CHITTENDEN COUNTY TREATMENT COURT

CONTROL GROUP EVALUATION

FINAL REPORT

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Submitted By

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SUMMARY OF CONCLUSIONS

1. The research confirmed that it is feasible to develop a valid control group for use in comparing recidivism results from outcome evaluations.

2. The previous outcome evaluation for the CCTC reported a recidivism rate for the participants who graduated from the program of 41.8% which was at parity with the rate of 50.6% observed for the subjects who were terminated from the program. The control group developed in this study showed a significantly higher recidivism rate of 82.0%, leading to the conclusion that the CCTC appears to be a promising approach for reducing recidivism among both graduates of the program and also those subjects who participate in the program but are either terminated or choose to withdraw from the program.

3. The positive impact of the CCTC was further revealed in the comparison of reconviction rates (number of reconvictions per 100 subjects) among the subjects who completed the CCTC, the subjects that were terminated or withdrew from the program, and the control group. The reconviction rate for those participants who completed the program was nearly half the rate observed for the terminated/withdrew group (127 vs. 241 reconvictions per 100 subjects) and almost four time less than the rate determined for the control group (127 vs. 495 reconvictions per 100 subjects).

4. Comparisons between the CCTC participants and the control group with respect to demographics and criminal histories showed only a few minor differences. The conclusion is that the reduced recidivism rates observed for the CCTC graduates and the subjects who were terminated or withdrew from the program represented a significant reduction in recidivism compared to the control group and is most likely a result of the benefits the participants received from the CCTC program and not a result of the differences observed between the participants and control subjects

INTRODUCTION

This evaluation of the CCTC is a follow-up to an outcome evaluation conducted in February of 2013[1]. The result of that outcome evaluation revealed a recidivism rate of 41.8% for subjects who had graduated from the program, and a rate of 50.6% for subjects who were terminated or withdrew from the program. However, since a control group was not available for comparison, it was not possible to determine from the research whether these recidivism rates represented a significant improvement over the recidivism rates expected for similar offenders who had not received benefit from the treatment court. This evaluation was initiated to address this issue.

This outcome evaluation was supported through funds provided by the Vermont Court Administrator's Office (CAO). However, the findings and conclusions expressed in this report are those of the authors and do not necessarily reflect the views of the CAO.

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[1] The Executive Summary from the Chittenden County Treatment Court Outcome Evaluation report (February, 2013) is available in Appendix C.

SUMMARY OF FINDINGS

Which Subjects Recidivated?

This section compares the rate of recidivism from the previous outcome evaluation with the recidivism rate calculated for the new control group. Table 1 displays the results of this comparison. As reported previously, the percentage of CCTC participants who were reconvicted after graduating from the program was found to be 41.8%, and was at parity with the recidivism rate for the CCTC participants who were terminated or withdrew from the program (50.6%). In comparison, the control group showed a recidivism rate of 82.0%, significantly higher than was observed for either of the CCTC study groups.

Table 1
Comparison of Recidivism Rates
CCTC Study Segments vs. Control Group

| | CCTC Participants | | | | | | Control Group | |
| | Graduated | | Terminated / Withdrew | | Total | | | |
	Count	%	Count	%	Count	%	Count	%
Recidivist	28	41.8%	41	50.6%	69	46.6%	173	82.0%
Non-recidivist	39	58.2%	40	49.4%	79	53.4%	38	18.0%
Total	**67**	**100.0%**	**81**	**100.0%**	**148**	**100.0%**	**211**	**100.0%**

Note: Values in the same row with different shades of gray are significantly different at p< 0.05 in the two-sided test of equality for column proportions. Tests assume equal variances.

When Did Subjects Recidivate?

The calculation summarized in the previous section represents the recidivism rate at the time this study was conducted. In addition to this recidivism measure, program effectiveness can also be measured in terms of how long a participant remains conviction free in the community. Even if a participant is convicted of another offense after program completion, the longer the subject remains crime free is important in evaluating the crime prevention potential for a program. This section takes a closer look at recidivism rates with respect to how long a subject was away from the CCTC and eligible to recidivate.

