% Utilize Ancillary Services	80
Types of Tx Sessions (avg %)		% Utilize Multiple Ancillary Services	74
Individual	46	Types of Ancillary Services	
Group	36	% Academic	11
Family	9	% Crisis Intervention	13
IOP	5	% Drug Education	67
Residential	2	% HIV Risk	15
Average % Positive Drug Tests	24	% Legal	10
Average Weekly Drug Tests	0.7	% Medical	11
Percent Rewarded	80	% Mental Health	15
Percent Sanctioned	91	% Transportation	55
		% Other	36
Recidivism Outcomes	Drug Court N=105; Comparison N=105; Graduate N=30		
Overall Arrest		Re-Arrest (Felony)	
Drug Court	54%	Drug Court	11%
Comparison	66%	Comparison	12%
Drug Court Graduate	40%	Drug Court Graduate	3%
Post Program Arrests		Re-Arrest (Drug/Alcohol Offense)	
Drug Court	43%	Drug Court	4%
Comparison	49%	Comparison	13%
Drug Court Graduate	30%	Drug Court Graduate	0%
In-Program Arrest		Re-Arrest (Crimes Against a Person)	
Drug Court	35%	Drug Court	13%
Comparison	34%	Comparison	15%
Drug Court Graduate	23%	Drug Court Graduate	17%

- ❑ Overall, 92% of the juveniles enrolled in the drug court program have ASAM scores of Level 2 or higher indicating the need for, at a minimum, intensive outpatient substance abuse services. Yet, only 21% of drug court participants actually received these types of treatment services.
- ❑ The rate of in-program positive drug tests among juvenile drug court participants in Maine (24%) is lower than rates of positive drug tests for other adolescents in Maine's juvenile justice system (35%).
- ❑ Participants who are more frequently tested have lower rates of positive drug tests.
- ❑ There are cross-site variations in the types of sanctions and incentives imposed as well as variations in the responses of different drug courts to similar infractions.

Maine's Juvenile Drug Treatment Court Program has made significant strides in implementing a model juvenile drug court system statewide. Transforming the drug court "concept" into actual practice, however, poses a number of operational and logistical challenges at both the state and local level. The Statewide Steering Committee and all key actors participating in these drug court programs should feel a sense of accomplishment for the hard work and personal investment each has made in building this model program.

Conclusions and Recommendations

Policy makers should be convinced that the juvenile drug court can be an effective intervention to reduce recidivism for substance abusing adolescent offenders. However, results of the study should also remind policy makers that juvenile drug courts are effective for only some juvenile offenders. In Maine, less than 30% successfully completed the program and graduated. A total of 30% of the drug court graduates and 48% of those who were expelled were arrested in the 12-month post program follow-up. The corresponding figure for the control group is 49%.

These relative low rates of successful program completion and relatively high rates of re-offending indicate that policy makers should not only have realistic expectations about the overall impact of juvenile drug courts but should also attempt to improve the existing program so as to improve overall outcomes. The following actions should be considered to further improve the effectiveness of the program:

- ❑ In order to become cost-effective, the number of participants must be increased. Those drug court sites struggling to reach capacity should consider working more closely with and encourage the primary sources of their referrals (defense counsel and JCCO's) to increase enrollments in their jurisdictions. Local teams might consider conducting focus groups to address this issue.

- ❑ The drug court model is based on identifying a target population of medium to high risk and need adolescent offenders. However, our analysis indicates that these policies are often ignored in the screening and admissions process. More emphasis needs to be placed on refining the drug court's target population and providing services that are commensurate with moderate to high risk adolescents.
- ❑ The drug court should consider streamlining admissions related duties. In particular, we found case management and treatment organizations duplicating efforts in conducting clinical assessments. The removal of this redundancy would also assist in increasing enrollments.
- ❑ Extend the scheduled length of the first phase of the program so as to establish more realistic benchmarks and reasonable expectations for participants and their families to assess their progress in the initial phases of the program.
- ❑ Since only 21% of drug court participants received the types of treatment services that were commensurate with their level of treatment need, more emphasis should be placed on ensuring that appropriate treatment interventions are being delivered.
- ❑ Given different responses to similar infractions, consideration should be given to the development of a structured sanction protocol (i.e.: graduated sanctions menu) that is recommended for drug courts nationally.
- ❑ Increase the level of drug testing to meet the standards that key actors in the program believe are necessary. Data indicates that frequent drug testing is a deterrent. Sites that drug test most frequently also have the *fewest* positive tests.
- ❑ Consider building stronger relationships with schools and the business community to support the long-term goals of assisting participants to develop positive relationships in the community and obtaining the necessary skills to become productive citizens.
- ❑ Ensure that local drug court practitioners continue to receive nationally recognized training based on best practices.

Table of Contents

Section 1 - Introduction	1
Section 2 - Processing Offenders: Identifying, Screening and Enrollment Procedures	4
Productivity of Maine's Juvenile Drug Court.....	4
Screening and Assessment.....	5
Section 3 - Drug Testing Protocol and Practices	10
Participant Compliance with the Drug Testing Protocol	11
Factors Predictive of Positive Drug Use.....	11
Section 4 - Role of Sanctions and Incentives.....	13
Section 5 - Substance Abuse Treatment and Ancillary Services.....	17
Treatment Phases	18
Delivery of Treatment Services	20
Ancillary Services.....	20
Section 6 - Graduation and Termination Outcomes	22
Participant Characteristics and Program Completion Outcomes.....	22
Demographics	23
Program Participation and Discharge Outcomes	24
Factors Predictive of Program Graduation	25
Section 7 - Recidivism Outcomes.....	26
Methods.....	27
Findings.....	27
Survival Analysis.....	31
Section 8 - Estimating Program Costs and Crime Reduction Benefits.....	33
Methodology	33
Section 9 - Conclusions and Recommendations.....	36

Table of Figures

Table 1: Comparison of the Productivity of Maine’s Juvenile Drug Courts	4
Table 2: Yo-LSI Distributions by Court	5
Table 3: JASAE Summary Scores by Court	6
Table 4: Time Between Initial Referral and Admission (days)	8
Table 5: Cross-site Comparison of Drug Testing Practices	10
Table 6: Cross-site Comparisons of Drug Testing Results	11
Table 7: Factors Predictive of Percent Positive Drug Tests	12
Table 8: Cross-Site Comparison of the Frequency of Rewards and Sanctions	14
Table 9: Cross-site Comparisons of the Types of Rewards and Sanctions	14
Table 10: Cross-site Comparisons of Participants Sanctioned for Drug Use	15
Table 11 : Temporal Order of Sanctions for Positive Drug Tests	16
Table 12: Cross-site Comparisons of Phase Lengths for Program Graduates	19
Table 13: Average percent of treatment modality used by court	20
Table 14: Overall Distribution of the Types of Ancillary Services	21
Table 15: Participant Characteristics by Discharge Status	23
Table 16: Program Information by Discharge Status	24
Table 17: Odds Ratios for the Step-wise Logistic Regression on Graduation Outcomes	25
Table 18: Recidivism Outcomes Control and Experimental	28
Table 19: Experimental vs. Control – Multiple Indicators of Recidivism	29
Table 20: Recidivism Outcomes Controlling for Participation in Substance Abuse Treatment ..	30
Table 21: Results from the Stepwise Logistic Regression on the Odds of Recidivism	30
Table 22: Results from the Stepwise Logistic Regression on the Odds of Recidivism	31
Table 23: Cost Associated with a Criminal Act	34
Table 24: Annualized Operational Costs and Crime Reduction Benefits	35
Figure 1: Flow Chart of Maine Juvenile Drug Court Program from Referral to Discharge	8
Figure 2: Temporal Order of Sanctions for Positive Drug Tests	16
Figure 3: Tx Attendance by ASAM level	19
Figure 4: Tx Attendance by Yo-LSI Risk	19
Figure 5: Survivor Function Estimate of Months to First Arrest	32

Section 1

Introduction

Nationally, drug courts were developed as a means to respond to the complex problems posed by substance abusing offenders involved in the revolving door of the criminal justice system. The drug court model is believed to be one of the more promising approaches to integrate substance abuse treatment into the normal, daily operations of the court and supervision systems. After more than a decade of growth, the underlying tenets of the drug court model are seen in a variety of specialized criminal court proceedings.

One of the earliest and perhaps most popular adaptations of the original adult drug court model are programs that target adolescent offenders – juvenile drug courts. Although similar in many respects, the juvenile drug court is designed to respond to the unique problems posed by substance abuse among adolescent offenders. Lack of maturity, sense of invulnerability as well as negative influences of peers, gangs, and the common abuse of substances among family members are some of the many challenges faced in attempting to motivate juvenile offenders to change.

The first juvenile drug court program originated in Key West, Florida in 1993 (Belenko, 2001) and since then, juvenile drug courts have expanded considerably over the past decade. Today, there are more than 250 juvenile drug courts in operation or in various stages of planning across forty-six states and the District of Columbia. Nationally, more than 14,000 adolescents have enrolled in drug court programs and over 4,000 have successfully completed these programs and graduated (Cooper, 2003). The underlying strength and continued expansion of drug court programs undoubtedly rests upon the cooperation and collaboration that exists between the judiciary and an array of public and private sector agencies that provide treatment, aftercare and ancillary services to participants.

The State of Maine is one of the pioneer states to have fully developed a state-wide system of drug courts for both adult and juvenile offenders. Currently, Maine has six juvenile drug courts operating in seven counties that serve a combined population of 883,410 people – or approximately 70% of the state's population. The first juvenile drug court program became operational in January, 2000 when the first adolescent was admitted to the Bangor juvenile drug court in Penobscot County (pop. 144, 919) with the Honorable Ann Murray presiding. The Honorable Christine Foster presides over the York County (pop. 186,742) juvenile drug court and the Honorable Keith Powers presides over the Cumberland County (pop. 265,612) juvenile drug court and chairs the State-wide Juvenile Drug Court Steering Committee. The Honorable Joseph Field presides over the juvenile drug court serving both Sagadahoc (pop. 35,214) and Lincoln Counties (pop. 30,016) as well as portions of Cumberland County. The Honorable Vendeen Vafiadas presides over the Kennebec County (pop. 117,114) juvenile drug court and the Honorable Paul Cote presides over the juvenile drug court in Androscoggin County (pop. 103,793). As of September, 2003, a total of 246 adolescents have been admitted into these drug courts, 62 have successfully completed the program and graduated, 116 were expelled and 68 are still currently active.

Maine's juvenile drug court is a court supervised, *post-plea* (but pre-final disposition) drug diversion program providing comprehensive community based treatment services to juvenile offenders and their families. The drug court requires weekly court appearances before the designated program judge, participation in substance abuse treatment, and compliance with program requirements. The program has four phases and is designed to take approximately 12 months to successfully complete.

The program receives primary funding from the Juvenile Accountability Incentive Block Grant (JAIBG) with matching funds provided by Maine's Office of Substance Abuse. The program also receives funding from the Office of Justice Programs, Drug Court Programs Office to provide ongoing training for drug court team members.

In order to assess the structure and operations of juvenile drug court programs in Maine and plan for their future development, Maine's Office of Substance Abuse in consultation with Maine's Judicial Department, contracted researchers from the College of Arts and Sciences at the University of Southern Maine to evaluate the program. Donald F. Anspach and Andrew S. Ferguson served as co-principal investigators for the project working in collaboration with research staff Laura Phillips, Michelle Baker, Jody Giambatistta and Edith Hale. The Honorable Keith Powers from Maine's Judicial Department, Linda Frazier of Maine's Office of Substance Abuse, and Ron Anton and Jane Clark from Day One, Inc. have served as the primary juvenile drug court officials involved in the evaluation. In addition, Maine's Department of Corrections, Division of Juvenile Services and Maine's Department of Public Safety deserve special acknowledgements for providing research staff access to criminal history information.

This report is part of an ongoing, cross-site review of Maine's juvenile drug court program. Because it includes one of the first outcome assessments utilizing a quasi-experimental research design, this study is unique among juvenile drug court program evaluations that have been conducted to date. The outcome portion of the evaluation uses a quasi-experimental matched pair design. It compares arrests for 105 juvenile drug court participants for a twelve month post-program follow-up with a control group of 105 similarly situated adolescent offenders traditionally adjudicated. The control group was constructed from data obtained from Maine's Department of Corrections and the Juvenile Treatment Network (Day One). Offenders were matched across a variety demographic characteristics, substance use history/screening results and criminal risk factors including: age, race, gender, county of residence, ASAM score, drug and alcohol score, Yo-LSI criminal risk, living situation and school status. The study also incorporates results from a survey of key actors participating in the juvenile drug court program. And, a cost-benefit analysis examining incarceration savings is provided. The fieldwork for the study was conducted over an eighteen month period beginning January 1, 2002 and ending June 30, 2003.

Overall findings indicate a positive program effect with fewer juvenile drug court participants being arrested than the control group and program graduates being the least likely to re-offend overall. Juvenile drug court participants are also less likely than the control group to be rearrested for alcohol or drug related offenses or for the commission of violent crimes. Currently, the program's total annualized operational costs for processing 105 drug court participants over the cost of a matched sample of juvenile offenders adjudicated through the traditional juvenile court is \$93,218.00.

