CHITTENDEN COUNTY MENTAL HEALTH COURT

OUTCOME EVALUATION

FINAL REPORT

Submitted to:

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Submitted By

THE VERMONT CENTER FOR JUSTICE RESEARCH

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EXECUTIVE SUMMARY

The Chittenden County Mental Health Court (CMHC) began operation in January 2003. It is a program for adults who have committed a crime and are having difficulty with issues related to severe and persistent mental illness but are deemed competent to stand trial. These mental illnesses could include schizophrenia, paranoia, clinical depression, and borderline personality disorders. The CMHC accepts participants with any mental health diagnoses, including personality disorders and intellectual disabilities, but the majority of participants also have a co-occurring substance use condition as well. Typically, their offenses are crimes such as disorderly conduct, unlawful trespass, drug possession, burglary, and retail theft. Occasionally, the court will hear felonies, such as arson, DWI, and assault, though all cases must first be approved by the State's Attorney's office. The Chittenden County Mental Health Court is a collaborative effort among the Vermont Superior Court, State's Attorney's Office, Public Defender's Office, Court Administrator's Office, and the Howard Center.

METHODOLOGY

An outcome evaluation attempts to determine the effects that a program has on participants. In the case of the Chittenden County Mental Health Court (CMHC) the objective of this outcome evaluation was to determine the extent to which the CMHC reduced recidivism among program participants.

For this outcome evaluation, the study cohort was divided into two groups – subjects who successfully completed the CMHC program (n=56), and a segment that was terminated or withdrew from the program (n=43). Six other subjects who were currently active in the CMHC were also on the participant list provided by the Court Administrator's Office, but they were not included in this report. During the study period, 57% of CMHC participants (56 of 99) successfully graduated from the CMHC.

An indicator of post-program criminal behavior that is commonly used in outcome evaluations of criminal justice programs is the number of participants who recidivate -- that is, are convicted of a crime after they complete the program. An analysis of the criminal history records of the 99 subjects who were referred to the CMHC from March 21, 2003 to May 24, 2012, was conducted using the Vermont criminal history record of participants as provided by the Vermont Criminal Information Center at the Department of Public Safety. The Vermont criminal history record on which the recidivism analysis was based included all charges and convictions prosecuted in a Vermont Superior Court-Criminal Division that were available as of July 13, 2012. The criminal records on which the study was based do not contain Federal prosecutions, out-of-state prosecutions, or traffic tickets.

SUMMARY OF CONCLUSIONS

1. The Chittenden County Mental Health Court (CMHC) appears to be a promising approach for reducing recidivism among participants who completed the program. An analysis of the Vermont criminal records for the 99 study subjects shows that significantly fewer CMHC graduates were reconvicted of some type of crime as compared to the subjects who were terminated/withdrew from the program (25.0% versus 51.2%).

2. The CMHC was shown to be effective in producing graduates that remained conviction free in the community during their first year after leaving the program. Approximately 82% of the successful graduates of the CMHC were conviction-free during their first year after leaving the program. The success rate dropped to 72% for the study group that was terminated or withdrew from the CMHC.

3. The CMHC appears to be a promising approach for reducing the number and severity of reconvictions for participants who completed CMHC. The reconviction rate of the successful CMHC participants was less than one-half the rate for the participants that were unsuccessful (91 compared to 225 reconvictions per 100, respectively).

4. The CMHC recidivists from both study groups tended to commit a majority of their post-CMHC crime in Chittenden County.

5. Subject characteristics that were found to have some correlation with the tendency to recidivate were the *Age at First Conviction/Contact, Age at Referral to CMHC, the Base Charge Sentence Type,* and *Total Prior Misdemeanors*. However, further analysis showed that these correlations were not strong enough to result in a useful model that could be used as a predictor of recidivism.

INTRODUCTION

This outcome evaluation of the Chittenden County Mental Health Court (hereafter the "CMHC") was designed to answer five questions associated with the post-project behavior of subjects who participated in the CMHC from March 21, 2003 to May 24, 2012.

1. Which subjects were convicted of additional crimes after their participation in the CMHC?

2. For those subjects who were convicted of additional crimes after their participation in the CMHC, when were they convicted?

3. For those subjects who were convicted of additional crimes after their participation in the CMHC, what crimes did they commit?

4. For those subjects who were convicted of additional crimes after their participation in the CMHC, in which counties were the subjects convicted?

5. Which demographic and criminal history characteristics are important in predicting whether or not participants in the CMHC recidivate?

In this evaluation, participant behavior was divided into two study groups – those who successfully graduated from the CMHC, and those who were terminated or withdrew before completing the CMHC.

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.

Mental Health Court

January 2003 – March 2012

Overview

Chittenden County Mental Health Court accepted its first participant in January 2003. It is a collaborative effort among the Vermont Superior Court-Criminal Division, State's Attorney's Office, Public Defender's Office, Court Administrator's Office, and the Howard Center. The program is designed for adults who have committed a crime and are having difficulty with issues related to severe and persistent mental illness but are deemed competent to stand trial. These mental illnesses could include schizophrenia, paranoia, clinical depression, and borderline personality disorders. The CMHC accepts participants with any mental health diagnoses, including personality disorders and intellectual disabilities, but the majority of participants also have a co-occurring substance use condition as well. Typically, their offenses are crimes such as disorderly conduct, unlawful trespass, drug possession, burglary, and retail theft. Occasionally, the court will hear felonies, such as arson, DWI, and assault, though all cases must first be approved by the State's Attorney's Office.

"Most CMHC participants appear in the court once a week initially, then less frequently as they demonstrate improvement. They are monitored for adherence to medications and regularly undergo urine drug screens. They also are counseled to strengthen their coping skills and to meet employment goals. The program includes several incentives for compliance and sanctions for noncompliance, including intensified treatment and/or jail time".[1]

EVALUATION METHODOLOGY

An outcome evaluation attempts to determine the effects that a program has on participants. In the case of the CMHC the objective of this outcome evaluation was to determine the extent to which the CMHC reduced recidivism among CMHC participants.