Tables 2A, 2B, and 2C on the next page present recidivism data for the 67 participants who graduated from the CCTC (Table 2A), the 81 participants who were terminated or withdrew from the program (Table B), and the 211 control group subjects – focusing on the number of subjects who were eligible to recidivate during a time period and the number who were reconvicted during that same time period. Looking at the column under "< 1 Year" in each table, the data show that all 67 graduates of the CCTC, the 81 subjects who were terminated from the program, and all 211 of the control group subjects were eligible to recidivate during this time. The table shows that 16 of the graduates and 17 from the terminated/withdrew group were reconvicted of crimes during that time period resulting in recidivism rates of 23.9% and 21.0%, respectively. In comparison, the recidivism rate observed for the control group during this time period is almost twice the rate that was observed for the CCTC participants. Table 2C shows that 100 of the control subjects were reconvicted in less than one year for a recidivism rate of 47.4%.

The second column in the tables show the recidivism rates of the subjects who were at least one full year from leaving the CCTC, or in the case of the control group, from their recidivism start date. Combining the first and second columns of data show that for the post-CCTC elapsed time period including one full year, the graduates of the program recidivated at a significantly lower rate of 31.3% (21 of 67 participants), compared to the control group recidivism rate of 63.0% (133 of 211 subjects). The participants who were terminated or withdrew from the CCTC also showed a significantly lower recidivism rate of 33.3% (27 of 81 subjects). Subsequent columns extend the post-CCTC elapsed time out to five to seven years and show that very little recidivism occurred after the second full year of eligibility, with 80% to 90% of all subjects who recidivate doing so before and during that time period.

Table 2A
Time to Recidivate Post-CCTC by Years of Eligibility to Re-offend – CCTC Graduates

Post-CCTC Elapsed Time	**< 1 Year**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Number of Participants Who Recidivated During the Time Period	16	5	4	2	1	0
Total # of Participants Who Were Eligible to Recidivate During the Time Period*	67	57	49	41	37	26
% Recidivated	**23.9%**	**8.8%**	**8.2%**	**4.9%**	**2.7%**	**0.0%**

*The data in this row represents all participants who had completed the CCTC for certain time periods. Participants may appear in more than one column based on the longevity of their post-CCTC elapsed time. For example each of the 41 participants who appear in the "Year 3" column also appear in the "< 1 Year", "Year 1", and "Year 2" columns because, having completed three years of post-CCTC elapsed time, they necessarily have also completed less than one year, one year, and two years of elapsed time.

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Table 2B
Time to Recidivate Post-CCTC by Years of Eligibility to Re-offend – Terminated/Withdrew from the CCTC

Post-CCTC Elapsed Time	< 1 Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Number of Participants Who Recidivated During the Time Period	17	10	7	2	2	1	2	0
Total # of Participants Who Were Eligible to Recidivate During the Time Period	81	77	58	55	49	40	34	24
% Recidivated	**21.0%**	**13.0%**	**12.1%**	**3.6%**	**4.1%**	**2.5%**	**5.9%**	**0.0%**

Table 2C
Time to Recidivate Post-CCTC by Years of Eligibility to Re-offend – Control Sample

Post-CCTC Elapsed Time	< 1 Year	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Number of Participants Who Recidivated During the Time Period	100	33	24	12	3	0	1	0
Total # of Participants who were eligible to recidivate during the time period	211	210	204	194	175	159	131	100
% Recidivated	**47.4%**	**15.7%**	**11.8%**	**6.2%**	**1.7%**	**0.0%**	**0.8%**	**0.0%**

Crimes For Which Participants Were Convicted

When considering the effect that the CCTC had on participants it is important to differentiate between the number of *participants* who recidivated and the number of *crimes* for which participants were convicted during the study period. While the first section of this evaluation focused on whether or not a *participant* was reconvicted during the study period, this section of the analysis focuses on the *number of crimes* for which participants were reconvicted.