Several limitations of this study deserve recognition because they may have important impacts on the interpretation of outcomes. First, the data presented in this study about drug court operations does not necessarily reflect current practices. The analyses about the program (e.g.: testing, treatment, sanctions, etc.) is based upon a total of 105 participants who either graduated or were expelled from the drug court program at least 15 months prior to the publication of this report. This was necessitated by the research design measuring rearrest rates over a twelve month post program follow-up. Hence, the analyses are skewed towards offenders participating in the initial period of program operations. In an ideal research design information about the initial year of program operations would be excluded to account for issues that often arise during program implementation. Lastly, since there are an insufficient number of cases to conduct a site by site assessment of outcomes, it is not possible to determine whether some drug court sites have better outcomes than others.

The report is organized as follows: The next section provides a brief overview and assessment of the productivity of Maine's statewide juvenile drug court program as well as an examination of the drug court's target population and enrollment procedures. The third section provides an overview of drug testing practices and outcomes. The fourth section examines the role of sanctions and incentives and is followed by an overview of treatment and ancillary services. The sixth and seventh sections examine factors predicting program graduation and recidivism outcomes. Section eight presents a cost-savings estimate for the drug court program and the last section of the report provides an overall summary and recommendations to be considered to further improve the program.

Section 2

Processing Offenders: Identifying, Screening and Enrollment Procedures

Productivity of Maine's Juvenile Drug Court

This section examines the productivity of Maine's juvenile drug court program. It consists of cross-site comparisons of the number of enrollees and discharge outcomes for each court location since inception. Productivity information is based on all 246 adolescents offenders who were enrolled in one of the six drug court programs for one or more days between January, 2000 and September, 2003. Overall productivity information is summarized in Table 1. As of September, 2003, a total of 178 participants were discharged from these programs (62 participants completed the program and graduated and 116 participants were discharged through expulsion). Currently, there are 68 active drug court participants.

Graduation rates for Maine's juvenile drug court compare favorably with graduation rates of juvenile drug courts nationally. Overall graduation rates for Maine's juvenile drug court (35%) exceed national estimates (29%). However, graduation rates are variable and range from a low of 14% in the Lewiston¹ drug court to a high of 44% in the West Bath drug court.

At each of the six drug court locations, the number of active participants allowed at any one time is limited to fifteen – or ninety participants statewide. If all six courts operated at capacity, the total number of enrollees, to date, would be 53 participants per court or 318 participants statewide. However, this has not occurred. As shown in Table 1, all but one of the six sites, Portland, have operated at lower than capacity levels.

Table 1: Comparison of the Productivity of Maine's Juvenile Drug Courts

		Juvenile Drug Treatment Court Sites						
		Augusta	Bangor	Biddeford	Lewiston	Portland	West Bath	Total
2000 Admissions		10	11	14	-	15	16	66
2001 New Admissions		9	14	12	-	15	14	64
2002 New Admissions		12	10	10	7	16	13	68
2003 Admissions as of September		11	7	9	8	8	9	52
Total Enrollments		42	40	45	15	53	51	246
Discharged- Expelled		24	19	23	6	23	21	116
Discharged- Graduated		8	12	10	1	16	15	62
Currently Active		10	9	12	8	14	15	68
Phase 1		4	4	3	7	3	7	28
Phase 2		5	3	5	1	5	5	24
Phase 3		1	1	2	0	0	2	6
Phase 4		0	1	2	0	6	1	10
Overall Graduation Rate		25%	39%	30%	14%	30%	44%	35%
National Estimate								29%

¹ The Lewiston juvenile drug court became operational in January, 2002 approximately two years after initial implementation.

Screening and Assessment

One of the most crucial determinants of program success is the selection of adolescents for participation in drug court. Selecting only the most incorrigible juvenile offenders would guarantee program failure while selecting only those offenders likely to succeed without the intervention would be an ineffective use of limited resources. The policy of Maine's juvenile drug court is to target adolescents who demonstrate: (1) a medium to high risk of criminal recidivism; (2) a substantial substance abuse problem; (3) an ability to participate in treatment for substance abuse; and (4) has a parent or other important adult figure who is willing to participate or, at a minimum, play an active role in the juvenile's participation in the program.

Adolescent offenders with substance abuse problems may be recommended as potential drug court participants by a variety of agencies or persons including the district attorney, juvenile community corrections officers (JCCO's), defense counsel, school officials, or any other interested persons. However, the majority of referrals come from JCCO's (65%) and defense counsel (32%).

JCCOs are the primary gatekeepers to the juvenile drug court program. They are responsible for determining initial program eligibility and conducting referrals. This initial determination is based, in part, upon results of the Youthful Offender Level of Service Inventory (Yo-LSI) which is a screening tool used to measure risk of re-offending.

However, as shown in Table 2, a Yo-LSI was not completed for approximately a third of all drug court participants (n=41). Since training on the Yo-LSI was concurrent with the start of the juvenile drug court program, some adolescents admitted in year 2000 may not have received a Yo-LSI due to the amount of time required for Yo-LSI training and implementation. We estimate that 16 of the 41 adolescents did not receive a Yo-LSI because of the time required for training and implementation. Among those who were assessed with a Yo-LSI (n=64), 24% were evaluated as low risk of re-offending by their JCCO. The percent of low risk offenders range from a low of 0% in Lewiston to a high of 36% in West Bath. Our analysis indicates that the policy of admitting only juvenile offenders with a medium to high risk of recidivism is not being adhered to by drug court teams.

Table 2: Yo-LSI Distributions by Court

	<i>Juvenile Drug Treatment Court Sites</i>						
	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Yo-LSI Risk Level							
Low	7	19	21	-	28	36	24
Medium	43	33	11	-	4	40	25
High	50	48	68	100	68	24	51
N	10	15	8	1	28	12	64
% of Cases No Yo-LSI	29	29	58	-	28	52	39
N	14	21	19	1	25	25	105

Unlike the screening protocol measuring risk of recidivism (Yo-LSI), findings suggest that the substance abuse screening protocol (JASAE) is more widely utilized. That is, the policy of admitting juveniles with a significant need for substance abuse treatment appears to be more effective. After having been screened by their JCCO, offenders who are perceived as having a substance abuse problem are referred to a treatment provider (or the drug court case manager) where a screening procedure for substance abuse is performed (Juvenile Automated Substance Abuse Evaluation-JASAE).

Referring to Table 3, we find that adolescents who are admitted to the juvenile drug court score relatively high with regards to both the extent of their substance abuse severity as well as with the recommended level of treatment intervention. Overall, 92% of the juveniles enrolled in the drug court program have an ASAM score of Level 2 or higher indicating the need for, at a minimum, intensive outpatient services. However, it is interesting to note that only 21% of drug court participants actually received these services (refer to Section 5 for more information on treatment services). Put differently, 79% of participants did not receive the minimum level of treatment they required.

Table 3: JASAE Summary Scores by Court

<i>Court (N)</i>	<i>Juvenile Drug Treatment Court Sites</i>						
	<i>Augusta (14)</i>	<i>Bangor (21)</i>	<i>Biddeford (19)</i>	<i>Lewiston (1)</i>	<i>Portland (25)</i>	<i>West Bath (25)</i>	<i>Total (105)</i>
ASAM Level							
Level 3+	14	43	21	-	48	24	31
Level 2a/2b	36	24	42	-	32	32	32
Level 2c	-	14	11	100	-	8	8
Level 2	43	19	26	-	8	20	21
Level 1 and below	7	-	-	-	12	16	8
Total	100%	100%	100%	100%	100%	100%	100%
Summary Score							
Tested 21+	100	100	100	100	96	92	97
Below 21	-	-	-	-	4	8	3
Total	100%	100%	100%	100%	100%	100%	100%
Alcohol Score							
3 and Lower	43	43	26	100	12	20	28
4	50	24	47	-	48	32	39
5	7	33	26	-	40	48	33
Total	100%	100%	100%	100%	100%	100%	100%
Drug Score of Five							
Yes	50	29	26	-	32	32	67
No	50	71	74	100	68	68	33
Total	100%	100%	100%	100%	100%	100%	100%
Life Circumstances Evaluation Code							
Less than 5.6	21	29	26	-	32	32	29
Greater than 5.6	79	71	74	100	68	68	71
Total	100%	100%	100%	100%	100%	100%	100%
Test Taking Attitude Score							
18 and greater	43	29	16	-	16	24	24
12-17	29	33	37	100	16	20	27
8-11	7	24	37	-	40	16	26
0-7	21	14	11	-	28	40	24
Total	100%	100%	100%	100%	100%	100%	100%

Nevertheless, some key actors believe results from the Yo-LSI and the JASAE are effective tools for determining program eligibility. Using a point scale (0= Not Important, 10=Very Important) key actors consider both the Yo-LSI and the JASAE screening instruments as “slightly important” when determining eligibility requirements ($x=7$). Survey responses, however, are largely role dependent. JCCO’s rank the overall importance of these instruments the highest and court personnel rank the usefulness of these tools the lowest.

If screening eligibility requirements are met, adolescents are then recommended for a clinical assessment. The clinical assessment is conducted by the drug court case manager and consists of interviews, observations, additional standardized testing tools as well as file reviews of school records, DOC case files, and medical and mental health histories. Additional testing tools include the Practical Adolescent Dual Diagnostic Interview (PADDI) and the Circumstances Motivational and Readiness Scales (CMRS). Additional factors taken into consideration include: extent of drug or alcohol abuse, mental health history, family and social relationships, medical/health care history, housing status, education, psychological functioning, nature of current and previous charges, and criminal risk level. The clinical assessment process is fairly time consuming taking approximately four to six hours to complete. Overall, 49% of drug court participants required more than one appointment to complete both the face-to-face portion of the assessment and the additional standardized testing tools.

How important is the clinical assessment in determining program eligibility requirements? Overall, key actors consider the value of this assessment to be less useful than the initial screening instruments. They rank it as “somewhat important” in determining program eligibility. Again, survey responses are largely role dependent and reflect conflicting points of view. JCCO’s and court personnel rank the importance of the clinical assessment the lowest whereas treatment professionals and case managers rank the usefulness of the clinical assessment the highest.

Once the clinical assessment is completed, the drug court team reviews the entire case file before deciding whether or not to admit the offender to the program. A juvenile may only be accepted into the drug court at a hearing and by order of the court. This requires the juvenile to enter a guilty plea to pending charges or accept a motion to revoke probation. The juvenile must be represented by legal counsel at this hearing and must have the consent of his or her parent or legal guardian to participate in the program. Juveniles not admitted to the drug court program are returned to court for traditional adjudication.

Upon admission, the juvenile is informed of the conditions and requirements of participation in the drug court, including conditions of release. The drug court case manager provides a written schedule of court sessions and the substance abuse treatment program. At this point the participant enters the initial phase of the drug court. Overall, this entire process – the time between initial referral to final admission – takes an average of 37 days to successfully complete. As shown in Table 4, this time-frame essentially holds across courts with the greatest differences between Augusta (29 days) and West Bath (45 days)².

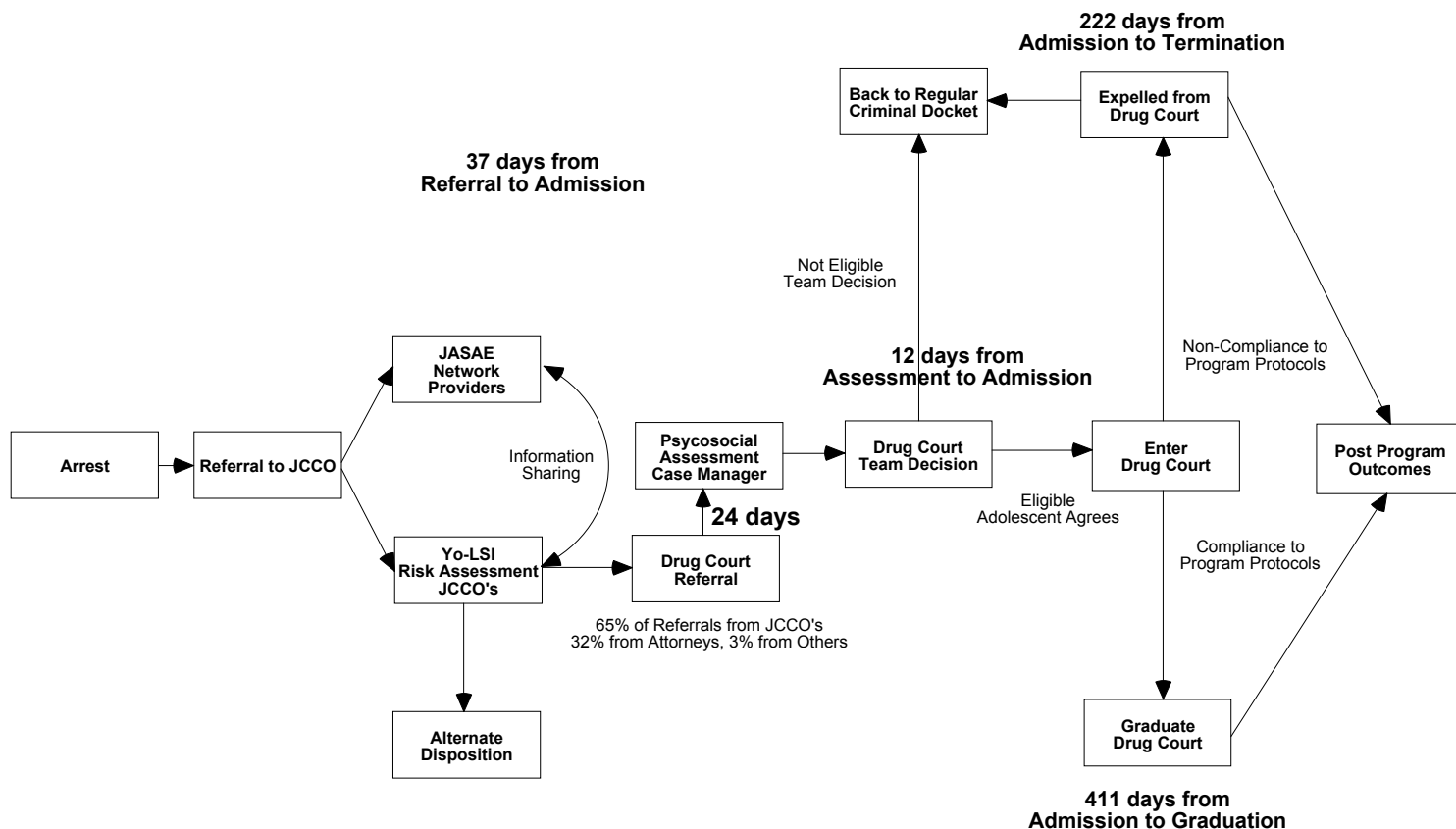
² To ameliorate the effects of delays in admissions, some courts have admitted juveniles on a provisional basis pending receipt of their final clinical assessment.