An indicator of post-program criminal behavior that is commonly used in outcome evaluations of criminal justice programs is the number of participants who recidivate -- that is, are convicted of a crime after they complete the program. In the case of this study, participants were considered to have recidivated if they were reconvicted of any crime prosecuted in a Vermont Superior Court – Criminal Division, including violations of probation and motor vehicle offenses, after successful completion or termination from the CMHC.

This evaluation included two study segments – subjects who successfully completed the CMHC program (n=56), and a segment that was terminated or withdrew from the program (n=43). Six other subjects who were currently active in the CMHC were also on the participant list provided by the Court Administrator's Office, but they were not included in this report. During the study

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[1] http://www.clinicalpsychiatrynews.com/news/more-top-news/single-view/mental-health-courts-may-bring-fewer-charges/12376e2e7a.html

period, 57% of CMHC participants (56 of 99) successfully graduated from the CMHC.

An analysis of the criminal history records of the 99 subjects who were referred to the CMHC from March 21, 2003 to May 24, 2012 was conducted using the Vermont criminal history records of the participants as provided by the Vermont Criminal Information Center at the Department of Public Safety. The Vermont criminal history records on which the recidivism analysis was based included all charges and convictions prosecuted in a Vermont Superior Court-Criminal Division that were available as of July 13, 2012.   The criminal records on which the study was based do not contain Federal prosecutions, out-of-state prosecutions, or traffic tickets.

RECIDIVISM

How is Recidivism Defined?

Since recidivism is usually the primary measure of interest when evaluating the effectiveness of programs such as the Mental Health Court, it is important to consider the manner in which recidivism is defined, and how the definition affects the interpretation of study results. The Vermont Legislature in "The War on Recidivism Act" of 2011, ordered the Department of Corrections to calculate recidivism as:

> [T]he rate of recidivism based upon offenders who are sentenced to more than one year of incarceration, who, after release from incarceration, return to prison within three years for a conviction for a new offense or a violation of supervision resulting, and the new incarceration sentence is at least 90 days.[2]

Analysis using this definition of recidivism for the CMHC study indicates that only one subject, belonging to the terminated/withdrew group, can be classified as a recidivist. This analysis results in a post-program recidivism rate of 1.8% for this study segment, and no recidivists among those who successfully completed the CMHC.

Despite the extremely low recidivism rate for the CMHC derived from Vermont's statutory definition of recidivism, CMHC Project administrators requested that a more rigorous definition for recidivism be used for this analysis. It was determined that a "zero tolerance" standard for recidivism would be adopted such that any CMHC participant who was convicted of any crime prosecuted in a Vermont Superior Court-Criminal Division, including violations of probation and motor vehicle offenses, after program completion or termination would be considered a recidivist.

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http://www.leg.state.vt.us/docs/2012/Acts/ACT041.pdf Section 5, Subsection b(1).

How was Recidivism Determined?

In order to determine which participants recidivated, a recidivism clock start date was set for each subject, dependent on whether they successfully graduated from the CMHC, or were unsuccessful at completing the CMHC and were terminated or withdrew.

For those participants that had **successfully completed** the CMHC, their recidivism clock started on their "Program Completion Date", which was included in the participant description data provided by the CAO. If a Program Completion date was not available, the recidivism clock was started on the "Sentencing Date" which was also provided in the participant description data. If the sentencing date was not available, then the recidivism clock was started on the "Disposition Date" of the base docket case (the case that resulted in the subject's referral to the Mental Health Court) from the VCIC criminal history records. For subjects who were **terminated or withdrew** from the CMHC, the recidivism clock was started on the "Program End Date," which was provided in the participant description data from the CAO.

Based on each subject's recidivism start date and their criminal records from the VCIC, a subject was considered a recidivist if they committed and were convicted of any new offense after their recidivism start date. The elapsed time to recidivate was also measured between the start of the participant's recidivism clock and the date the participant was arrested for the new offense that ended in conviction.

RESEARCH QUESTION 1: WHICH SUBJECTS WERE CONVICTED OF ADDITIONAL CRIMES AFTER THEIR PARTICIPATION IN THE CMHC?

Summary of Findings

Significantly fewer subjects who completed the CMHC (25.0% or 14 of 56) were reconvicted of some type of crime as compared to 22 of the 41 subjects (51.2%) who were terminated or withdrew.

Detailed Findings

Table 1 provides data regarding the percentage of CMHC participants who recidivated during the study period per the study definition of recidivism. Recidivists are defined as any CMHC participant who was convicted of any crime prosecuted in a Vermont Superior Court-Criminal Division, including violations of probation and motor vehicle offenses, after CMHC completion. An analysis of the Vermont criminal records for the 99 CMHC participants shows that significantly fewer subjects who completed the CMHC (25.0% or 14 of 56) were reconvicted of some type of crime as compared to 22 of the 43 subjects (51.2%) who failed to complete the CMHC and withdrew or were terminated.

Table 1
Subjects Reconvicted for Any Offense

	Graduated from CMHC		Terminated/Withdrew from CMHC	
	Count	Percent	Count	Percent
Recidivist	14	25.0%	22	51.2%
Non-recidivist	42	75.0%	21	48.8%
Total	56	100.0%	43	100.0%

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

RESEARCH QUESTION 2: WHEN WERE SUBJECTS ARRESTED AND CONVICTED?

Summary of Findings

The analysis showed that for all of the study participants, most recidivism occurred in the period up to one year after leaving the CMHC. For the CMHC graduates, however, more than 82% remained conviction-free during their first year after leaving the program. Of the subjects who were unsuccessful in completing the CMHC, 72% remained conviction-free during the first year after leaving the program.