Table 3 compares the number of reconvictions between the CCTC recidivists, and the control group recidivists. The data show that the combined recidivists from the CCTC were convicted of 280 crimes during the follow-up period. The participants who graduated from the CCTC were convicted of a total of 85 crimes during the study period – 12 of which were felonies (14.1%). Participants who withdrew or were terminated from the CCTC were convicted of 195 crimes during the study period – 37 of which were felonies (19.0%). This difference in felony reconvictions was not significant. In comparison, the control sample committed a total of 1045 crimes – 207 of which were felonies (19.8%).

Examination of the reconviction rate per 100 subjects provides a more revealing comparison. The reconviction rate for those participants who completed the program was nearly half the rate observed for the terminated/withdrew group (127 vs. 241 reconvictions per 100 subjects) and almost four time less than the rate determined for the control sample (127 vs. 495 reconvictions per 100 subjects).

Also, there were no significant differences in the proportions of total felonies to misdemeanors between the CCTC recidivists and the control group.

Table 3
Offense Levels for All Crimes for Which Subjects Were Reconvicted

| | CCTC Study Participants | | | | | | Control | |
| | Graduated | | Terminated or Withdrew | | Total | | | |
	# of Convictions	%	# of Convictions	%	# of Convictions	%	# of Convictions	%
Felony	12	14.1%	37	19.0%	49	17.5%	207	19.8%
Misdemeanor	73	85.9%	158	81.0%	231	82.5%	838	80.2%
Total	**85**	**100.0%**	**195**	**100.0%**	**280**	**100.0%**	**1045**	**100.0%**

Note: Values in the same row that are shaded gray are significantly different at p< 0.05 in the two-sided test of equality for column proportions. Tests assume equal variances.

Table 4 shows a comparison of the types of post-program crimes for which the CCTC recidivists and the control recidivists were reconvicted. The comparison of reconvictions between the total sample of CCTC recidivists and the control group recidivists revealed consistent results. The primary differences observed in comparing the types of offenses committed by the CCTC and control group recidivists were the CCTC recidivists were reconvicted for more theft crimes and driving with a suspended license violations. The control showed more reconvictions for fraud offenses and violations of probation.

Table 4
All Crimes for Which Subjects Were Reconvicted

	Graduated CCTC		Terminated / Withdrew		Total CCTC		Control Group	
	# of Conv	%	# of Conv	%	# of Conv	%	# of Conv	%
Total Theft Convictions	24	28.2%	57	29.2%	81	28.9%	214	20.5%
Driving License Suspended	18	21.2%	17	8.7%	35	12.5%	84	8.0%
Drug Offense	11	12.9%	14	7.2%	25	8.9%	65	6.2%
Total Assault Convictions	2	2.4%	19	9.7%	21	7.5%	81	7.8%
Total Fraud Convictions	5	5.9%	13	6.7%	18	6.4%	119	11.4%
Vs Justice *	4	4.7%	12	6.2%	16	5.7%	46	4.4%
Escape	2	2.4%	13	6.7%	15	5.4%	46	4.4%
Failure to Appear	3	3.5%	12	6.2%	15	5.4%	56	5.4%
Violation of Probation	3	3.5%	11	5.6%	14	5.0%	155	14.8%
Disorderly Conduct	3	3.5%	9	4.6%	12	4.3%	46	4.4%
TRO Violation	0	0.0%	8	4.1%	8	2.9%	7	0.7%
DUI-2nd Offense	6	7.1%	1	0.5%	7	2.5%	14	1.3%
Other DMV Convictions	2	2.4%	3	1.5%	5	1.8%	34	3.3%
Unlawful Trespass	2	2.4%	2	1.0%	4	1.4%	21	2.0%
Unlawful Mischief	0	0.0%	3	1.5%	3	1.1%	18	1.7%
Disturbing the Peace	0	0.0%	1	0.5%	1	0.4%	2	0.2%
Other DUI Convictions	0	0.0%	0	0.0%	0	0.0%	14	1.3%
Other Convictions	0	0.0%	0	0.0%	2	0.7%	39	3.7%
Total	**85**	**100.0%**	**195**	**100.0%**	**280**	**100.0%**	**1045**	**100.0%**
Number of Recidivists	28		41		69		211	
Average # of Convictions	3.0		4.8		4.1		5.0	
Median # of Convictions	2		4		3		3	

Note: Values in the same row that are shaded in gray are significantly different at p< 0.05 in the two-sided test of equality for column proportions.