Table 4: Time Between Initial Referral and Admission (days)

	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Length of Time from Referral to Admission							
Mean	28.5	32.1	32.4	38.0	38.5	44.8	36.6
Median	24.0	28.0	24.0	38.0	32.0	35.0	29.0
Range	6-63	8-133	7-119	-	10-126	9-138	6-138
N	14	21	19	1	25	25	105

Figure 1 provides a flow chart of decision points in Maine’s juvenile drug treatment court program from initial referral to discharge. The flow chart summarizes the decision points that occur as drug court participants are admitted and processed through the program, and approximates the amount of time (state-wide averages) required to complete the admissions process. For example, while it takes an average of 37 days for the entire admissions process to be completed, nearly two-thirds of this total time (24 days) is spent completing the clinical assessment. Once the clinical assessment is completed, however, it then takes less than two weeks before a decision about final admission to the program is reached. Information about the average length of time from admission to discharge is also presented for program graduates as well as for juveniles expelled from the program.

Figure 1: Flow Chart of Maine Juvenile Drug Court Program from Referral to Discharge



Findings presented thus far indicate that the program is not operating at capacity. Given the established maximum capacity of 15 participants per site, it is a concern that only two sites are presently at capacity and only one site has maintained this level over the long term. Since the majority of referrals come from JCCO's, perhaps those sites struggling to reach capacity can work more closely with regional officers to increase referrals and hence, enrollments.

The second but related issue pertains to the amount of time required of case managers to complete clinical assessments. Since treatment providers are also required to perform a similar assessment upon intake, there appears to be an inherent redundancy in efforts between case management and treatment. Consideration might be given to streamlining this process enabling case managers to dedicate more time to perform other duties. Since the vast majority of these adolescents are going to be referred to a treatment provider for further assessment (regardless of whether they are admitted to the drug court program or not), it only stands to reason that the amount of time saved from assessing adolescents who are not accepted into the program, alone, can ultimately serve as a vehicle to generate more referrals, increase enrollments and potentially negate the need for any kind of maximum enrollment figure.

Section 3

Drug Testing Protocol and Practices

The frequent and effective use of random and monitored drug and alcohol testing is the *5th key component* of drug courts. Reliable and valid drug testing practices ensure compliance with the abstinence requirement of the program and identifies when appropriate action is necessary due to non-compliance. Drug tests also highlight levels of program integrity while providing a means for the criminal justice system to perform an important public safety function. In addition, drug testing provides treatment professionals valuable information about participant substance use and aids in the modification of an appropriate treatment plan.

A careful examination of the drug testing protocol is essential to assess the overall effectiveness and success of the program. This section provides an overview of what key actors think about drug testing and drug testing practices and compares this information with actual drug testing data accumulated for each individual participant.

Key actors were questioned about how often they believed clients should be drug tested at each phase of treatment and whether they believed the frequency and quality of existing drug testing practices were adequate. Key actors generally believe that the frequency of drug testing should be based on a “step-down system” where testing frequency decreases as participants progress through program phases. Overall, 82% believe that participants should be tested more than once per week during the first phase of the program. This frequency decreases to 78% in Phase II, 39% in Phase III and 23% of respondents indicated that participants should be tested more than once per week during the last phase of the program.

How often are participants actually tested during each phase? Table 5 shows that the frequency of drug testing across sites occurs less than once a week. We find that overall, participants were actually tested approximately once every 9 days during the first three phases of the program and approximately once every 11 days during Phase 4. Drug testing frequency varies across sites ranging from a low at West Bath (avg. 1 test/35 days) to a high at Lewiston (avg. 1 test/5 days). These findings reflect neither the desired frequency nor the “step-down system” recommended by policy and supported by key actors in the drug court program.

Table 5: Cross-site Comparison of Drug Testing Practices

Average Number of Drug Tests Administered per week	<i>Juvenile Drug Treatment Court Sites</i>						
	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Phase 1	0.45	0.85	1.00	1.32	1.10	0.24	0.74
Phase 2	0.57	1.17	0.63	-	1.05	0.23	0.75
Phase 3	0.47	0.89	0.86	-	1.26	0.13	0.74
Phase 4	0.25	1.22	0.29	-	0.42	0.14	0.41
Overall	0.51	0.86	0.80	1.32	1.00	0.20	0.68
N	14	21	19	1	25	25	105

Participant Compliance with the Drug Testing Protocol

An absence of positive drug tests is one way of assessing participant compliance with the abstinence requirement of the program. Referring to Table 6, 77% of the 105 participants tested positive one or more times for alcohol or drugs. The number of participants with no positive drug tests range from a low of 0% in Lewiston to a high of 44% in West Bath. Among those participants testing positive, the frequency of positive tests range from a low of 1 to high of 33 positive tests per person. The median number of positive tests is 3 and ranges from a low of 1 in Lewiston to a high of 5 in Augusta.

Overall, the percent of positive tests ranges from a low of 14% in Portland to a high of 59% in Lewiston. With an overall percent positive rate of 24%, Maine juvenile drug courts compare favorably both with the national average for drug court participants (24%) and with other adolescents in the juvenile justice system where positive drug test rates exceed 35%³.

Table 6: Cross-site Comparisons of Drug Testing Results

	<i>Juvenile Drug Treatment Court Sites</i>						
	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Average Percent Positive Tests	0.36	0.23	0.27	0.59	0.14	0.26	0.24
Participants Testing Positive							
% None	29	24	5	-	12	44	23
% One	-	5	16	100	12	28	14
% Two or More	71	71	79	-	76	28	63
N	14	21	19	1	25	25	105
Participants with Positive Tests							
Mean	6.9	6.2	4.6	1.0	3.5	2.1	4.4
Median	5.0	4.5	4.0	1.0	3.0	1.5	3.0
Range	2-23	1-33	1-12	-	1-8	1-8	1-33
N	10	16	18	1	14	14	81

Factors Predictive of Positive Drug Use

Multivariate analyses are used to identify what factors, if any, are associated with positive drug test results. Specifically, multiple linear regression was employed to test the impact of participant characteristics and various drug court program activities upon the frequency of percent positive drug tests.

Table 7 shows results of the linear regression. In it we find three factors associated with the frequency of positive drug tests. The first variable concerns participants who had prior crimes against a person. These participants are more likely to have a higher rates of positive tests. Two other variables relating to program activities are also predictive of the rate of positive drug tests. Length of program participation is inversely associated with the frequency of positive drug use. That is, as the length of program participation increases, the rate of percent positive tests decreases. Lastly, the frequency of drug tests administered each week is also inversely related to the rate of percent positive tests.

³ “Juvenile Drug Court Activity Update: Summary Information, OJP Drug Court Clearinghouse and Technical Assistance Project. American University.

In other words, participants who are more frequently tested have lower rates of positive drug tests. This suggests that drug testing may serve as a deterrent to drug use. Hence, consideration ought to be given to increasing the level of drug testing so as to meet both the standards that key actors in the program believe are necessary as well as to improve overall outcomes.

Table 7: Results of the Multiple Linear Regression Analysis on Factors Predictive of Percent Positive Drug Tests

<i>Significant Variables^a</i>	<i>Beta</i>	<i>t</i>
Prior Personal Arrests	0.21*	1.97
Length of Time in Program	-0.33***	-3.12
Drug Tests per Week	-0.33**	-2.86
Constant		0.72
R ²	0.62	
N	105	
*** p<.001, ** p<.01, * p<.05; two-tailed tests		
^a Unstandardized coefficients and standard errors available from author upon request.		
Only the significant terms tested in the models are presented in order to conserve space.		

Section 4

Role of Sanctions and Incentives

Theoretically, sanctions and rewards have the potential to be important ingredients for a program of behavioral management (Marlowe, 2002). Like other juvenile drug courts nationally, Maine's juvenile drug courts use rewards and sanctions to ensure compliance to program goals and objectives. However, Maine currently does not use a structured sanctions protocol. Rather, the imposition of rewards and sanctions is handled on a case-by-case basis depending upon staff's perception of the participants' overall performance in the program as discussed in pre-court staffings. The presiding judge imposes these sanctions and rewards during weekly status hearings⁴.

Nationally, there is a paucity of research information about the use of sanctions and rewards, especially among juvenile drug court programs. Drug court evaluations to date, have neither examined whether sanctions and rewards are tied to the performance expectations of the drug court nor controlled for the temporal ordering of sanctions. To fill this gap in the existing research literature this study examines the role of sanctions and rewards both within and across juvenile drug court programs in Maine.

Upon admission to the drug court, participants consent to the use of these sanctions. Typically, sanctions are imposed for violations of program rules and regulations such as: positive urinalysis, technical violations, new criminal activity, failure to attend scheduled meetings with probation, case management, treatment, insubordination or other offensive behavior. Rewards are given for compliance with program requirements. Information provided in this section is based upon case management records and from results of the survey administered in March, 2003.

The initial decision to sanction or reward a participant typically occurs during a review of participant progress at weekly staffing sessions. At the staffing, the drug court team arrives at a consensus upon a particular course of action to take in the weekly status hearing. Indeed, the ability to arrive at a consensus, or make a team decision, is an important indicator of the level of cooperation and collaboration that exists among drug court team members. According to survey results, the majority of drug court team members (excluding judges) indicate that they believe their opinions play a major role in the court's decision to sanction or reward participants. In addition, key actors were also presented with three scenarios and asked to identify the kind of intervention (sanction) that should occur and what they believed would likely take place in the status hearing.

With the exception of one case, there was no difference between what key actors thought "should happen" and what they believed was "likely to happen" in the courtroom. (Refer to Appendix A for survey results.) Yet, when asked about the overall effectiveness of the use of these sanctions and incentives, nearly half (46%) of the team members indicated that current use of sanctions and incentives is not an effective mechanism to secure compliance to program requirements.

⁴ The analysis that follows is based upon rewards and sanctions reported in weekly progress reports by case managers for the forty-two month period of the evaluation.

Table 8 provides an overall distribution of the frequency of actual sanctions and rewards participants received during drug court. The majority of participants (91%) received one or more sanctions during their participation in the program. Among those sanctioned, the number of sanctions range from 1 to 23 with a median of 5. The majority of participants (80%) also received one or more rewards. They ranged from 1 to 37 with a median of 5. The overall ratio of rewards to sanctions is 1.2:1.

Table 8: Cross-Site Comparison of the Frequency of Rewards and Sanctions

	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Distribution of Sanctions							
Percent of Participants Sanctioned	71	86	100	100	100	88	91
Number of Sanctions							
Mean	2.5	5.4	7.2	2.0	11.2	3.6	6.5
Median	2.0	5.0	7.0	2.0	9.0	3.0	5.0
Range	1-9	1-10	1-18	-	3-23	1-10	1-23
N	10	18	19	1	25	22	95
Distribution of Rewards							
Percent of Participants Rewarded	71	71	95	100	100	60	80
Number of Rewards							
Mean	4.2	5.3	12.2	-	13.4	2.9	8.9
Median	2.0	3.0	10.5	2.0	13.0	2.0	5.0
Range	1-25	1-18	1-37	-	1-26	1-9	1-37
N	10	15	18	1	25	15	84

Table 9 presents information on the distribution of types of sanctions and rewards imposed at each site. The most frequent reward is praise or applause from the bench (61%) followed by tangible rewards (14%) such as gift certificates. The most frequent type of sanction are verbal reprimands (38%) followed by detention (15%), community service (11%) and other (12%). There are cross-site variations in both the frequency and types of rewards and sanctions imposed. As discussed above, detention is the second most frequently imposed sanction. However, courts that use detention range from a low of 8% in Augusta to a high of 20% in Lewiston. Rewards also vary by site. For example, use of tangible rewards ranges from a low of 0% in Lewiston to a high of 20% in Biddeford.