Detailed Findings

In addition to recidivism measures, program effectiveness can be also 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 project.

Table 2 summarizes the analysis of elapsed recidivism time for subjects who were convicted of any new crime during the study period. For the participants who **successfully completed** the CMHC, only 17.9% (10 of 56) of arrests for any new criminal conviction occurred in less than one year. For the subjects who were **terminated** or **withdrew** from the CMHC, 27.9% (12 of 43) of arrests for any new criminal conviction occurred in less than one year. Although the results show that fewer graduates of the CMHC were reconvicted within a year of completion, the difference is not statistically significant.

Table 2
Time to Recidivism

Participant Group	When First Recidivated	Total	Percentage
Graduated from CMHC	< 1 year	10	17.9%
	During year 1	3	5.3%
	During year 2	0	0.0%
	After year 2	1	1.8%
	Total Subjects	**56**	**25.0%**
Terminated/Withdrew from CMHC	< 1 year	12	27.9%
	During year 1	9	14.0%
	During year 2	0	0.0%
	After year 2	1	2.3%
	Total Subjects	**43**	**51.2%**

If "successful outcome" for the CMHC is defined as no arrest for any new criminal conviction within one year of recidivism eligibility, then the success rate for participants who completed the CMHC would be 82.1% (46 subjects with no arrest for any new criminal conviction within one year divided by 56 participants who successfully completed the CMHC). The success rate drops to 72% (31 divided by 43) for participants who withdrew or were terminated from the CMHC.

To provide a more detailed analysis of when recidivism occurs, Table 3 presents recidivism data in yearly increments – focusing on the number of successful graduates of the CMHC who were eligible to recidivate during a time period and the number who were reconvicted during that time period. Looking at the first column of data – the time period up to one year after CMHC completion – all 56 subjects appear in this increment because at the time of the study every participant had been away from the CMHC for at least a year. During that time period, ten of the participants (17.9%) were reconvicted. Looking at the second column of data – the first full year after successful CMHC completion – 51 of the participants had reached that point of elapsed time since leaving the CMHC. During "Year 1" reconvictions dropped off sharply with only three participants being reconvicted (5.9%). In "Year 2" none of the subjects were reconvicted, and only one of 27 subjects committed new crimes (3.7%) in "Year 3".

This data suggest that though the majority of recidivism occurs within the first year, it is unlikely that recidivism will increase substantially as participants increase their post-CMHC elapsed time to three or more years. Therefore the data from the study period suggest that recidivism is likely to remain very low as post-CMHC elapsed time continues to increase for participants.

Table 3
Time to Recidivate by Years of Eligibility to Re-offend – CMHC Graduates
Post-CMHC Elapsed Time

	< 1 Year	Year 1	Year 2	Year 3
Time Period in Which Participant Recidivated	10	3	0	1
Total # of Participants who were eligible to recidivate during the time period*	56	51	43	27
% Recidivated	**17.9%**	**5.9%**	**0.0%**	**3.7%**

*The data in this row represent all participants who had completed the CMHC for certain time periods. Participants may appear in more than one column based on the longevity of their post-CMHC elapsed time. For example each of the 27 participants who appear in the "Year 3" column also appear in the "< 1 Year", "Year 1", and "Year 2" columns because, having completed two years of post-CMHC elapsed time, they necessarily have also completed less than one year, one year, and two years of elapsed time.

RESEARCH QUESTION 3: WHAT CRIMES DID THEY COMMIT?

Summary of Findings

No significant differences were observed between study segments in reconviction offense levels (felonies vs. misdemeanors) or average reconvictions per recidivist. The recidivists who graduated from the CMHC averaged 3.5 convictions, compared to an average of 4.4 convictions for the recidivists who were terminated or withdrew from the program. However, looking at the reconviction rate for all study participants revealed that the graduates of CMHC had a significantly lower reconviction rate of 91 reconvictions per 100 participants versus a rate of 225 reconvictions per 100 participants for the subjects who were terminated or withdrew from the program.

The only significant difference observed between study segments with respect to types of crimes committed was the number of theft offenses. The recidivists who were terminated or withdrew from the program had more theft reconvictions (19.6%) than did the subjects who graduated from the CMHC (7.8%). Approximately 63% of their reconvictions were for (listed in order of frequency): theft, disorderly conduct, DMV offenses, simple assault, and failure to appear.

Detailed Findings

When considering the effect that the CMHC 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. For example, if a participant's case was disposed in 2009 and s/he was convicted of two crimes in 2010 and then three crimes in 2011, the participant would be counted as a recidivist only once. However, in order to understand the full offense pattern of participants and to assess the full impact of the CMHC on the criminal behavior of participants it is important to also note that the defendant was convicted of those five additional crimes 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.

Participant Offense Levels and Patterns

Table 4 indicates that the combined recidivists from the CMHC were convicted of a total of 148 crimes during the follow-up period. Participants who completed the CMHC were convicted of a total of 51 crimes during the study period – five felonies and 46 misdemeanors. Participants who withdrew or were terminated from the CMHC were convicted of almost twice as many crimes during the study period – 97 crimes with six felonies and 91 misdemeanors. The difference noted in offense between the graduates of the CMHC and the subjects that were terminated was not found to be significant.

Since the size of the two study groups was different, a reconviction rate per 100 is a more useful measure for comparison. The reconviction rate for those participants who completed the CMHC was 91 reconvictions per 100 participants (51 reconvictions divided by the 56 subjects who completed the CMHC, multiplied by 100) versus 225 reconvictions per 100 participants for the terminated/withdrew group (97 divided by 43, multiplied by 100).