* Contempt, false alarms, resisting arrest, etc.

SUBJECT PROFILE COMPARISONS

The following profile comparisons demonstrate how closely the CCTC participants and the control group were matched. Although there were a few significant differences reported in some of the variables used to develop the control group, additional analysis showed these differences were not found to significantly affect the recidivism rate reported for the control group.

The overall conclusion is that the significantly lower recidivism rate observed for the CCTC graduates and the subjects who were terminated or withdrew from the program, compared to the control group, was more likely due to the benefits the participants received from the CCTC, whether or not they were successful in completing the program, rather than from differences in demographic or criminal history characteristics between the groups.

Demographic Profile Comparisons

Gender

Table 5 presents the gender composition of the study group. The total study group for the CCTC consisted of approximately 47.3% females and 52.7% males, compared to the control group which was composed of 50.2% females and 49.8% males. This difference was not found to be significant.

Table 5
Gender by CCTC Participants/Control

	CCTC Participants						Control Group	
	Graduated CCTC		Terminated / Withdrew		Total CCTC		Control Group	
	Count	%	Count	%	Count	%	Count	%
Female	35	52.2%	35	43.2%	70	47.3%	106	50.2%
Male	32	47.8%	46	56.8%	78	52.7%	105	49.8%
Total	**67**	**100.0%**	**81**	**100.0%**	**148**	**100.0%**	**211**	**100.0%**

Race

Table 6 presents the racial characteristics of the CCTC participants and the control group. Not surprisingly, over 96% of all subjects were Caucasian. The CCTC study cohort included only four African Americans (2.7%) and one Native American (0.7%). There were slightly fewer African Americans (1.9% vs. 2.7%) in the control group, but the difference is not significant.

Table 6
Race by CCTC Participants/Control

	CCTC Participants						Control Group	
	Graduated CCTC		Terminated / Withdrew		Total CCTC			
	Count	%	Count	%	Count	%	Count	%
African American	2	3.0%	2	2.5%	4	2.7%	4	1.9%
Asian	0	0.0%	0	0.0%	0	0.0%	1	0.5%
Caucasian	64	95.5%	79	97.5%	143	96.6%	204	96.7%
Native American	1	1.5%	0	0.0%	1	0.7%	0	0.0%
Unknown	0	0.0%	0	0.0%	0	0.0%	2	0.9%
Total	67	100.0%	81	100.0%	148	100.0%	211	100.0%

Current Age

Table 7 shows a comparison of the ages of the CCTC and control group subjects. The data show that the total CCTC participants' age profile matches closely to that of the control subjects. No significant differences were observed.

Table 7
Current Age - By CCTC Participants/Control

	CCTC Participants						Control Group	
	Graduated CCTC		Terminated / Withdrew		Total CCTC			
	Count	%	Count	%	Count	%	Count	%
60 +	1	1.5%	1	1.2%	2	1.4%	2	0.9%
50 to 59	5	7.5%	3	3.7%	8	5.4%	7	3.3%
40 to 49	11	16.4%	8	9.9%	19	12.8%	24	11.4%
35 to 39	12	17.9%	9	11.1%	21	14.2%	35	16.6%
30 to 34	21	31.3%	29	35.8%	50	33.8%	73	34.6%
25 to 29	16	23.9%	30	37.0%	46	31.1%	66	31.3%
21 to 24	1	1.5%	1	1.2%	2	1.4%	4	1.9%
Total	67	100.0%	81	100.0%	148	100.0%	211	100.0%

Age at First Conviction or Arrest

Table 8 summarizes data regarding the age of participants at their first criminal conviction, or first arrest if they did not show any convictions in their criminal history. Over 50% of the CCTC and control group subjects had been convicted of a criminal offense, or had at least been arrested, by age 20. No significant differences were observed between the CCTC participants and the control group in age at first conviction or arrest.