Table 9: Cross-site Comparisons of the Types of Rewards and Sanctions

	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Types of Sanctions							
Detention	8.3	13.7	17.6	20.0	13.7	18.4	14.9
Community service	4.6	10.1	12.0	40.0	13.0	11.9	11.3
House Arrest	1.8	5.4	9.2	-	10.3	4.5	6.8
Increased Reporting	2.8	0.6	2.1	-	5.8	3.3	3.3
Written Assignment	2.8	5.4	3.5	-	7.9	7.4	6.0
Verbal Caution Only	67.9	45.8	35.9	20.0	23.3	39.3	38.2
Termination	10.1	10.1	11.3	20.0	5.5	5.7	7.8
Other	1.8	8.9	8.5	-	20.5	9.4	11.7
N	109	168	142	5	292	244	960
Types of Rewards							
Tangible	9.9	19.8	10.5	-	13.3	14.1	13.8
Curfew Extension	17.6	15.8	5.7	-	13.7	8.3	12.1
Phase Advancement	13.2	12.9	10.5	-	8.5	24.4	12.3
Praise/Applause/Handshake	56.0	50.0	72.9	100	64.0	51.3	60.7
Other	3.3	1.5	0.5	-	0.4	1.9	1.1
N	91	202	210	1	445	156	1105

In order to examine the relationship between non-compliance with program protocols and the particular types of sanctions imposed, the research team examined sanction data for positive drug screens⁵. Table 10 presents information on the types of sanctions imposed on 105 drug court participants who were sanctioned for positive drug tests. Overall, the most frequent response to a positive urinalysis is a verbal reprimand (36%) followed by detention (19%). Other types of sanctions imposed for positive drug use range from written assignments (6%) to community service work (12%).

Findings in Table 10 also indicate variations among drug courts in the types and frequency of sanctions imposed for positive drug tests. For example, use of detention ranges from a low of 0% in Augusta to a high of 31% in Biddeford. And, verbal warnings were most commonly issued in Augusta (84%) in contrast to Portland (20%).

Table 10: Cross-site Comparisons of Participants Sanctioned for Drug Use

	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Types of Sanctions Given for Drug Use							
Detention	-	16.1	31.4	25.0	24.4	15.8	18.9
Community service	3.1	14.3	20.0	50.0	8.1	12.3	11.9
House Arrest	-	5.4	5.7	-	12.8	5.3	7.0
Increased Reporting	6.3	1.8	5.7	-	10.5	7.0	6.7
Written Assignment	3.1	3.6	2.9	-	3.5	17.5	6.3
Verbal Caution Only	84.4	44.6	25.7	25.0	19.8	33.3	36.3
Termination	-	10.7	2.9	-	7.0	5.3	5.9
Other*	3.1	3.6	5.7	-	14.0	3.5	7.0
N	32	56	35	4	86	57	270

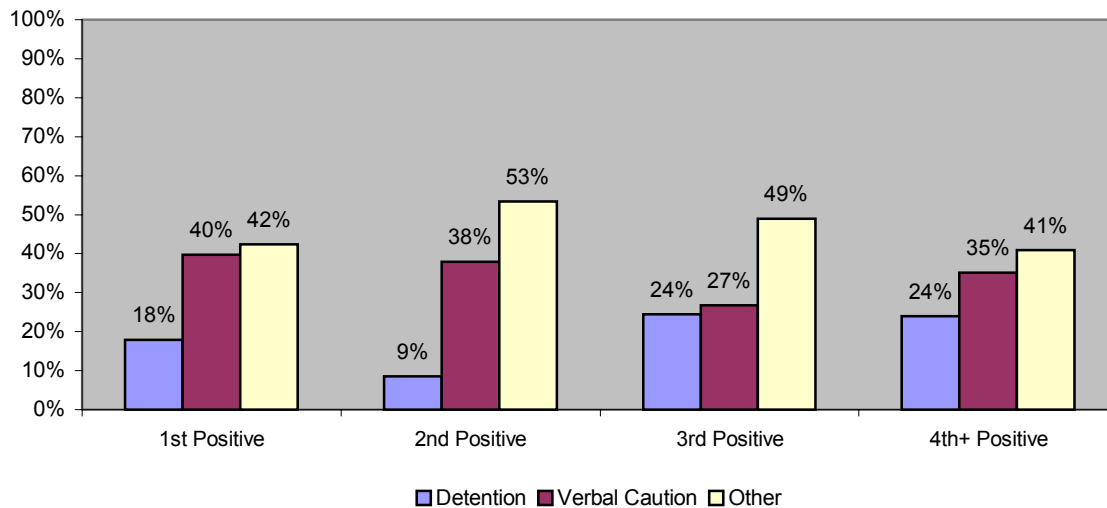
*Other includes: Increased Treatment (n=12); Household Chores (n=4); and No Contact Order (n=3)

Data presented in Table 11 examines whether sanctions are graduated for persistent drug use. That is, we examined the sanctions imposed on participants for their first, second, third, and fourth successive positive drug test. Findings indicate that sanctions are not graduated. Rather, the overall distribution is relatively flat. For example, in Portland, more participants received a detention for their first positive drug test than for subsequent positive drug tests. Whereas in Augusta, participants received a verbal warning/reprimand regardless of their first, second, third or subsequent positive drug test. Referring to Figure 2, we can see that while there is a slight reciprocal relationship between detention and verbal reprimand along the temporal order overall, the basic distribution of sanctions is relatively flat.

⁵ Sanction information was obtained for 64.2% of the 116 people with positive drug tests because there was either no sanction or no sanction data available. The data does not reflect persons who admitted use of alcohol or drugs for whom a drug test was not administered.

Table 11 : Temporal Order of Sanctions for Positive Drug Tests

	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Types of Sanctions for 1 st drug use							
Detention	-	14.3	30.0	100	34.8	-	17.9
Verbal Caution	88.9	57.1	30.0	-	17.4	38.1	39.7
Other	11.1	28.6	40.0	-	47.8	61.9	42.3
N	9	14	10	1	23	21	78
Types of Sanctions for 2 nd drug use							
Detention	-	15.4	-	-	11.1	8.3	8.6
Verbal Caution	71.4	53.8	42.9	-	11.1	41.7	37.9
Other	28.6	30.8	57.1	100	77.8	50.0	53.4
N	7	13	7	1	18	12	58
Types of Sanctions for 3 rd drug use							
Detention	-	12.5	-	-	28.6	60.0	24.4
Verbal Caution	83.3	25.0	20.0	-	21.4	10.0	26.7
Other	16.7	62.5	80.0	100	50.0	30.0	48.9
N	6	8	5	2	14	10	45
Types of Sanctions for 4 th to 11 th Drug Use							
Detention	-	19.0	61.5	-	22.6	14.3	23.9
Verbal Caution	88.9	38.1	15.4	-	25.8	35.7	35.2
Other	11.1	42.9	23.1	-	51.6	50.0	40.9
N	9	21	13	-	31	14	88

Figure 2: Temporal Order of Sanctions for Positive Drug Tests

The sanctioning policy of Maine's Juvenile Drug Court Program does not provide a structured schedule of responses for specific client behaviors or identifies in advance the specific rewards for compliance and specific consequences for non-compliance. Overall findings indicate cross-site variations in the types of sanctions and incentives imposed as well as variation in the responses of different drug courts to similar infractions. Such findings can be anticipated as the case-by-case decision making practices of these drug courts are not guided by an explicit set of standards for making those decisions. Given different responses to similar infractions, consideration ought to be given to the development of a structured sanction protocol (i.e., graduated sanctions menu) that is recommended for drug courts nationally and by the team of professionals who led Maine's drug court training in March, 2003.

Section 5

Substance Abuse Treatment and Ancillary Services

The fourth *Key Component* of the drug court model is to *provide access to a continuum of alcohol, drug, and other related treatment and rehabilitation services*. In this respect, community-based treatment providers play a central role in drug court programs. While the justice system maintains authority over participants to ensure compliance with the treatment protocol and performance requirements of the drug court, the treatment system delivers the necessary services to produce the intended behavioral changes.

However, there are a number of obstacles that limit implementing and delivering a continuum of care within any community. The local health-care economy with its own limited resources, economic competition, professional loyalties, referral bias and third party reimbursements often constrain the range of available options (Hester and Miller, 1995). The absence of truly different treatment options often results in the delivery of the same treatment program to both adult and adolescent populations. A standard formula often pervades what on the surface appear to be different treatment interventions (Hester and Miller, 1995).

Moreover, the availability of treatment counselors across communities is uneven as is their expertise. The drug treatment service system consists of a number of independent treatment providers who often deliver treatment according to their own predilections and personal philosophies. Liddle, Friedman, and Miller, among others, have concluded that many of the most common treatment interventions provided to adolescents (such as non-directive counseling, reality therapy, 12-step groups, and psychoanalytic therapy) are either unsuccessful, ineffective or of unknown value as treatment interventions. Motivational enhancement therapy (MET), cognitive behavioral therapy (CBT), and family treatment interventions (FTI), on the other hand, consistently show the best outcomes in such studies, however, they are widely under utilized by treatment providers.

A further constraint centers on the broad diversity of potential clients who are served and limited client resources. In particular, criminal justice involved clients have funding constraints limiting the services that are available. Such obstacles potentially compromise engaging juvenile drug court participants in scientifically proven treatment interventions (Taxman, 2000).

The State of Maine is responding to these problems. The creation of a statewide Juvenile Treatment Network and a training grant for treatment personnel are ways to address some of these issues. For example, given that many substance abuse providers in Maine are not trained in the use of scientifically based approaches to treatment, Maine's Office of Substance Abuse applied for and received an enhancement grant from the Office of Justice Programs, Drug Court Programs Office, to provide training for counselors in the "best practices" of substance abuse treatment for juvenile drug court participants.

Here, we examine variation in treatment duration as well as variation in both the types and frequency of treatment interventions employed (see Sections 9 and 10 for more information about the relationship between these interventions on discharge and recidivism outcomes). Data presented in this section of the report derive from records maintained in the drug court case management MIS and the Office of Substance Abuse, Treatment Data System (TDS).

Treatment Phases

Maine's juvenile drug treatment court attempts to integrate court operations and treatment progress through a four phase system that is designed to take approximately fifty weeks to successfully complete. During each phase, there are distinct treatment goals with specified time periods for completion. We compared the intended length of time required to complete each phase of treatment with the actual amount of time that it took graduates to complete these phases.

Findings in Table 12 indicate the actual amount of time required to complete the drug court program approximates but exceeds the 50 week standard set forth in the drug courts' Policies and Procedures manual. The median length of time to successfully complete drug court and graduate is 57 weeks and ranges between 31 weeks and 78 weeks.

The actual time required to complete the program exceeds the fifty week standard largely because participants are unable to complete Phase I within the scheduled time frame. The amount of time required to complete the first phase of the program is more than double the intended scheduled length (8 weeks). With a few site specific exceptions, the time required to complete other phases approximate their scheduled time frame. Here, consideration might be given to increase the scheduled length of the first phase of the program so as to establish more realistic benchmarks and reasonable expectations of participant progress.

Table 12 also presents information about attendance at treatment. While the median number of treatment sessions attended is 66, treatment attendance by participants who graduated from the program range from a low of 18 sessions to a high of 202 sessions. According to the policies established by the drug court, the frequency of treatment session attendance is "open ended" and discretionary, individually tailored to meet the specific needs of the adolescent. Hence, it is not possible to compare required sessions with actual sessions attended.

We also examined whether the average number of treatment sessions attended weekly is related to the risk and needs assessment of participants. One would expect that the intensity of the treatment intervention should be the greatest for high need, high risk juvenile offenders, and conversely, those classified as low risk/need, should receive the least intense intervention. Referring to Figure 3 (next page), findings indicate that there is a slight positive linear relationship between treatment intensity and level of treatment need.

However, recalling from Section 2, it was identified that nearly all (97%) of drug court participants had substantial substance abuse problems. Hence, we would assume that participants who were also classified as high risk would also receive the greatest level of treatment intervention. Referring to Figure 4, findings indicate that this is indeed not the case as there is a non-linear relationship between treatment intensity and Yo-LSI level of criminal risk.

Here, adolescents classified in the “moderate” range attended the greatest frequency of treatment sessions, whereas high risk/need youth and low risk/need youth attend approximately the same frequency of treatment sessions.