Table 4
Offense Levels for All Crimes for Which Subjects Were Reconvicted

	Graduated from CMHC		Terminated/Withdrew from CMHC		Total	
	# of Convictions	Percent	# of Convictions	Percent	# of Convictions	Percent
Felony	5	9.8%	6	6.2%	11	7.4%
Misdemeanor	46	90.2%	91	93.8%	137	92.6%
Total	**51**	**100.0%**	**97**	**100.0%**	**148**	**100.0%**

Table 5 shows the types of crime for which the subjects were reconvicted. The recidivists who completed the CMHC averaged 3.6 convictions with a median of 2.5 and maximum of eight convictions. About 72% of their reconvictions included (listed in order of frequency): disorderly conduct, motor vehicle violations, simple assault, failure to appear, theft, and drug crimes. There were a total of seven violent crime convictions for recidivists who completed the CMHC (six simple assaults, one domestic assault). A majority of the motor vehicles violations for participants who completed the CMHC were driving with license suspended.

The subjects who withdrew or were terminated from the CMHC averaged 4.4 convictions with a median of three convictions and a maximum of 17. These subjects showed similar offense patterns as subjects who completed the CMHC, with approximately 69% of their reconvictions including (listed in order of frequency): theft, simple assault, failure to appear, disorderly conduct, motor vehicle violations, and unlawful trespass. The terminated/withdrew group had significantly more reconvictions for theft crimes than did the subjects who completed the program (19.6% vs. 7.8%, respectively). There were 13 violent crime convictions for this study group (11 simple assaults, two domestic assaults). Seven of the nine motor vehicle violations committed by these subjects were for driving with license suspended.

The difference noted in average convictions between the graduates of the CMHC and the subjects that were terminated was not found to be significant. The graduates of the CMHC

were, however, reconvicted of significantly fewer theft crimes than were the subjects who were terminated/withdrew.

Table 5
All Crimes for Which Subjects Were Reconvicted

	Graduated from CMHC		Terminated/Withdrew from CMHC		Total	
	# of Convictions	Percent	# of Convictions	Percent	# of Convictions	Percent
Total Theft Convictions*	4	7.8%	19	19.6%	23	15.5%
Disorderly Conduct	9	17.6%	10	10.3%	19	12.8%
Total DMV Convictions	8	15.7%	9	9.3%	17	11.5%
Simple Assault	6	11.8%	11	11.3%	17	11.5%
Failure to Appear	6	11.8%	11	11.3%	17	11.5%
Unlawful Trespass	3	5.9%	7	7.2%	10	6.8%
Drug Offense	4	7.8%	4	4.1%	8	5.4%
Violation of Probation	3	5.9%	4	4.1%	7	4.7%
Vs Justice	1	2.0%	6	6.2%	7	4.7%
Unlawful Mischief	3	5.9%	3	3.1%	6	4.1%
DUI	2	3.9%	3	3.1%	5	3.4%
Fraud	0	0.0%	5	5.2%	5	3.4%
Domestic Assault	1	2.0%	2	2.1%	3	2.0%
Alcohol Violation	0	0.0%	1	1.0%	1	0.7%
Arson	1	2.0%	0	0.0%	1	0.7%
Commerce	0	0.0%	1	1.0%	1	0.7%
Escape	0	0.0%	1	1.0%	1	0.7%
Total	**51**	**100.0%**	**97**	**100.0%**	**148**	**100.0%**
Number of Recidivists	14		22		36	
Average # of Reconvictions	3.6		4.4		4.1	
Median # of Reconvictions	2.5		3		3	
Maximum # of Reconvictions	8		17		17	

* Total Theft Convictions were found to be significantly different at $p < 0.10$ in the two-sided test of equality for column means.

RESEARCH QUESTION 4: IN WHICH COUNTIES WERE THE SUBJECTS CONVICTED?

Summary of Findings

For the graduates of the CMHC, over 78% of their reconvictions were prosecuted in Chittenden County. Likewise, for the subjects who did not complete the CMHC, almost 88% of their new crimes occurred in Chittenden County.

Detailed Findings

Table 6 provides the distribution of post-program reconvictions for CMHC participants who successfully completed the program by the county in which the case was prosecuted. For graduates of CMHC, 40 of their 51 new convictions (approximately 78.4%) occurred in Chittenden County. The other reconvictions occurred mostly in Rutland and Washington counties.

Table 6
County of Prosecution for Reconvictions:
Participants Who Graduated / Completed CMHC

	Chittenden		Rutland		Washington	
	# of Conv	%	# of Conv	%	# of Conv	%
Disorderly Conduct	9	22.5%	0	0.0%	0	0.0%
Total DMV Convictions	6	15.0%	0	0.0%	2	20.0%
Total Assault Convictions	4	10.0%	0	0.0%	3	30.0%
Failure to Appear	3	7.5%	0	0.0%	3	30.0%
Total Theft Convictions	3	7.5%	1	100.0%	0	0.0%
Drug Offense	4	10.0%	0	0.0%	0	0.0%
Unlawful Mischief	3	7.5%	0	0.0%	0	0.0%
Unlawful Trespass	3	7.5%	0	0.0%	0	0.0%
Violation of Probation	1	2.5%	0	0.0%	2	20.0%
Total DUI Convictions	2	5.0%	0	0.0%	0	0.0%
Arson	1	2.5%	0	0.0%	0	0.0%
Vs Justice*	1	2.5%	0	0.0%	0	0.0%
Total	**40**	**100.0%**	**1**	**100.0%**	**10**	**100.0%**

*Contempt, False Alarms, Resist Arrest, etc.

Table 7 shows the distribution of counties where the participants who were terminated or withdrew from the CMHC were prosecuted for their reconvictions. For this study segment, 87.6% of their reconvictions were in Chittenden County.