Table 8A
Age at First Arrest or Conviction by CCTC Participants/Control

| | CCTC Participants | | | | | | Control Group | |
| | Graduated CCTC | | Terminated / Withdrew | | Total CCTC | | Control Group | |
	Count	%	Count	%	Count	%	Count	%
50 +	1	1.5%	0	0.0%	1	0.7%	1	0.5%
40 to 49	3	4.5%	1	1.2%	4	2.7%	7	3.3%
35 to 39	0	0.0%	0	0.0%	0	0.0%	5	2.4%
30 to 34	7	10.4%	2	2.5%	9	6.1%	7	3.3%
25 to 29	7	10.4%	9	11.1%	16	10.8%	14	6.6%
21 to 24	20	29.9%	19	23.5%	39	26.4%	56	26.5%
16 to 20	29	43.3%	50	61.7%	79	53.4%	121	57.3%
Total	67	100.0%	81	100.0%	148	100.0%	211	100.0%

Criminal History Profile Comparisons

Base Charge Offense Level

Table 9 shows the comparison between the CCTC participants and the control group for the offense levels (felony vs. misdemeanor) of the base docket charges -- those charges that resulted in the referral of study participants to the CCTC, or the charges used as the start of the recidivism clock for the control group. All study groups showed that approximately 60% of their base charge convictions were misdemeanors, with approximately 40% being felony convictions. There were no statistically significant differences in base charge offense level between the CCTC and the control group.

Table 9
Base Docket Charge Offense Level by CCTC Participants/Control

	CCTC Participants						Control Group	
	Graduated CCTC		Terminated / Withdrew		Total CCTC		Control Group	
	Count	%	Count	%	Count	%	Count	%
Felony	29	43.3%	33	40.7%	62	41.9%	74	35.1%
Misdemeanor	38	56.7%	48	59.3%	86	58.1%	137	64.9%
Total	67	100.0%	81	100.0%	148	100.0%	211	100.0%

Base Charge Offense Class

Table 10 shows a comparison of base charge offense types between the CCTC participants and the control group. For both groups theft charges constituted approximately 40% of the base charges. The offense class profile for the CCTC subjects matched closely with the control group. The only significant difference observed was the control group committed more assault charges on their base docket.

Table 10
Offense Classes for Most Severe Base Docket Charge by CCTC Participants/Control

	CCTC Participants						Control Group	
	Graduated CCTC		Terminated / Withdrew		Total CCTC		Control Group	
	Count	%	Count	%	Count	%	Count	%
Theft	26	38.8%	33	40.7%	59	39.9%	84	39.8%
Public Order Offenses	17	25.4%	19	23.5%	36	24.3%	47	22.3%
Drug Offenses	11	16.4%	7	8.6%	18	12.2%	18	8.5%
Fraud	7	10.4%	11	13.6%	18	12.2%	16	7.6%
Assault	2	3.0%	6	7.4%	8	5.4%	24	11.4%
Other DMV Offenses	2	3.0%	3	3.7%	5	3.4%	11	5.2%
DUI	2	3.0%	2	2.5%	4	2.7%	11	5.2%
Total	67	100.0%	81	100.0%	148	100.0%	211	100.0%

Note: Values in the same row that are shaded in gray are significantly different at p< 0.05 in the two-sided test of equality for column proportions.

Comparison of Prior Criminal Activity

Table 11 shows a frequency distribution of total number of prior convictions comparing the CCTC study segments with the control group. The data show that the control group distribution of total prior convictions matches very well with the total CCTC study group. No significant differences were observed.