Table 12: Cross-site Comparisons of Phase Lengths for Program Graduates

		<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Ideal Length of Drug Court: 50 weeks								
Actual Length	Mean	53.5	47.9	66.4	-	57.2	63.0	57.2
	Median	45.1	52.7	67.5	-	59.0	61.8	58.6
	Range	39-76	31-55	63-68	-	38-72	52-78	31-78
Ideal Length of Phase 1: 8 weeks								
Actual Length	Mean	15.7	17.0	27.9	-	16.0	21.1	19.1
	Median	14.4	15.1	26.1	-	16.1	22.0	18.8
	Range	7-25	12-26	26-32	-	7-28	14-34	7-34
Ideal Length of Phase 2: 20 weeks								
Actual Length	Mean	14.2	16.2	12.7	-	19.6	19.5	17.9
	Median	17.0	15.5	12.0	-	18.0	16.1	16.6
	Range	8-18	5-29	10-16	-	12-29	12-35	5-35
Ideal Length of Phase 3: 12 weeks								
Actual Length	Mean	13.8	8.3	18.0	-	10.8	13.1	12.3
	Median	8.6	6.5	18.0	-	11.0	13.9	12.2
	Range	6-27	5-15	14-22	-	6-15	8-19	5-27
Ideal Length of Phase 4: 10 weeks								
Actual Length	Mean	10.0	6.6	8.1	-	11.0	10.4	9.8
	Median	8.0	5.6	8.0	-	11.0	10.4	9.3
	Range	7-14	3-12	7-9	-	5-23	1-16	1-23
Frequency of Treatment Sessions								
	Mean	34.7	90.5	56.0	-	67.9	92.5	75.4
	Median	28.0	74.5	42.0	-	70.0	66.0	65.5
	Range	18-58	31-82	36-90	-	20-117	33-202	18-202
	N	3	4	3	-	9	11	30

Figure 3: Tx Attendance by ASAM Level

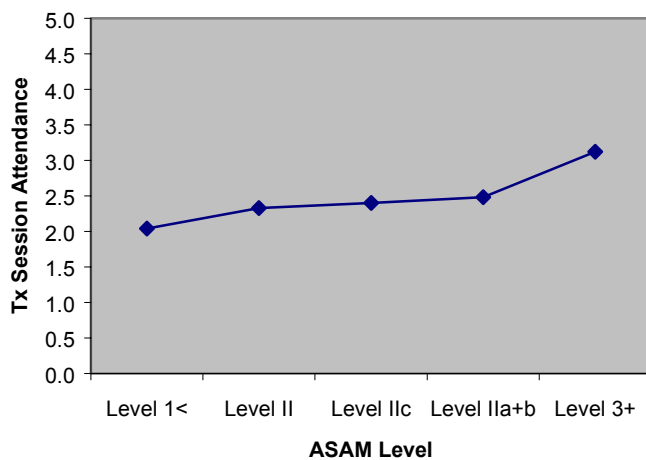
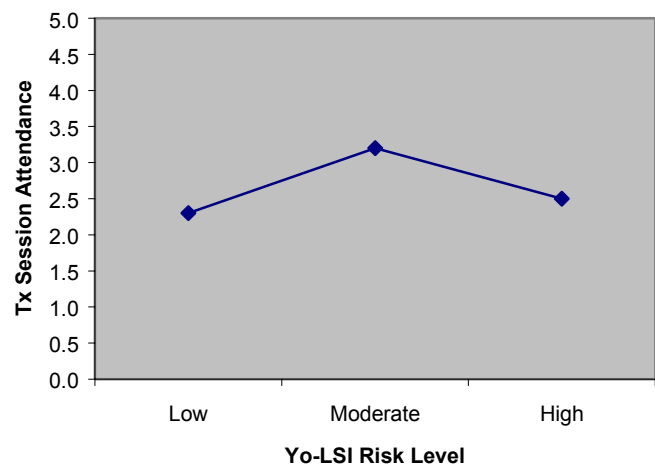


Figure 4: Tx Attendance by Yo-LSI Risk



Delivery of Treatment Services

Juvenile drug court participants receive a variety of treatment services ranging from individual, group, and family counseling to intensive outpatient and residential services. Table 13 shows the types of treatment services actually received. (The cell values represent a total average percent and therefore will not sum to 100.) Referring to Table 13, the majority of participants received individual counseling (46%) followed by group therapy (32%) and family counseling (13%). Other types of treatment interventions occurred with much less frequency. (Note: it will be impossible to compare the merits of individual versus group counseling. Only two participants did not receive a combination of both during treatment).

In Table 12, above, we presented information about the overall duration of the drug court program and each of the four phases. However, the start and end dates of the drug court program do not necessarily correspond to actual start and end dates of treatment. Table 13 shows that the actual amount of time spent in treatment is less than the total time spent in the drug court program. Overall, the average amount of time in treatment is 40 weeks, or about 70% of the total length of drug court program participation (57 weeks). The amount of time in treatment in drug court varies considerably ranging from 3 weeks to 76 weeks with a median of 43 weeks.

Table 13: Average percent of treatment modality used by court

	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
Types of Tx Interventions							
Individual	73	45	81	-	46	29	46
Group	27	36	19	-	27	39	32
Family	0	11	1	-	20	14	13
IOP	0	7	0	-	0	18	8
Residential	0	0	0	-	7	0	2
N	3	4	3	-	9	11	30
Duration of Treatment (wk.)							
Mean	25	37	38	-	47	40	40
Median	23	39	36	-	52	43	43
Range	17-37	21-50	16-61	-	4-63	3-76	3-76
N	3	4	3	-	9	11	30

Ancillary Services

Recognizing that substance abuse treatment alone often fails to meet the multiple needs of the offender population, the 4th key component of drug courts emphasizes that a “continuum of care” include the provision of an array of ancillary services in addition to substance abuse treatment. Data provided on ancillary service utilization was derived from a combination of case management records and information provided by the Office of Substance Abuse Treatment Data System (TDS).

In Maine, little or no funding is being provided the drug court program to deliver or facilitate the delivery of ancillary services. Nevertheless, many juvenile drug court participants have been able to avail themselves of a number of ancillary services on an ad hoc basis including: academic assistance, crisis intervention services, health care, mental health, employment, transportation and a wide variety of other ancillary services. In fact, the vast

majority of participants (80%) have utilized at least one ancillary service during their participation in drug court and nearly as many (74%) have utilized two or more services.

Referring to Table 14, drug education (67%) and transportation services (55%) were among the most frequently utilized services. Mental health and HIV testing (15%), crisis intervention (13%) and academic services (11%) were among the wide variety of services accessed by juvenile drug court participants. (Refer to Sections 8 and 9 for more information about the relationship between ancillary services and graduation and recidivism outcomes.)

Table 14: Overall Distribution of the Types of Ancillary Services Accessed by Juvenile Drug Court Participants

	<i>Juvenile Drug Treatment Court Sites</i>						
	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>	<i>Total</i>
% Utilize Any Ancillary Services	79	95	68	-	68	92	80
% Utilize Multiple Ancillary Services	79	86	58	-	60	92	74
Types of Ancillary Services							
Academic	7	24	5	-	12	8	11
Crisis Intervention	-	33	5	-	16	8	13
Drug Education	71	81	42	-	60	88	67
HIV Risk	14	14	5	-	12	28	15
Legal	43	10	-	-	8	-	10
Medical	14	10	5	-	24	4	11
Mental Health	7	33	21	-	8	8	15
Transportation	57	62	42	-	52	64	55
Other*	50	52	26	-	24	36	36
N	14	21	19	1	25	25	105

*Other ancillary services include: Aversion Therapy, Acupuncture, Social Services, Mentoring Programs, Housing, Employment and Financial Services, and Child Care

Section 6

Graduation and Termination Outcomes

Previous sections of this report addressed the overall structure of each drug court, the use of sanctions and rewards, and the delivery of treatment services. In the final sections of the report, concern lies with the efficacy of the juvenile drug court program as it relates to participant level outcomes. This section and the one that follows examine factors related to completion of the program through graduation and factors related to recidivism outcomes. The final section provides an overall cost/savings estimate for the program.

The successful completion of drug court requires participants to comply with certain performance expectations of the court including no new criminal conduct, abstaining from alcohol and drug use, and attending substance abuse treatment. The analysis that follows is based upon a total of 105 participants who either graduated (n=30) or were expelled (n=75) from the drug court program who also had a minimum of twelve months post-program follow-up. The purpose of this section of the report is to identify what factors (if any) are related to successful completion of the juvenile drug court program.

The analysis that follows is presented in two stages. The first stage involves simple bivariate comparisons and tests for differences of means between participant characteristics and core components of the drug court program on discharge outcomes. The dependent variable is rate of program graduation (0-100%). T-tests are performed on all dichotomous variables and analysis of variance is analyzed for all continuous variables and variables involving multiple categories.

The second stage of the analysis introduces a multivariate statistical technique called logistic regression. The purpose for using logistic regression is to examine what variables are related to successful completion of the program (graduation). The logistic regression analysis will enable us to simultaneously 1) “control” for offender characteristics so as to ascertain which compliance requirements of the program are significant in predicting graduation outcomes; and conversely 2) isolate participant characteristics significant in predicting graduation outcomes while controlling for the effects of compliance with program protocols.

Participant Characteristics and Program Completion Outcomes

This section examines the relationship between several general characteristics of participants on graduation outcomes. As shown in Table 15, the majority of participants can be characterized as moderate to high risk, white males with fairly severe substance abuse histories (see columns labeled %). Overall, there are two significant characteristics related to successful completion of the drug court program. Participants with prior crimes against a person (19%) and prior property related crimes (23%) are less likely to graduate than participants with no prior personal arrests (39%) and property related crimes (43%).

Table 15: Participant Characteristics by Discharge Status

Demographics	%	N	% G	Demographics	%	N	% G
Gender				Race			
Female	15	16	44	White	93	98	28
Male	85	89	26	Non-White	7	7	23
Total	100	105	29	Total	100	105	29
Employed at Admission				In School at Admission			
Yes	43	45	33	Yes	67	70	31
No	57	60	25	No	33	35	23
Total	100	105	29	Total	100	105	29
Drug of Choice				Living with Relatives			
Alcohol	21	22	36	Yes	88	92	29
Marijuana	65	68	26	No	12	13	23
Heroin	9	9	22	Total	100	105	29
Other	6	6	33				
Total	100	105	29	Yo-LSI Risk			
ASAM Level				Low	11	7	43
Level 3 and Higher	31	33	30	Moderate	36	23	13
Level II (a & b)	32	34	29	High	53	34	15
Level II c	8	8	-	Total	100	64	17
Level II	21	22	32				
Level I and Below	8	8	38	Prior Tx Experience			
Total	100	105	29	Yes	69	72	31
Sum Score of 21+				No	31	33	24
1) Yes	97	102	28	Total	100	105	29
2) No	3	3	33				
Total	100	105	29	Prior Felony Arrest			
Prior Arrest				1) Yes	25	26	27
Yes	86	90	26	2) No	75	79	29
No	14	15	47	Total	100	105	28
Total	100	105	29				
Prior Personal Arrest **				Prior Drug Arrest			
1) Yes	51	54	19	1) Yes	40	42	32
2) No	49	51	39	2) No	60	63	24
Total	100	105	29	Total	100	105	29
Prior Property Arrest*				Prior Other Arrest			
1) Yes	71	75	23	1) Yes	9	9	44
2) No	29	30	43	2) No	91	96	27
Total	100	105	29	Total	100	105	29

***p<.001, **p<.01, *p<.05; two-tailed tests
ns=Not Significant G=Graduate

Program Participation and Discharge Outcomes

We also examined the relationship between various core components of the drug court model on graduation outcomes. Findings in Table 16 indicate there are several significant differences between graduates and expelled participants on measures of positive drug use, frequency of drug testing, sanctions and incentives as well as utilization of specific types of ancillary services. However, there were no significant differences between graduates and those expelled across both measures of treatment (frequency of attendance and type).

On average, program graduates had a lower rate of positive drug tests (12%) compared to expelled participants (29%). Program graduates were also less likely to be drug tested than expelled participants (.56 tests/wk compared to .73 tests/wk). And as expected, more graduates were rewarded during program participation and more expelled participants were sanctioned. Utilization of ancillary services was also more frequent among program graduates particularly with respect to HIV testing and “other” ancillary services including social services, mentoring programs, housing, employment and financial services.

Table 16: Program Information by Discharge Status

	<i>Graduated (n=30)</i>	<i>Expelled (n=75)</i>	<i>Total (n=105)</i>
Number of Treatment Sessions Attended per Week			
Mean	2.7	2.6	2.6
Median	1.7	1.6	1.7
Range	0.6-18.1	0.1-21.5	0.1-21.5
Types of Tx Sessions Attended (Mean % of Total)			
Individual	46	47	46
Group	32	37	36
Family	13	7	9
IOP	8	3	5
Residential	2	2	2
Number of Weekly Drug Tests			
Mean	0.56*	0.73	0.68
Median	0.67	0.76	0.72
Range	0.11-1.22	0-1.54	0-1.54
Average Percent Positive Drug Tests			
Mean	11.8%***	28.5%	23.7%
Percent Rewarded	100***	73	80
Percent Sanctioned	83	100	91
% Utilize Ancillary Services	90	76	80
% Utilize Multiple Ancillary Services	83	71	74
Types of Ancillary Services			
Academic	13	11	11
Crisis Intervention	20	11	13
Drug Education	80	64	67
HIV Risk	30**	9	15
Legal	17	7	10
Medical	13	11	11
Mental Health	17	15	15
Transportation	60	53	55
Other*	63***	25	36

*** p<.001, ** p<.01, * p<.05; two-tailed tests

*Other ancillary services include: Aversion Therapy, Acupuncture, Social Services, Mentoring Programs, Housing, Employment and Financial Services

These bivariate analyses suggest that some program and participant characteristics have an effect on program completion outcomes. However, we do not know what the combined effect of all these factors are, or which are the most salient. Hence, the next section incorporates a multivariate analysis that will assist in further exploration of this issue.