Table 7
County of Prosecution for Reconvictions:
Participants Who Were Discharged / Withdrew From CMHC

	Chittenden		Grand Isle		Lamoille		Rutland		Washington	
	# of Conv	%	# of Conv	%	# of Conv	%	# of Conv	%	# of Conv	%
Total Theft Convictions	17	20.0%	0	0.0%	1	20.0%	0	0.0%	1	33.3%
Total Assault Convictions	13	15.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Failure to Appear	9	10.6%	0	0.0%	2	40.0%	0	0.0%	0	0.0%
Disorderly Conduct	8	9.4%	0	0.0%	1	20.0%	1	33.3%	0	0.0%
Total DMV Convictions	6	7.1%	1	100.0%	0	0.0%	1	33.3%	1	33.3%
Unlawful Trespass	6	7.1%	0	0.0%	0	0.0%	1	33.3%	0	0.0%
Vs Justice	6	7.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total Fraud Convictions	6	7.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Drug Offense	3	3.5%	0	0.0%	0	0.0%	0	0.0%	1	33.3%
Violation of Probation	4	4.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Unlawful Mischief	2	2.4%	0	0.0%	1	20.0%	0	0.0%	0	0.0%
Total DUI Convictions	3	3.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Alcohol Violation	1	1.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Escape	1	1.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	**85**	**100.0%**	**1**	**100.0%**	**5**	**100.0%**	**3**	**100.0%**	**3**	**100.0%**

*Contempt, False Alarms, Resist Arrest, etc.

PARTICIPANT PROFILE COMPARISONS

Overview

In order to determine whether the observed reduction in recidivism rate for the CMHC graduates was due to differences in the characteristics of the study segments, or due to the benefits of the program, comparisons of the demographic, criminal history, and base docket profile characteristics of the study segments were conducted. Data from the participant records provided by the CAO and VCIC were used for this analysis. The following profiles and variables were examined.

- <u>Demographic Profile</u>: Gender, age when they started the CMHC, race, and state of birth.

- <u>Criminal History Profile</u>: Age at first conviction/contact and prior criminal record.

- <u>Base Case Profile</u> (Cases that led to the referral to CMHC.): Base docket offense level, type, case disposition and sentence type.

Summary of Demographic Profile Comparisons

There were no significant differences between the graduates of the CMHC and the subjects who did not complete the program, with respect to gender, age when they started the program, race, or state of birth.

Both study segments were slightly more male – approximately 55% male to 45% female. They averaged about 34 years of age when they started the CMHC. A majority of both study segments were Caucasian (>95%) and born in Vermont (>62%), with 15 other birth states represented.

Detailed Findings – Demographic Profile Comparisons

Gender by Study Segments

Table 8 presents the gender composition of the study group. The total study group for the CMHC consisted of approximately 44.4% females and 55.6% males. No statistically significant differences in gender profile were observed across the two study segments.

Table 8
Gender by Study Segments

	Graduated		Terminated/Withdrew		Total	
	Count	%	Count	%	Count	%
Female	25	44.6%	19	44.2%	44	44.4%
Male	31	55.4%	24	55.8%	55	55.6%
Total	56	100.0%	43	100.0%	99	100.0%

Age When Started CMHC by Study Segments

Table 9 summarizes the age distribution of the study segments at the time they started the CMHC. No statistically significant differences were found in the age distributions or average age across the two study segments. The graduates of the CMHC averaged slightly older at 35, compared to 32 as the average age for the subjects who did not complete the program.

Table 9
Age When Started CMHC by Study Segments

	Graduated		Terminated/Withdrew		Total	
	Count	%	Count	%	Count	%
18 to 20	4	7.1%	4	9.3%	8	8.1%
21 to 24	5	8.9%	9	20.9%	14	14.1%
25 to 29	10	17.9%	7	16.3%	17	17.2%
30 to 34	8	14.3%	6	14.0%	14	14.1%
35 to 39	9	16.1%	4	9.3%	13	13.1%
40 to 49	14	25.0%	11	25.6%	25	25.3%
50 +	6	10.7%	2	4.7%	8	8.1%
Total	56	100.0%	43	100.0%	99	100.0%
Ave. Age	35.0		32.1		33.8	
Median Age	35		30		33	

Race by Study Segments

Table 10 presents the racial characteristics of the study groups. Ninety-six percent of all CMHC subjects were white. African Americans and Asians comprised 3% and 1%, respectively, of all the study participants. There were no significant differences between the study segments in regards to race.

Table 10

Race by Study Segment

	Graduated		Terminated/Withdrew		Total	
	Count	%	Count	%	Count	%
African American	2	3.6%	1	2.3%	3	3.0%
Asian	1	1.8%	0	0.0%	1	1.0%
Caucasian	53	94.6%	42	97.7%	95	96.0%
Total	**56**	**100.0%**	**43**	**100.0%**	**99**	**100.0%**

State or Country of Birth by Study Segments

Table 11 presents information regarding the states where participants were born. Sixty-two percent of all the participants were born in Vermont. After Vermont, 15 other states were represented with the next most common places of birth being New York, Massachusetts, Connecticut, and New Hampshire.

Table 11
State or Country of Birth by Study Segment

	Graduated		Terminated/Withdrew		Total	
	Count	%	Count	%	Count	%
VT	35	62.5%	27	62.8%	62	62.6%
NY	2	3.6%	4	9.3%	6	6.1%
MA	4	7.1%	1	2.3%	5	5.1%
CT	2	3.6%	2	4.7%	4	4.0%
NH	3	5.4%	1	2.3%	4	4.0%
CA	2	3.6%	1	2.3%	3	3.0%
FL	1	1.8%	1	2.3%	2	2.0%
MD	1	1.8%	1	2.3%	2	2.0%
OH	1	1.8%	1	2.3%	2	2.0%
CO	1	1.8%	0	0.0%	1	1.0%
NC	1	1.8%	0	0.0%	1	1.0%
NV	0	0.0%	1	2.3%	1	1.0%
PA	0	0.0%	1	2.3%	1	1.0%
RI	1	1.8%	0	0.0%	1	1.0%
SD	1	1.8%	0	0.0%	1	1.0%
WI	0	0.0%	1	2.3%	1	1.0%
Unknown	1	1.8%	1	2.3%	2	2.0%
Total	**56**	**100.0%**	**43**	**100.0%**	**99**	**100.0%**

Summary of Criminal History Profile Comparisons

No significant differences were found between study segments with respect to age at first conviction/contact and prior offense levels (felonies vs. misdemeanors).