Table 11
Total Number of Pre-CCTC Convictions by Participant Group / Control Group

| | CCTC Participants | | | | | | Control Group | |
| | Graduated CCTC | | Terminated / Withdrew | | Total CCTC | | | |
	Count	%	Count	%	Count	%	Count	%
10+ Prior Convictions	18	26.9%	40	49.4%	58	39.2%	69	32.7%
8 to 9 Prior Convictions	6	9.0%	12	14.8%	18	12.2%	26	12.3%
6 to 7 Prior Convictions	5	7.5%	9	11.1%	14	9.5%	21	10.0%
3 to 5 Prior Convictions	14	20.9%	16	19.8%	30	20.3%	41	19.4%
2 Prior Convictions	10	14.9%	1	1.2%	11	7.4%	23	10.9%
1 Prior Conviction	6	9.0%	1	1.2%	7	4.7%	10	4.7%
No Prior Convictions	8	11.9%	2	2.5%	10	6.8%	21	10.0%
Total	67	100.0%	81	100.0%	148	100.0%	211	100.0%

Table 12 shows a summary of descriptive statistics – mean, median, and maximum -- of the criminal history characterization variables used to match the control file with the CCTC study cohort. The data show that for most of the variables the control group is at statistical parity with the total CCTC study group. The only significant difference observed was for average charge severity. The control group had a lower average severity of prior convictions compared to the total CCTC cohort.

Table 12
Pre-CCTC Convictions - Comparison of Types of Convictions
By Participant Groups / Control Group

		CCTC Participants			Control Group
		Graduates	Terminated	Total CCTC	Control Group
	N=	67	81	148	211
Total Prior Convictions	Mean	6.3	11.1	9.0	7.8
	Median	4	9	8	7
	Maximum	29	35	35	38
Total Prior Felonies	Mean	1.1	1.7	1.4	1.2
	Median	0	1	1	0
	Maximum	13	10	13	9
Total Prior Domestic Assault	Mean	0.09	0.11	0.10	0.17
	Median	0	0	0	0
	Maximum	2	3	3	3
Total Prior Drug Convictions	Mean	0.52	0.48	0.50	0.47
	Median	0	0	0	0
	Maximum	4	4	4	4
Total Prior DUI Convictions	Mean	0.31	0.28	0.30	0.27
	Median	0	0	0	0
	Maximum	3	2	3	3
Total Prior Assault Convictions	Mean	0.16	0.79	0.51	0.43
	Median	0	0	0	0
	Maximum	3	9	9	4
Total Prior Theft Convictions	Mean	1.9	2.7	2.3	1.5
	Median	1	2	2	1
	Maximum	21	11	21	14
Total Prior VOP	Mean	0.6	2.0	1.4	1.8
	Median	0	1	0	1
	Maximum	4	12	12	14
Average Charge Severity	Mean	34.1	34.2	34.1	32.1
	Median	33	34	33	32
	Maximum	52.5	50.9	52.5	50

Note: Values in the same row that are shaded in gray are significantly different at p< 0.05 in the two-sided test of equality for column means.

Table 13 provides a comparison of frequency distributions of the prior conviction offense classes between the CCTC study segments and control group. The results show a very close match of the control group with the CCTC study cohort with respect to number and types of prior convictions. The only significant difference observed was the total CCTC study groups were convicted of more prior theft crimes, and the control groups were convicted of more public order offenses.

Table 13
Pre-CCTC Convictions - Comparison of Offense Classes
By Participant Groups / Control Group

	CCTC Participants						Control Group	
	Graduated CCTC		Terminated / Withdrew		Total CCTC			
	Count	%	Count	%	Count	%	Count	%
Public Order Offense	144	34.0%	364	40.5%	508	38.4%	778	47.6%
Theft	126	29.7%	221	24.6%	347	26.2%	312	19.1%
DMV Other Offenses	38	9.0%	109	12.1%	147	11.1%	140	8.6%
Fraud	29	6.8%	55	6.1%	84	6.4%	98	6.0%
Assault	11	2.6%	64	7.1%	75	5.7%	91	5.6%
Drug Offense	35	8.3%	39	4.3%	74	5.6%	99	6.1%
DUI	21	5.0%	23	2.6%	44	3.3%	58	3.5%
Domestic Assault	6	1.4%	9	1.0%	15	1.1%	36	2.2%
TRO	9	2.1%	6	0.7%	15	1.1%	8	.5%
Fish & Game	4	0.9%	3	0.3%	7	0.5%	5	.3%
Other Convictions	0	0.0%	4	0.4%	4	0.3%	8	.5%
TRO	1	0.2%	1	0.1%	2	0.2%	3	.2%
Total	**424**	**100.0%**	**898**	**100.0%**	**1322**	**100.0%**	**1636**	**100.0%**