Results of the Multivariate Analysis: Factors Predictive of Program Graduation

The multivariate analysis assesses those factors that have an effect on or predict the overall odds of successful program completion while controlling for a number of “independent” or explanatory variables. Specifically, a step-wise logistic regression model is employed to test the combined effect of participant characteristics, drug test results, attendance at treatment, sanctions and incentives, and participation in ancillary services on the overall odds of graduation⁶.

Table 17 presents results of the step-wise logistic regression model for the odds of successful program completion. Overall results indicate that five factors (one participant characteristic and four program related variables) are significant predictors of successful program completion.

First, those who were screened as “low risk” are more than twenty-five times more likely to graduate than participants characterized as “high risk.” Length of program participation, as expected, is also positively associated with graduation. Conversely, in-program arrest activity is negatively associated with graduation. Those who were arrested during program participation are 21 times less likely (inverse of 0.047) to graduate than those not arrested. Two other significant findings pertains to those participants who received drug education and HIV testing services during their participation in the program. Those participants who received these ancillary services are significantly (8 times and 16 times respectively) more likely to graduate than those who did not. Overall, the model is quite robust with over 53% of the variance in discharge outcomes explained.

Table 17: Odds Ratios for the Step-wise Logistic Regression on Graduation Outcomes for Maine’s State-wide Juvenile Drug Treatment Court

<i>Variables</i>	<i>B</i>	<i>S.E.</i>	<i>Wald</i>	<i>Sig.</i>	<i>Exp(B)</i>
Program Length	.645	.149	18.633	.000	1.906
In Program Arrests	-3.060	1.023	8.943	.003	.047
Low Risk	3.226	.982	10.783	.001	25.175
Drug Education Services	2.122	.985	4.640	.031	8.348
Crisis Intervention Services	2.778	1.196	5.396	.020	16.085
Constant	-10.030	2.248	19.909	.000	.000

^aOnly the significant terms tested in the models are presented in order to conserve space.

⁶ An insufficient number of graduates prohibits a site by site examination.

Section 7

Recidivism Outcomes

One of the principle goals of drug court programs is to reduce the likelihood of arrests among participants. This section of the report assesses the efficacy of Maine's juvenile drug treatment court against this outcome measure. The analysis is based on a comparison of arrest rates of the 105 juvenile drug court participants who either successfully completed the program and graduated or were expelled with the arrest rates of a matched sample of 105 adolescent offenders traditionally adjudicated. The analysis includes an examination of multiple indicators of recidivism including: overall arrest rates, in-program versus post-program recidivism, arrest frequency and offense severity. A multivariate analysis examining factors predicting the overall occurrence of arrests as well as a time to arrest (survival analysis) is basic to the analysis that follows.

While there is a growing body of research literature indicating positive results for adult drug court programs, little evidence exists for juvenile drug court programs. This is largely due to the fact that the juvenile drug court program is more recent, and that juvenile drug court programs, nationally, have lower caseloads than adult drug courts making it difficult for researchers and evaluators to generate any meaningful conclusions about the efficacy of the juvenile drug court model.

Moreover, many of the studies that have been done on juvenile drug court programs lack quasi-experimental designs and few include analyses of recidivism data or utilize multivariate models to assess program outcomes. Consequently, findings that do exist are mixed and site specific. Arguably, such problems exist for a variety of reasons including constraints imposed on research projects by funding agencies, difficulties in obtaining reliable information on juvenile offenders and low overall participation rates to name a few.

Among the few program evaluations that compare recidivism rates of juvenile drug court participants with a comparison group of adolescent offenders, findings vary significantly. For example, Latessa (2002) suggests a positive effect on crime reduction for Ohio's juvenile drug court programs demonstrating a differential arrest rate of 19% between drug court participants and non-participants. This is in contrast to Logan, Hoyt, and Leukefeld (2001) and Hartmann and Rhineberger (2003) who report negative findings for the Polk County and Kalamazoo County juvenile drug court programs indicating that comparison subjects did not differ or fared better with lower rearrest rates.

The analysis that follows, then, provides a unique opportunity to examine some rare data about rearrest activity among juvenile drug court participants and more importantly, how these arrest rates compare against a matched-pair of adolescent offenders who were adjudicated through traditional criminal case processing.

Overall, these findings suggest a positive program effect with fewer juvenile drug court participants being arrested than the control group and program graduates being the least likely to re-offend overall. Juvenile drug court participants are also less likely than the control group to be rearrested for alcohol or drug related offenses or for the commission of felonies or violent crimes.

Methods

To assess the efficacy of Maine's juvenile drug court program, the research compared differences between recidivism rates of juvenile drug court participants and similarly-situated juveniles who were traditionally adjudicated. That is, the research incorporates a quasi-experimental, matched-pair design. This approach allows the research to compare arrest rates between juvenile drug court participants and a matched grouping of juvenile offenders who did not participate in drug court. Of the 145 participants who were discharged from the drug court, only 105 had sufficient exposure, or "time at risk," to be included in the 12 month follow-up assessment. For example, a participant discharged on January 1, 2001 was tracked for 12 months until December 31, 2001 to identify whether an arrest had occurred.

The control group was constructed from information gathered from Maine's Department of Corrections and the Juvenile Treatment Network (Day One). The 105 adolescents in the drug court program were matched with 105 juvenile offenders who were not in the program across a variety of demographic characteristics, substance use history/screening results and criminal risk factors including: date of entry, age, race, gender, county of residence, ASAM score, JASAE drug and alcohol scores, Yo-LSI measure of criminal risk, living situation and school status. The exposure time or "time at risk" during which arrest activity was measured for the 105 juvenile offenders who were not in the program was the same number of days as the exposure time for the drug court participant with whom they were matched.

The Juvenile Treatment Network contained information to match the offenders. This information contained substance abuse screening test results and demographic information. The Yo-LSI measure for criminal risk for each offender was obtained from the Department of Corrections. The research team was also able to obtain substance abuse treatment attendance information for both drug court participants and control subjects using data obtained from the State Office of Substance Abuse, Treatment Data System (TDS).

Recidivism data presented in this section reflects all in-program and post-program felony and misdemeanor arrest activity in Maine for each individual who either successfully completed the drug court program through graduation or who was expelled. Arrest data was obtained from two sources: 1) Maine's Department of Corrections, Division of Juvenile Services provided arrest information on adolescents who were still under their supervision and, 2) Maine's Department of Public Safety provided arrest data for those adolescents who turned 18 and matriculated into the adult criminal justice system.

Findings

Findings in this section of the report are based on 210 juvenile offenders. A total of 105 of the offenders either successfully completed the program and graduated (30) or were expelled from the program (75). These 105 drug court participants were paired with 105 juvenile offenders who did not participate in the drug court program.

Recidivism data is presented in Table 18 for two different groups of offenders: drug court participants and a control group matched with the program participants on a number of variables. The drug court participants are further divided into two sub-groups - those who successfully completed the program through graduation and drug court participants who were expelled from the program. The first column presents information about the control group of juvenile offenders

with substance abuse problems who were not in drug court. The second column presents overall information about juvenile offenders who were in the drug court (experimental group). The third and fourth columns of Table 18 present recidivism data for program graduates and expelled participants and the last column provides overall totals. T-tests were performed to determine whether the differences in arrests rates were statistically significant.

Findings in Table 18 indicate that fewer drug court participants (43%) had post-program arrests than the control group (49%) but approximately the same percent of drug court participants were arrested (35%) while in drug court as non-drug court (34%) participants during a similar time-frame. More importantly, fewer graduates (40%) than expelled participants (60%) or the control group (66%) were arrested overall. This pattern of fewer arrests holds during program participation and during the 12 month post-program follow-up where fewer graduates (30%) than expelled participants (48%) or the control group (49%) were arrested.

Table 18: Recidivism Outcomes Control and Experimental

		<i>Control</i>		<i>Experimental</i>		<i>Graduate</i>		<i>Expelled</i>		<i>Total</i>	
Overall Arrest (Felony or Misdemeanor)		N	%	N	%	N	%	N	%	N	%
	Yes	69	66	57	54	12	40	45	60	126	60
	No	36	34	48	46	18	60	30	40	84	40
Post Program Arrests (Felony or Misdemeanor)		N	%	N	%	N	%	N	%	N	%
	Yes	52	49	45	43	9	30	36	48	96	46
	No	53	51	60	57	21	70	39	52	114	54
In-Program Arrest (Felony or Misdemeanor)		N	%	N	%	N	%	N	%	N	%
	Yes	36	34	37	35	7	23	30	40	73	35
	No	69	66	68	65	23	77	45	60	137	65

Table 19 presents arrest information by the frequency and seriousness of the offense charges (as measured by the those arrested for Class A-C felonies and Class D and E misdemeanors). Findings indicate that drug court participants are, on the whole, less likely to be arrested than the control group and less likely than the control group to be arrested for alcohol or drug related offenses. Overall, drug court graduates are the least likely to be arrested, commit felonies and/or drug and alcohol related offenses than either expelled participants or the control group. Simply put, drug court graduates are less likely to be arrested indicating a positive program effect.

Table 19: Experimental vs. Control – Multiple Indicators of Recidivism

<i>Post Admission Arrest Activity</i>	<i>Control</i>		<i>Experimental</i>		<i>Graduate</i>		<i>Expelled</i>		<i>Total</i>	
Arrest (Felony or Misdemeanor)	N	%	N	%	N	%	N	%	N	%
Yes	69	66	57	54	12	40	45	60	126	60
No	36	34	48	46	18	60	30	40	84	40
Misdemeanor Arrest										
Yes	56	53	52	50	13	43	39	52	108	51
No	49	47	53	50	17	57	36	48	102	49
Felony Arrest										
Yes	13	12	12	11	1	3	11	15	25	12
No	92	88	93	89	29	97	64	85	185	88
Drug/Alcohol Offense–F/M										
Yes	14	13	4	4	0	0	4	5	18	9
No	91	87	101	96	30	100	71	95	192	91
Crimes Against a Person										
Yes	16	15	15	13	5	17	10	13	31	15
No	89	85	90	87	25	83	65	87	179	85
Number of Arrests										
Mean	2.5		2.7		2.7		2.7		2.6	
Median	2.0		2.0		2.0		2.0		2.0	
Range	1-10		1-12		1-12		1-8		1-12	
Total Arrests	168		173		38		135		341	
Length of Time to First Arrest (months)										
Mean	6.5		6.1		4.8		6.4		6.3	
Median	5.4		3.8		1.7		5.1		4.9	
Range	.13-24		.03-24		.20-24		.03-19		.03-24	

We also compared recidivism rates between experimental and control subjects controlling for participation in substance abuse treatment⁷. Referring to Table 20, findings indicate that drug court participants receiving substance abuse treatment (54%) are less likely to recidivate than control subjects receiving substance abuse treatment (74%). Drug court participants receiving substance abuse treatment (54%) are also less likely to be rearrested than control subjects receiving no substance abuse treatment services (61%).

It is also interesting to note that drug court participants are 3 times more likely to participate in substance abuse treatment than control subjects with equally severe levels of substance abuse. This suggests that the drug court program provides a better avenue for substance abusing adolescent offenders to obtain treatment services than offenders under traditional supervision.

⁷ As shown in Table 20, there were a total of 6 expelled drug court participants who did not receive any substance abuse treatment during their participation in the program. Given such a small number, meaningful comparisons cannot be drawn between this group and others presented in Table 20.

Table 20: Recidivism Outcomes Controlling for Participation in Substance Abuse Treatment

		<i>Control With Tx</i>		<i>Experimental With Tx</i>		<i>Control No Tx</i>		<i>Experimental No Tx</i>		<i>Total</i>	
		N	%	N	%	N	%	N	%	N	%
Arrest (During Treatment/DC)	Yes	14	40	36	36	22	31	1	17	73	35
	No	21	60	63	64	48	69	5	83	136	65
Re-Arrest (12 Months Post Treatment/DC)	Yes	19	54	37	37	33	47	2	33	90	43
	No	16	46	62	63	37	53	4	67	119	57
Re-Arrest (Overall)	Yes	26	74*	54	54*	43	61	3	50	125	60
	No	9	26	45	46	27	39	3	50	84	40

*** p<.001, ** p<.01, * p<.05; two-tailed tests

Factors Predicting Overall Arrests Outcomes

Results from the preceding analyses suggest, on the one hand, that drug court participants had, lower recidivism rates than the control group of offenders traditionally adjudicated. On the other hand, however, these observed differences are small suggesting that they may be attributable to offender characteristics (e.g.: types of prior arrests) or offender activities (e.g.: participation in treatment). However, there are more powerful statistical techniques that enable us to better isolate the effect of drug court participation on recidivism outcomes while controlling for these additional factors. Here we employ a step-wise logistic regression, to assess what factors significantly predict the overall odds of recidivism. The logistic regression model tests the combined effect of participant demographics, attendance at treatment, criminal history patterns and drug court participation on the overall odds of rearrest. This analysis complements the preceding bivariate analyses by assessing the salience of each factor among control variables.

Results from the logistic regression analysis indicate that there are three significant variables that predict the overall occurrence of arrests. Referring to Table 21, two variables from the risk and substance abuse screens are significant. Here, offenders that are low risk and require a relatively low level of treatment intervention are two and three times less likely to recidivate than high risk/high need offenders. (This is calculated by taking the inverse of the odds ratio *Exp B*.) The last variable of significance pertains to drug court participation versus non-participation. Findings indicate that drug court participants are nearly two times less likely to recidivate than the control group of matched offenders.