There were some significant differences observed in the types of prior offenses committed. The CMHC graduates had significantly more prior convictions involving disorderly conduct, driving with license suspended, and DUI, and significantly fewer offenses involving shoplifting.

Detailed Findings – Criminal History Profile Comparisons

Age at First Conviction or Contact by Study Segments

Table 12 summarizes a comparison by study segment of the ages of participants at their first criminal conviction or, if they had no conviction in their criminal history, their first contact with the criminal justice system. The data show that there were no significant differences between study segments in age distribution or average age. Both study segments had their first conviction/contact at an average age of about 24, with a majority of the subjects between the ages of 16 and 20—41.1% for graduates and 53.5% for the terminated/withdrew group.

Table 12
Age at First Conviction or Contact by Study Segments

	Graduated		Terminated/Withdrew		Total	
	Count	%	Count	%	Count	%
16 to 20	23	41.1%	23	53.5%	46	46.5%
21 to 24	13	23.2%	7	16.3%	20	20.2%
25 to 29	7	12.5%	4	9.3%	11	11.1%
30 to 34	4	7.1%	3	7.0%	7	7.1%
35 to 39	4	7.1%	3	7.0%	7	7.1%
40 to 49	5	8.9%	2	4.7%	7	7.1%
50 +	0	0.0%	1	2.3%	1	1.0%
Total	56	100.0%	43	100.0%	99	100.0%
Ave. Age	24.6		24.1		24.4	
Median Age	22		20		21	

Prior Convictions Offense Levels by Study Segments

Table 13 presents the data regarding the offense levels of the subjects' prior convictions. Misdemeanors comprised the majority of prior convictions for both study segments—accounting for over 88% of prior crimes. There were no significant differences found across study segments.

Table 13
Prior Convictions Offense Levels by Study Segment

	Graduated		Terminated/Withdrew		Total	
	# of Convictions	%	# of Convictions	%	# of Convictions	%
Felony	62	11.4%	53	11.8%	115	11.6%
Misdemeanor	482	88.6%	398	88.2%	880	88.4%
Total	544	100.0%	451	100.0%	995	100.0%

Prior Convictions Offense Types by Study Segments

Table 14 presents the data on the types of prior offenses committed by the CMHC participants. There was no significant difference found between study segments in average number of prior convictions. Overall, the combined study sample averaged 10.1 prior convictions, with a median number of eight, and a maximum number of 41. Over half of the prior convictions for all study subjects were comprised of (in order of frequency): violation of probation, theft, disorderly conduct, assault, and shoplifting. Graduates had significantly more prior convictions involving disorderly conduct, driving with license suspended, and DUI, and significantly fewer offenses involving shoplifting.

Table 14
Prior Convictions Offense Type by Study Segments

	Graduated		Terminated / Withdrew		Total	
	# of Conv	%	# of Conv	%	# of Conv	%
Violation of Probation	72	13.2%	59	13.1%	131	13.2%
Other Theft Convictions	55	10.1%	58	12.9%	113	11.4%
Disorderly Conduct	65	11.9%	35	7.8%	100	10.1%
Total Assault Convictions	62	11.4%	34	7.5%	96	9.6%
Shoplifting	39	7.2%	49	10.9%	88	8.8%
Failure to Appear	34	6.3%	31	6.9%	65	6.5%
Total Fraud Convictions	30	5.5%	34	7.5%	64	6.4%
Unlawful Mischief	22	4.0%	28	6.2%	50	5.0%
Unlawful Trespass	21	3.9%	19	4.2%	40	4.0%
Driving License Suspended	27	5.0%	10	2.2%	37	3.7%
DUI-2nd Offense	27	5.0%	9	2.0%	36	3.6%
Drug Offense	20	3.7%	11	2.4%	31	3.1%
Vs Justice	14	2.6%	16	3.5%	30	3.0%
Other DMV Convictions	20	3.7%	9	2.0%	29	2.9%
Disturbing the Peace	9	1.7%	15	3.3%	24	2.4%
Other DUI Convictions	7	1.3%	5	1.1%	12	1.2%
Alcohol Violation	4	0.7%	7	1.6%	11	1.1%
TRO Violation	4	0.7%	6	1.3%	10	1.0%
Acts Prohibited/Prostitution	3	0.6%	4	0.9%	7	0.7%
Fish & Game Violation	2	0.4%	3	0.7%	5	0.5%
Escape	1	0.2%	4	0.9%	5	0.5%
Municipal Ordinance	1	0.2%	2	0.4%	3	0.3%
Arson	2	0.4%	1	0.2%	3	0.3%
Stalking	2	0.4%	0	0.0%	2	0.2%
Conspiracy	0	0.0%	2	0.4%	2	0.2%
L&L with a Child	1	0.2%	0	0.0%	1	0.1%
Total Convictions	544	100.0%	451	100.0%	995	100.0%
Number of Subjects	56		43		99	
Average # of Convictions	9.7		10.5		10.1	
Median # of Convictions	7		9		8	
Maximum # of Convictions	41		36		41	

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.

Summary of Base Docket Case Profiles

No significant differences were observed between study segments in base docket offense levels. Approximately 19% of the total study samples' base dockets had felony charges. There were also no significant differences in types of base docket charges. In total, about 72% of the charges consisted of (in order of frequency) assault, theft, disorderly conduct, and fraud. With respect to base docket sentencing, significantly fewer graduates were sentenced to incarceration than the participants who were terminated or withdrew from the CMHC (5.4% versus 25.6%, respectively).