APPENDIX A

OVERVIEW OF THE CHITTENDEN COUNTY TREATMENT COURT

In 2002, under Act 128, the Vermont Legislature established a pilot project to create drug court initiatives and begin implementing drug courts in three Vermont counties: Rutland, Chittenden, and Bennington. The Chittenden County Treatment Court was one of the drug courts established by Act 128, and began operating in January 2003. It was established as a program for combating drug crimes, not only drug possession, but drug-related crimes, both misdemeanors and felonies, such as retail theft, burglaries and grand larceny. Offenders identified as drug-addicted are referred to the court by law enforcement, probation officers and attorneys and put into a treatment program whose goal is to reduce drug dependency and improve the quality of life for offenders and their families. In most cases, after their successful completion of drug court, the original charges are dismissed or reduced. During the study period, 45.3% of CCTC participants (67 of 148) successfully graduated from the program. The benefits to society include reduced recidivism by the drug court participants, leading to increased public safety and reduced costs to taxpayers.

This evaluation of the CCTC is a follow-up to an outcome evaluation conducted in February of 2013[2]. The result of that outcome evaluation revealed a recidivism rate of 41.8% for subjects who had graduated from the program, and a rate of 50.6% for subjects who were terminated or withdrew from the program. However since a control group was not available for comparison, it was not possible to determine from the research whether these recidivism rates represented a significant improvement over the recidivism rates expected for similar offenders who had not received benefit from the treatment court. This evaluation was initiated to address this issue.

This outcome evaluation was supported through funds provided by the Vermont Court Administrator's Office (CAO). However, the findings and conclusions expressed in this report are those of the authors and do not necessarily reflect the views of the CAO.

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[2] The Executive Summary from the Chittenden County Treatment Court Outcome Evaluation report (February, 2013) is available in the Appendix C.

APPENDIX B

CONTROL GROUP DEVELOPMENT METHODOLOGY

Control Group Generation

The development of the test control group began with identifying demographic and criminal history variables that are available in the criminal history records from the Vermont Criminal Information Center at the Department of Public Safety, that could be used for profiling the CCTC participants from the February 2013 outcome evaluation. The intent was to determine the parameters for creating a filtering program that could be used on a much larger data set of criminal histories for extracting a group of subjects with specific profiles. The following characterization variables were used in the development of the control file.

- **Demographic Variables:**
  - Gender
  - Race
  - Current Age
  - Age at First Conviction or Arrest

- **Base Docket Charge Variables –** The "base docket" is the docket that represents the start of the recidivism clock – chosen as the first docket showing a conviction within the time frame of the original outcome evaluation. It is important that the base dockets for the control sample are consistent with the study sample with respect to:
  - Charge Offense Level – felony or misdemeanor
  - Charge Offense Class – represents offense type and relative severity of the crime.

- **Prior Criminal History Variables**
  - Number of Total Prior Convictions
  - Number of Prior Felony and Misdemeanor Convictions
  - Number of Prior Drug Convictions
  - Number of Prior DUI Convictions
  - Number of Prior Theft Convictions
  - Number of Prior VOP Convictions
  - Number of Prior Assault Convictions

These variables were used to create profiles of the participants from the CCTC outcome evaluation. Frequency tables and means, medians, and minimum/maximum ranges were collected for each variable to be used in developing the parameters for the filtering process.

To create the test control group, a dataset of criminal history records was obtained from the Vermont Criminal Information Center, for approximately 14,000 subjects that were arraigned in Chittenden County Criminal Court between January 1, 2006 and January 1, 2012. The Vermont criminal history records included all charges and convictions prosecuted in a Vermont criminal

court that were available as of September 17, 2012. The criminal records on which the study was based did not contain federal prosecutions, out-of-state prosecutions, or traffic tickets.