Table 21: Results from the Stepwise Logistic Regression on the Odds of Recidivism

<i>Variables</i>	<i>B</i>	<i>S.E.</i>	<i>Wald</i>	<i>Sig.</i>	<i>Exp(B)</i>
ASAM Score 1 or lower	-1.18	0.53	4.91	0.03	0.31
Low Risk	-0.69	0.32	4.66	0.03	0.50
Drug Court Participation	-0.62	0.30	4.31	0.04	0.54
Constant	1.04	0.25	16.81	0.00	2.83

We also examined factors predicting post-program recidivism outcomes. It will be recalled that results of the bivariate analysis indicated there was no significant difference between the arrest rates of drug court participants (43%) compared to the control group (49%) in the 12 month post program follow-up. That analysis actually masked the very important difference in recidivism rates between program graduates (30%) and expelled participants (48%) and did not control the combined effect of multiple explanatory variables.

Referring to Table 22, results from the step-wise logistic regression analysis on the occurrence of post-program recidivism indicate that drug court participants are nearly two times less likely to recidivate in the 12 month post-program follow-up than the control group of matched offenders. There are three variables of significance. First, those who were employed at the time of admission to the drug court (or an equivalent time frame for the control group) are two times less likely (inverse of .558) to recidivate than offenders not employed. Second, offenders with prior property related offenses are approximately 2 times more likely to recidivate than offenders with no prior property offenses. And, similar to the findings presented on the regression analysis predicting the overall occurrence of recidivism, the variable pertaining to drug court participation versus non-participation is also significant.

Table 22: Results from the Stepwise Logistic Regression on the Odds of Recidivism

<i>Variables</i>	<i>B</i>	<i>S.E.</i>	<i>Wald</i>	<i>Sig.</i>	<i>Exp(B)</i>
Employed at Admission	-.583	.293	3.957	.047	.558
Prior Property Arrest	.845	.312	7.312	.007	2.327
Drug Court Participation	-.774	.305	6.455	.011	.461
Constant	-.136	.277	.242	.623	.873

Survival Analysis

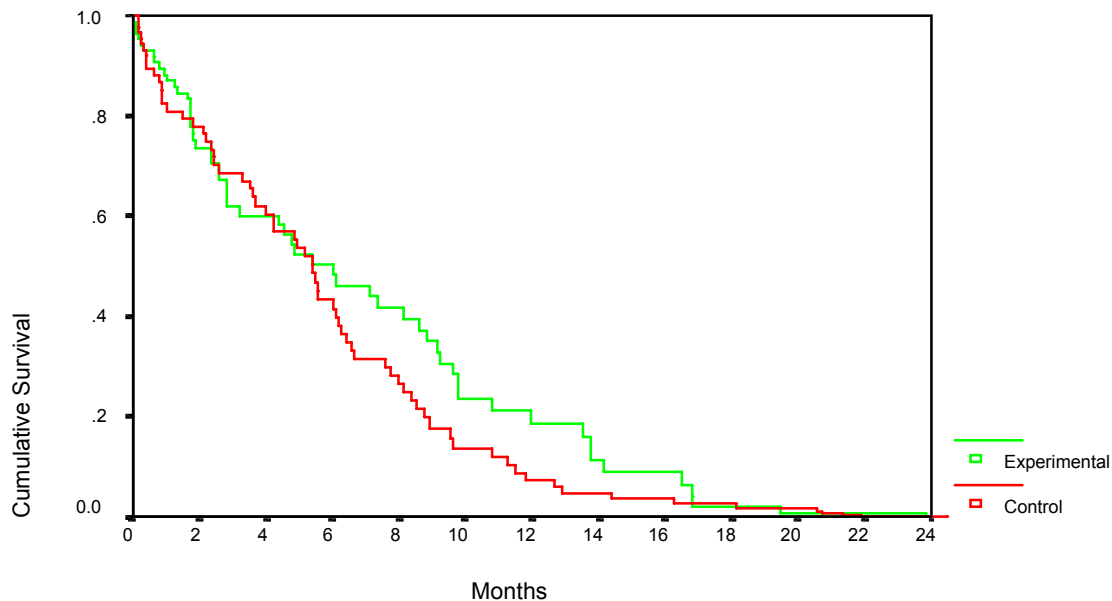
The outcome measures presented thus far focused on the overall occurrence of arrests between experimental and control subjects and factors predicting those outcomes. Another different approach to assess recidivism is to examine the length of time to arrest so as to measure the overall amount of time that participants refrained from criminal behavior. Here we used survival analysis to compare the timing of arrest between drug court participants and control subjects⁸.

Results of the survival analysis indicate that the drug court program did not significantly delay returns to crime, as measured by months to first arrest. The graph in Figure 5 illustrates the percent of drug court program participants and control subjects not yet arrested on the vertical axis. The number of months is displayed on the horizontal axis. For example, from the point of admission to the drug court (time zero) no one had been rearrested. By the sixth month, 57% of the control subjects had not been arrested (43% had been arrested) compared with 61% of drug court participants (39% had been arrested). And at twelve months, the percentages not arrested had declined to 14% for the control subjects and 16% for drug court participants.

⁸ Because of its flexibility, a Cox regression (proportional hazards model) model will be employed as it is commonly used to analyze failure time data in the presence of censored cases (i.e.: the number of missing observations in which some offenders were not rearrested during the period of investigation).

As in the case of the logistic regression analyses above, we also included several covariates (predictor variables) in the Cox regression model to examine factors predictive of desistance from new criminal activity. Results of the analysis indicate that there is only one variable that significantly predicts the overall rate of time to failure – employed at admission. Offenders who were not employed at the time of admission are significantly more likely to recidivate sooner than offenders who were employed ($B = -.478$, $SE = .214$, $p < .05$).

Figure 5: Survivor Function Estimate of Months to First Arrest



Overall findings in this section of the report indicate a positive program effect with fewer juvenile drug court participants (54%) being arrested than the control group (66%) and, more importantly, program graduates (40%) being the least likely to re-offend overall. Results of the multivariate analyses indicate that drug court participants are nearly two times less likely than the control group to be arrested overall as well as in the 12 month post-program follow-up period. In sum, with the exception of findings from the survival analysis, juvenile drug court participants fared better than the control group across multiple indicators of recidivism including overall rearrest frequency and offense severity.

Section 8

Estimating Program Costs and Crime Reduction Benefits

The total economic costs of substance abuse in the United States exceeds \$275 billion per year of which nearly half is attributable to alcohol and drug related crimes. Such costs occur because of lost earnings, losses in productivity, direct salary costs and indirect costs of organizations that deal with the repercussions of substance abuse including the criminal justice system, mental health organizations, hospitals and social service agencies, to name a few. As a result, the creation of numerous drug treatment and prevention programs have spawned a great deal of interest among policy makers. And with respect to drug courts, researchers have been pressed to identify the costs and benefits associated with these programs. Are drug courts cost effective? Are drug courts effective in reducing crime? Does participation in drug court reduce alcohol and drug use?

Currently, the program's total annualized operational costs for processing 105 drug court participants over a matched sample of juvenile offenders who were adjudicated through the traditional juvenile court is estimated at \$93,218.00.

Methodology

A number of different approaches can be used to determine whether or not drug court programs are cost effective. The methodology employed here is modeled after that developed by Harrell, Cavanagh and Roman (1998) who developed a method for calculating the costs and benefits of the Washington D.C. Superior Court Drug Intervention Program. The cost estimates for this study are based on differences in use of resources between the juvenile drug court program and adolescents adjudicated through traditional criminal case processing.

The costs of operating the juvenile drug court program is estimated for the 105 participants in the recidivism study, which reflects approximately the first 27 months of the programs operation. Since the primary concern lies in the ongoing costs of operations, program start-up costs (\$313,500) were excluded from the analysis. The costs associated with traditional case processing are also excluded as they are also costs that must be incurred by the juvenile drug court program as well. Since program participation length varies widely both across and within sites, total costs are based on the average daily cost times the number of days participants were enrolled in the drug court. The total annualized cost of the drug court's operations is \$307,164 which was calculated in the following manner:

Calculating Cost of Operations

Total Program Cost	\$1,599,775	
Start Up Costs	\$313,500	
Total Operating Costs	\$1,286,275	/ Total Client Days 53,979 = \$23.83/day
Less Cost of Active Days	\$23.83 * 12,156 days	= \$289,678
Less Cost of Excluded Cases	\$23.83 * 12,819 days	= \$305,477
Total Operating Costs	\$1,286,275 - \$289,678 - \$305,477	= \$691,120
Annualized Cost (27 Months)	\$691,120 * 27 /12	= \$307,164

Other costs described in this analysis include the cost of substance abuse treatment as well as the costs that result from new criminal activity including: costs incurred by crime victims (e.g.: medical care, mental health care expenditure, lost productivity); costs that accrue to the public (e.g.: victim's services and compensation); and criminal justice costs including the costs of detention and probation.

The cost of substance abuse treatment was calculated by multiplying the providers unit cost of service (e.g.: group therapy, individual session, intensive outpatient) times the number of units of service delivered. Treatment data services and corresponding provider costs were derived from the Office of Substance Abuse, Treatment Data System.

Estimating the costs incurred by crime victims and the costs accrued to the general public are calculated by multiplying the number of crimes (incidents) times the cost associated with each criminal event. Estimates for incidence cost is derived from Miller, Cohen and Wiersema (1996) and Rajkumar and French (1996). Table 23 provides their estimates for the average cost per victimization and figures are adjusted for inflation through 2001⁹.

Table 23: Cost Associated with a Criminal Act^a

<i>Offense</i>	<i>Cost of Incidence</i>	<i>Offense</i>	<i>Cost of Incidence</i>
Arson	\$21,682	Forgery	\$0
Assault	\$1,851	Larceny/Theft	\$431
Burglary	\$1,324	Motor Vehicle Theft	\$4,120
Drug Possession	\$0	Murder	\$432,055
Drug Trafficking	\$0	Criminal Threatening	\$756
Operating Under the Influence	\$6,991	Sexual Assault	\$5,978
Probation Violation	\$0	Robbery	\$2,704

^aAdapted from Harrell, Cavanagh and Roman (1998)
Miller, Cohen and Wiersema (2001) estimates

Criminal justice related costs including the costs of juvenile detention and probation were derived from official records maintained by the Department of Corrections, Division of Juvenile Services. Detention costs were estimated at \$217 per day for fiscal year 2000 and \$274 per day for fiscal year 2001. The average daily cost for an offender on juvenile probation was based on a median probation officer salary of \$42,714 (this includes fringe and retirement benefits). The same per diem cost was calculated for adult probation for those offenders committing crimes as adults. Per diem incarceration costs in adult jail facilities was estimated by taking the average from seven county jails (Cumberland, York, Androscoggin, Penobscot, Washington, Oxford and Franklin) which amounted to \$77.10 a day per offender. Information pertaining to crimes committed as adults and related sentencing data was obtained from Maine's Department of Public Safety.

⁹ It should be noted that these are national estimates using data derived from the National Crime Victim Survey and the Federal Bureau of Investigation. Any bias that may result in the application of these estimates in Maine cannot, unfortunately, be estimated.

Table 24 provides an annualized cost comparison of 105 juvenile offenders placed in the juvenile drug court program against a matched sample of 105 juvenile offenders who were traditionally adjudicated. Findings indicate that the program has produced a net savings across three primary indicators: reduced detention/jail costs, reduced probationary costs and an overall savings in crime reduction. However, findings indicate the program is not cost effective because enrollments are not being maintained at the established capacity of 15 participants per court. The net savings generated across these areas do not account for the overall operational costs of the program, yielding a net loss of 61 cents for every dollar invested or a total cost in excess of benefits of \$93,218.00. (See Appendix B for estimates using figures for the entire 27 month period.)

Maine's juvenile drug treatment program is not cost-effective because it has not maintained capacity at each of the six sites. Recalling the discussion of productivity in Section 2, we indicated that all but one drug court site had attained the "minimum capacity level" based on maintaining a total of 15 participants per site at any one time. In Table 24, we re-calculated the annualized costs of the drug court program and costs associated with traditional adjudication estimating the drug court operating at minimum expected capacity. All other things being equal, this scenario reveals that once actual enrollments reach the 15 person capacity, benefits from reduced criminal justice related costs will produce a net program benefit. In short, if the juvenile drug court program complies with its policy of maintaining enrollments of 15 participants at each site, cost-savings would be realized.

Given the availability for calculating program, treatment and criminal justice related costs and the lack of data available for measuring many social and familial related benefits, it should be noted that the cost-benefit analysis presented here is conservatively estimated.