Detailed Findings – Base Docket Case Profiles

Base Docket Offense Levels by Study Segments

Table 15 presents the data regarding the most serious offense level for charges from the base docket for study subjects. The case that resulted in their referral to the CMHC is referred to as the "base docket." Slightly fewer graduates of the CMHC had felony charges on their base docket – 17.9% compared to 20.9% for the subjects who were terminated or withdrew from the program. This difference was not found to be significant.

Table 15
Base Docket Offense Level by Study Segments

	Graduated		Terminated / Withdrew		Total	
	# of Convictions	%	# of Convictions	%	# of Convictions	%
Felony	10	17.9%	9	20.9%	19	19.2%
Misdemeanor	46	82.1%	34	79.1%	80	80.8%
Total	56	100.0%	43	100.0%	99	100.0%

Base Docket Offense Types

Table 16 presents data regarding the types of charges from the base dockets. No significant differences in types of charges were observed across the two study segments. In total, 71.8% of the base docket charges consisted of (in order of frequency) assault, theft, disorderly conduct, and fraud.

Table 16
Base Docket Charges by Study Segment

	Graduated		Terminated / Withdrew		Total	
	# of Charges	%	# of Charges	%	# of Charges	%
Total Assault Convictions	15	26.8%	10	23.3%	25	25.3%
Total Theft Convictions	10	17.9%	9	20.9%	19	19.2%
Disorderly Conduct	10	17.9%	5	11.6%	15	15.2%
Total Fraud Convictions	7	12.5%	5	11.6%	12	12.1%
Failure to Appear	6	10.7%	3	7.0%	9	9.1%
Disturbing the Peace	2	3.6%	2	4.7%	4	4.0%
Drug Offense	0	0.0%	3	7.0%	3	3.0%
Total DMV Convictions	0	0.0%	2	4.7%	2	2.0%
Vs Justice	1	1.8%	1	2.3%	2	2.0%
Stalking	2	3.6%	0	0.0%	2	2.0%
Unlawful Trespass	0	0.0%	1	2.3%	1	1.0%
Acts Prohibited/Prostitution	1	1.8%	0	0.0%	1	1.0%
DUI - 3rd & Subsequent	0	0.0%	1	2.3%	1	1.0%
Cruelty to Children	0	0.0%	1	2.3%	1	1.0%
Conspiracy	1	1.8%	0	0.0%	1	1.0%
Arson	1	1.8%	0	0.0%	1	1.0%
Total	**56**	**100.0%**	**43**	**100.0%**	**99**	**100.0%**

Base Docket Sentence Type

Table 17 displays the base docket dispositions and sentence type data. When analyzing the data by study segment, significantly more people who were terminated/withdrew were sentenced to incarceration (25.6% versus 5.4%) on their base docket. This lower incarceration rate for the CMHC graduates indicates that this variable may potentially be a factor influencing their lower recidivism rate.

Table 17
Base Docket Sentence Type by Study Segment

	Graduated		Terminated / Withdrew		Total	
	Count	**%**	**Count**	**%**	**Count**	**%**
Not Disposed By Court	17	30.4%	12	27.9%	29	29.3%
Probation	10	17.9%	12	27.9%	22	22.2%
Mental Hospital / Mental Health Court	21	37.5%	0	0.0%	21	21.2%
Incarceration	3	5.4%	11	25.6%	14	14.1%
Split Sentence	5	8.9%	4	9.3%	9	9.1%
Sentence Deferred	0	0.0%	2	4.7%	2	2.0%
Fine	0	0.0%	1	2.3%	1	1.0%
Missing/Unknown	0	0.0%	1	2.3%	1	1.0%
Total	**56**	**100.0%**	**43**	**100.0%**	**99**	**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. Tests assume equal variances.

<u>Research Question 5</u>: Are there demographic and criminal history characteristics that are important in predicting whether participants recidivate or not?

Regression Analysis - Summary of Findings

To answer this question, a discriminant analysis was conducted to investigate if correlations exist between certain demographic and criminal history characteristics of the CMHC participants and their tendency to recidivate. The analysis revealed that four variables, *Age at First Conviction or Contact, Age at Referral to CMHC, Base Charge Sentence Type*, and *Total Prior Misdemeanors*, showed some correlation to recidivism. The resulting regression model, however, did not show strong statistical significance and only correctly assigned approximately 68% of the subjects into recidivist/non-recidivist groups. Based on the results of this analysis, the conclusion can be made that the differences in demographic profiles and criminal histories of the study sample were not important factors in determining the tendency of CMHC participants to recidivate.

Regression Analysis - Detailed Findings

Discriminant analysis is a classification methodology that is used to predict group membership -- in this case the group is recidivists -- based on a linear combination of independent variables. The procedure begins with a data set of observations where both group membership and the values of the independent variables are known. For this study, the intended result of this analysis was a model that allows prediction of whether or not a CMHC participant is likely to recidivate, based on their known demographic and criminal history information. The following variables were used in the discriminant analysis.

Independent variables:

      Gender: 1 = female, 2 = male
      Race: 1 = African American, 2 = Asian, 3 = Caucasian
      Age at Referral to CMHC – age in years
      Age at First Conviction or Contact – age in years
      Total Number of Prior Convictions
      Total Number of Prior Felony Convictions
      Total Number of Prior Misdemeanor Convictions
      Base Charge Offense Level: 1 = felony, 2 = misdemeanor
      Base Charge Offense Rank: higher value equals more severe offense – range 15 to 75
      Base Charge Sentence Type: incarceration, split sentence, etc., lower value equals more severe sentence
      Maximum Base Charge Sentence Length

Dependent variable:

      Recidivists: 1 = recidivist and 2 = non-recidivist

For a first step, a test of equality of the group means of the independent variables was conducted. Table 18 below shows the results of this analysis. Although none of the independent variables differentiated the recidivists groups at a 95% significance level, two variables – *Age at First Conviction/Contact* and *Age at Referral to CMHC* – did show a difference in group means at a 90% confidence level.