A widely utilized data analysis software application -- Statistical Package for the Social Sciences (SPSS) -- was used to configure the data, compile the characterization variables, choose the base dockets, set the recidivism start dates, and run an initial recidivism analysis. This main control file was then systematically filtered and matched to the CCTC study group on the major demographic and criminal history parameters: gender, current age, age at first conviction or arrest, base docket offense levels and charge classes.

In order to facilitate further refining and balancing of the control file with respect to the more specific criminal history variables, a factor analysis was conducted on the combined study and control dataset to investigate if this statistical methodology would reveal simpler underlying relationships among these interrelated variables. This technique was used with some success in the development of a control group for the Spectrum Youth & Family Services Rapid Referral Program[3]. For the Spectrum project the factor analysis was able to group the characterization variables into four groups and calculate group scores for each of the study participants and control subjects. The aggregated group score ranges and means for the participant group were used to fine tune the final profile of the control group. For the CCTC control group development, the factor analysis was not able to find a simplified structure for the dataset, probably because the CCTC study cohort was not as homogenous as the Spectrum study group. Further filtering and balancing of the CCTC control group was facilitated by dividing the larger control dataset into smaller gender and age sub-segments. Using an iterative process, each control data sub-set was matched to the corresponding CCTC study sub-set, then recombined in the proper proportions using a random selection process.

The resulting final control group consisted of 211 subjects and showed a demographic and criminal activity profile that matched well with the CCTC study cohort.

Determination of Recidivism

The recidivism clock for the control group was started on the disposition date of the earliest conviction that occurred within the study period – 7/1/2004 to 1/1/2012. If the disposition date was not available from the Vermont Criminal Information Center records, then the recidivism clock was started on the arraignment date of the earliest conviction. If the arraignment date was also missing from the criminal history records, the recidivism clock was set to the arrest date of the earliest conviction within the study period. The elapsed time was then measured between the start of the control subject's recidivism clock and the date the subject was arrested for any new offense which ended in conviction.

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[3] This report can be found at:
http://www.crgvt.org/uploads/5/2/2/2/52222091/spectrum2_finalreport_10-20-12b.pdf

APPENDIX C

CHITTENDEN COUNTY TREATMENT COURT: Outcome Evaluation Report – February 2013

EXECUTIVE SUMMARY
Summary of Conclusions

1. The research showed that the CCTC had a minimal effect at reducing recidivism rates of participants of the program. People who graduated from the CCTC had a recidivism rate of 41.8% compared to 50.6% for participants who were unsuccessful at completing the CCTC. The observed difference was not statistically significant.

   It is important to note, however, that a true control or comparison group, as found in experimental research designs, was not available for comparison. The recidivism pattern of the study participants is likely to be different from a control group whose members would not be exposed to the services provided by the CCTC program.

2. The research showed that most recidivism occurred in the period of up to one year after leaving the CCTC, and as the graduates of the program continued through the next two years or longer, the probability that they will recidivate decreases significantly.

3. The CCTC appears to be a promising approach for reducing the number and severity of reconvictions for participants who completed the program. The reconviction rate for the successful CCTC participants was almost half the rate for the participants that were unsuccessful (127 compared to 241 reconvictions per 100, respectively). CCTC graduates were also convicted of significantly fewer violent crimes than the subjects that did not complete the CCTC.

4. The CCTC recidivists tended to commit post-program crime in Chittenden County. For both study segments over three-quarters of their new convictions were prosecuted in Chittenden County.

5. Using discriminant analysis, four independent variables; Age at Program Start, Total Non-violent Prior Convictions, Age at First Conviction / Contact, and Maximum Base Docket Sentence Length, were found to correlate with recidivism status (whether subjects were recidivists or non-recidivists). The resulting regression model was found to correctly classify 75% of the study participants as to whether they were recidivists or non-recidivists.