Table 24: Annualized Operational Costs and Crime Reduction Benefits of Maine's Juvenile Drug Court

	<i>Traditional Adjudication N=105</i>	<i>Juvenile Drug Court N=105</i>	<i>Difference</i>
<i>Actual Capacity</i> <i>Maintaining 64 clients statewide with 8 discharges per site per year</i>			
Total Operating Costs	0	307,164	(307,164)
Treatment Costs	20,233	51,807	(31,574)
Detention Costs (including sanctions)	595,079	380,576	214,502
New Probationary Costs	7,494	3,519	3,975
Cost of New Criminal Activity	137,355	110,312	27,043
Total	760,161	853,379	-93,218
<i>Operating at Min. Expected Capacity</i> <i>Maintaining 90 clients statewide with 15 discharges per site per year</i>			
Total Operating Costs	0	307,164	(307,164)
Treatment Costs	33,337	85,358	(52,021)
Detention Costs (including sanctions)	980,463	627,506	352,957
New Probationary Costs	12,348	5,798	6,549
Cost of New Criminal Activity	226,308	181,752	44,556
Total	1,252,456	1,207,579	44,877

Section 9

Conclusions and Recommendations

The mission of Maine's juvenile drug court is "*to improve the quality of juvenile justice in Maine through timely and effective substance abuse, social services, and juvenile justice interventions*". The degree to which the juvenile drug court program successfully meets these goals is directly related to the degree of collaboration that develops between the various agencies involved with the program in such matters as sharing resources, identifying and reaching the targeted population and selecting juvenile offenders who meet established eligibility criteria. The drug court program inspires a collaborative process to assemble and direct a variety of resources from numerous agencies towards the achievement of mutual goals. In this respect, juvenile drug courts are not intended to provide a "quick fix" rather, they are designed to overcome the boundaries of historically independent systems (Hartmann and Rhineberger, 2002).

This report has provided a rigorous assessment of Maine's juvenile drug treatment court program. Overall, there are three important findings about the programs' overall effectiveness:

1. Juvenile drug court participants have significantly lower overall arrest rates than a comparison group comprised of a matched pair of offenders traditionally adjudicated.
2. The juvenile drug treatment court program has produced a reduction in criminal justice related expenditures (costs of detention/jail, probation and averted crimes) and will become cost effective with expanded capacity.
3. Juvenile drug court participants are significantly more likely than non-drug court participants to participate in substance abuse treatment.

Policy makers should now be convinced that the juvenile drug court can be an effective intervention to reduce recidivism for substance abusing adolescent offenders. However, results of the study should also remind policy makers that juvenile drug courts are effective for only some juvenile offenders. As previously mentioned, drug courts are not a magic bullet. Many drug court participants fail. In Maine, less than 30% successfully completed the program and graduated. Within two years of program entry, about 40% of the graduates were rearrested. This is, nevertheless, a relatively high rate of re-offending even when compared to expelled participants (60%) and rearrests among the comparison group of non-drug court participants (66%).

Not only should policy makers have realistic expectations about the overall impact of juvenile drug courts, they should also attempt to improve the existing program so as to improve overall outcomes. High rates of program failure suggest the need to re-examine some of the technical flaws identified in this report. Policy makers need to ensure that offenders admitted to the program reflect an appropriate target population. Providing treatment services commensurate with the treatment needs of participants is also likely to improve outcomes. However, to improve successful completion rates and reduce rates of re-offending will require improvements in the overall frequency of drug testing. This study has established that frequent drug testing deters future drug use.

Do reductions in rearrest rates reported in this study justify the shift to juvenile drug court as a diversion program for drug involved adolescents? One way this question was addressed was to examine the ratio of benefits to costs of the juvenile drug court program. Findings indicate the program is not cost effective because enrollments are not being maintained at the established capacity of 15 participants per court. Hence, the evaluators recommend the following actions to be considered in order to further improve the effectiveness of the program:

- ❑ In order to become cost-effective, the number of participants must be increased. Those drug court sites struggling to reach capacity should consider working more closely with and encourage the primary sources of their referrals (defense counsel and JCCO's) to participate in increasing enrollments in their jurisdictions. Information flow might be increased and focus groups might be considered.
- ❑ The drug court model is based on identifying a target population of high to medium risk and need adolescent offenders. However, our analysis indicates that these policies are often ignored in the screening and admissions process. More emphasis needs to be placed on refining the drug court's target population and providing services that are commensurate with moderate to high risk adolescents.
- ❑ The drug court should consider streamlining admissions related duties. In particular, we found case management and treatment organizations duplicating efforts in conducting clinical assessments. The removal of this redundancy of effort should also assist in increasing enrollments.
- ❑ Extend the scheduled length of the first phase of the program so as to establish more realistic benchmarks and reasonable expectations for participants and their families to assess their progress in the initial phases of the program.
- ❑ Since only 21% of drug court participants received the types of treatment services that were commensurate with their level of treatment need, more emphasis should be placed on ensuring that appropriate treatment interventions are being delivered.
- ❑ Given different responses to similar infractions, consideration ought to be given to the development of a structured sanction protocol (i.e., graduated sanctions menu) that is recommended for drug courts nationally.
- ❑ Increase the level of drug testing to meet the standards that key actors in the program believe are necessary. Our data indicate that frequent drug testing is a deterrent. Sites that drug test the most frequent also have the *fewest* positive tests.
- ❑ Consider building stronger relationships with schools and the business community so as to support the long-term goals of assisting participants to develop positive relationships in the community and obtaining the necessary skills to become productive citizens.
- ❑ Continue to ensure that local drug court practitioners receive nationally recognized training.

In addition, we can not ignore evidence of the larger impacts of drug courts on the criminal justice and treatment systems. The drug court model has served as a major catalyst for change as it has been transformed into a more generalized “problem solving” approach (such as domestic violence courts). The drug court model has led to a new working relationship between different agencies of government and between the judiciary and the treatment system (Goldkamp, 2003). Locally, state officials do not seriously debate whether drug courts are appropriate or effective. Instead, attention is focused on how to involve more clients and professionals into these specialized courts and how to integrate these programs into the broader fabric of the judicial and treatment systems.

References

- Belenko, S. *Research on Drug Courts: A Critical Review. 2001 Update*. New York: The National Center on Addiction and Substance Abuse at Columbia University. 2001
- Cooper, Caroline S. et al. *2000 Drug Court Survey Report. Part I: Judicial Perspectives*. OJP Drug Court Clearinghouse and Technical Assistance Project. American University. October 2001. Draft.
- Cox, D.R. *Regression Models and Life Tables (with discussion)*. Journal of the Royal Statistical Society, B34, 187-220. 1972
- Goldkamp, J.S. White, J.B. and Robinson. *Do Drug Courts work? Getting Inside the Drug Court Black Box*. Journal of Drug Issues. 31: 27-72. 2001
- Goldkamp, J.S. *Reaction Essay: The Impact of Drug Courts*. Criminology and Public Policy. 2:2. 197-199. March 2003
- Hartmann, D., Rhineberger, G. *Evaluation of the Kalamazoo County Juvenile Drug Treatment Court Program*. Kercher Center for Social Research. Western Michigan University. September 2002
- Hester R.K., Miller W.R. *Handbook of Alcoholism Treatment Approaches: Effective Alternatives*. 2 ed. Neddham Heights MA: Allyn and Bacon. 1995
- Huff, D., Stageberg P., Wilson B. and Moore, R. *An Assessment of the Polk County Juvenile Drug Court*. Iowa Statistical Analysis Center. 2001
- French, Rajkumar. *Drug abuse, Crime Cost and Economic Benefits of Treatment*. Journal of Quantitative Criminology. 13(3). 294-302. 1996
- Juvenile Drug Court Activity Update: *Summary Information*. OJP Drug Court Clearinghouse and Technical Assistance Project. American University. 2003
- Latessa, E.J., Shaffer, D.K. & Loenkamp, C. Outcome evaluation of Ohio's Drug Court efforts: Final Report. University of Cincinnati. 2002
- Malowe, D. *Effective Strategies for Intervening With Drug Abusing Offenders*. Villanova Law Review. Vol. 47: 989. 2002.
- Miller, Cohen and Wierema. *Victim Costs and Consequences: A new look*. Washington DC National Institute of Justice. 1996
- Peters, R.H. and Murrin, M.R. Predictors of retention and arrest in Drug Courts. *National Drug Court Institute Review*, 2 (1), 33-60. 1999
- Taxman, Faye. *Unraveling "What Works" for Offenders in Substance Abuse Treatment Services*. National Drug Court Review. 2000

Appendix A

Scenario 1

Debra has been in the drug court program for two months. She is 16 years old, lives with her mother and is trying to enroll back in school. Her drug of choice is opiates and she has three prior misdemeanor convictions – all property related. To date, she has received two sanctions: a verbal reprimand for an unexcused absence at treatment (week two) and a curfew restriction for violating a no contact order with one of her friends (week four). She has received verbal praise from the bench since then and received a gift certificate last week. Two days ago, she failed to attend a scheduled session with treatment, quit her part-time job and arrived at home two hours after curfew. Her explanation to her case manager was that “she feels too confined.” All drug and alcohol tests have been negative. Today is drug court. What, if anything, should happen to Debra?

<i>Should Happen (n)</i> <i>Likely to Happen (n)</i>	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>
Incarceration	2 2	0 0	0 0	0 0	2 2	0 0
Community Service	2 4	3 3	2 2	1 1	2 2	1 1
Increase Testing	1 1	0 0	0 0	0 0	0 0	0 0
Increase Reporting	2 2	0 0	0 0	0 0	0 0	0 0
Written Assignment	4 4	2 2	2 2	0 0	2 2	1 1
Increased Treatment	0 0	1 1	1 1	0 0	1 1	0 0
Verbal Caution	4 4	3 3	2 2	0 0	2 2	0 0
Termination	0 0	0 0	0 0	0 0	0 0	0 0
Phase Demotion	0 0	0 0	0 0	0 0	0 0	0 0
Other	3 3	0 0	1 1	1 1	1 1	1 1

Scenario 2

John has been in the drug court program for two weeks. He is 15 years old, lives with his grandparents and is enrolled in school full-time. His drug of choice is marijuana and he has one prior assault conviction. He has recently tested positive for alcohol (.04) and has been suspended for initiating a fight at school. He has been compliant with all other program requirements. His explanation is that he used mouthwash prior to the test and that the fight was in self-defense having been instigated by others. Today is drug court. What, if anything, should happen to John?

<i>Should Happen (n)</i> <i>Likely to Happen (n)</i>	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>
Incarceration	0 0	4 2	0 1	1 1	2 2	1 2
Community Service	2 2	1 2	1 0	5 4	2 2	1 0
Increase Testing	2 1	3 4	1 1	3 1	0 0	1 0
Increase Reporting	1 1	0 0	0 0	1 2	0 0	0 0
Written Assignment	4 4	1 1	1 2	3 4	2 2	1 1
Increased Treatment	1 4	1 3	1 1	1 3	1 1	0 0
Verbal Caution	5 5	2 3	2 2	2 3	2 2	0 0
Termination	0 0	0 0	0 0	0 0	0 0	0 0
Phase Demotion	0 0	1 1	0 0	0 0	0 0	0 0
Other	1 2	0 0	1 1	2 5	1 1	1 2

Scenario 3

Jim has been in the drug court program for twelve months and is due to graduate in three weeks. He is 18 years old and has completed his GED. His drug of choice is opiates and he has eight prior misdemeanor and felony convictions – all substance use related. To date, he has received various sanctions for drug use, missing scheduled appointments and violating a no contact order. However, he has been drug free and compliant with program expectations for the past five months. Jim was arrested yesterday for use of a stolen credit card. Aside from whatever penalty Jim may receive for this new charge, what, if anything, should happen to him in drug court?

<i>Should Happen (n)</i> <i>Likely to Happen (n)</i>	<i>Augusta</i>	<i>Bangor</i>	<i>Biddeford</i>	<i>Lewiston</i>	<i>Portland</i>	<i>West Bath</i>
Incarceration	3 3	2 3	1 2	0 0	3 3	0 0
Community Service	0 1	1 3	0 0	0 1	1 1	0 0
Increase Testing	0 0	1 1	0 0	0 0	1 0	0 0
Increase Reporting	0 0	0 0	0 0	0 0	0 0	0 0
Written Assignment	0 0	1 0	1 0	0 0	3 1	0 0
Increased Treatment	0 0	0 0	0 0	0 0	1 0	0 0
Verbal Caution	0 1	1 1	0 0	0 1	0 0	0 0
Termination	4 3	0 1	0 0	0 0	3 3	0 0
Phase Demotion	1 0	1 1	2 2	0 0	4 0	0 0
Other	1 3	1 0	1 0	1 0	4 2	1 0

Appendix B

**Total Operational Costs and Crime Reduction Benefits of
Maine's Juvenile Drug Court**

	<i>Traditional Adjudication</i>	<i>Juvenile Drug Court</i>	<i>Difference</i>
<i>Existing Capacity</i> <i>(N=105, maintaining 80% capacity and discharging 9 clients per site per year)</i>			
Total Program Costs	0	691,120	(691,120)
Treatment Costs	45,525	116,566	(71,041)
Detention Costs	1,338,927	856,297	482,630
New Probation Costs	16,862	7,918	8,944
Crime Costs	309,048	248,202	60,846
Total	828,708	1,252,655	(209,741)
<i>Operating at Min. Expected Capacity</i> <i>(N=173, maintaining 100% capacity and discharging 15 clients per site per year)</i>			
Total Program Costs	0	691,120	(691,120)
Treatment Costs	75,008	192,056	(117,048)
Detention Costs	2,206,042	1,411,889	794,153
New Probation Costs	27,782	13,046	14,736
Crime Costs	509,193	408,942	100,251
Total	2,818,025	2,717,054	100,971