Table 18
Test of Equality of Group Means

	Independent Variable Means			
	Recidivist	**Non-recidivist**	**F**	**Sig.**
Age at First Conviction or Contact	22.2	25.6	3.81	.054
Age At Referral to CMHC	31.2	35.2	3.50	.064
Base Charge Sentence Type	5.1	5.8	2.21	.140
Total Prior Misdemeanors	10.3	8.1	1.70	.195
Total Prior Convictions	11.6	9.2	1.60	.209
Base Charge Offense Level	1.9	1.8	1.02	.316
Base Charge Offense Rank	38.8	42.6	0.65	.421
Total Prior Felonies	1.3	1.1	0.28	.595
Gender	1.6	1.5	0.17	.678
Race	2.9	2.9	0.10	.752
Base Charge Maximum Sentence	69.9	72.4	0.00	.966

Note: Values in the same row that are shaded in gray are significantly different at
p< 0.10 in the two-sided test of equality for column proportions.

A discriminant analysis was subsequently performed to determine if a *combination* of the independent variables exists that accurately assigns cases to the two recidivist groups. A manual stepwise variable selection method was used to determine which variables to include or remove from the model. The best model that resulted included four independent variables – *Age at First Conviction or Contact, Age at Referral to CMHC, Base Charge Sentence Type,* and *Total Prior Misdemeanors*.

Table 19 shows the resulting regression models for each group of the dependent variable – Recidivists and Non-recidivists. The coefficients and constants in the table are used to create regression equations. These equations can be used to assign each subject to the Recidivist or Non-recidivist group by multiplying each of the independent predictor variable values by its corresponding coefficient and summing these products with the constant to arrive at a classification score. Two classification scores are calculated for each subject – a Recidivist score and a Non-recidivists score. A subject is assigned to that group for which the classification score is the largest.

Table 19
Discriminant Analysis Model

	Recidivist	Non-recidivist
Age at First Conviction or Contact	.054	.101
Age At Referral to CMHC	.320	.319
Base Charge Sentence Type	.305	.261
Total Prior Misdemeanors	1.107	1.201
Constant	-9.464	-11.080

Although a regression model was determined from the discriminant analysis, statistical significance testing showed a very low correlation, accounting for less than 10% of the variation in the grouping variable, i.e. whether a subject is a recidivist or non-recidivist.

The low correlation of the discriminant function with the dependent variable is further revealed by the classification results shown in Table 20. In this table the rows are the observed categories of the dependent variable and the columns are the predicted categories. When prediction is perfect all cases will lie on the diagonal. The classification results reveal that 67.7% of all CMHC participants were classified correctly into "Recidivists" or "Non-recidivists".

Table 20
Classification Results

		Predicted Group Membership		Actual Group
		Recidivist	Non-recidivist	Membership
Count	**Recidivist**	26	10	36
	Non-recidivist	22	41	63
%	**Recidivist**	72.2	27.8	100.0
	Non-recidivist	34.9	65.1	100.0

Numbers/Percentages in bold and shaded are correctly predicted. 67.7% of original grouped cases correctly predicted.

Although the discriminant analysis was unable to show a strong correlation between participant characteristics and the tendency to recidivate, the results are similar to four other outcome evaluations that have been conducted recently for the Windsor County Sparrow Project[3], the Spectrum Youth & Family Services Rapid Referral Program[4], and the Rutland and Chittenden County Treatment Courts[5]. In these studies, the discriminant analysis revealed that the independent variable *Base Docket Sentence Type* was important in all four regression models that were created. Also, *Age at Program Start* and *Base Charge Offense Rank* remained as important variables in two of the outcome evaluations. In each of these other outcome evaluations, however, the correlations were also too weak to provide useful models for predicting recidivism. The resulting models were able to correctly assign only 65% to 70% of the participants to their correct recidivist group. This consistency across five different projects is encouraging, however, and shows the importance of doing more regression modeling with future program outcome evaluations, while looking further into base docket sentencing parameters. This observation also suggests that a meta-analysis using data from the five studies may serve to reduce some of the "noise" in the data and provide more significant insight into which subject characteristics are important in driving the tendency to recidivate. It is also important to compile more detailed demographic and psychographic participant profile information that may facilitate the development of more powerful predictive models and provide important tools for future pre-program screening.

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[3] Online report link:

http://www.crgvt.org/uploads/5/2/2/2/52222091/sparrow_final_report_6-20-12b.pdf

[4] Online report link:

http://www.crgvt.org/uploads/5/2/2/2/52222091/spectrum2_finalreport_10-20-12b.pdf.

[5] These outcome evaluations are available online at http://www.crgvt.org/reports.html

LIMITATIONS

Throughout this report the study cohort has been divided into two groups -- "Graduated" and "Terminated or Withdrew." The purpose of dividing the study cohort in this way was to show the difference in the post-program behavior between the two groups. It is important to note, however, that the "Terminated or Withdrew" group is not a true control or comparison group as found in experimental or quasi-experimental research designs. The key difference is that unlike an experimental design, the "Terminated or Withdrew" group did participate at some level in the CMHC program and possibly were affected by that experience. The recidivism pattern of the "Terminated or Withdrew" group is likely to be different from a true control group whose members would not be exposed to the services provided by the CMHC program. Given the positive results observed for the "Graduated" group in this study it is possible that the levels of recidivism for a true control group might be higher than reported here. Further, since we cannot assume that any differences between the two groups reported on in this study are random (as would be the case in an experimental design) there may be differences between the two groups which are unrelated to program participation which are, however, related to recidivism.

CONCLUSIONS

1. **The CMHC appears to be a promising approach for reducing recidivism among participants who completed the program.**

Out of the 99 CMHC participants, significantly fewer subjects who completed the CMHC (25.0% or 14 of 56) were reconvicted of some type of crime as compared to 22 of the 41 subjects (51.2%) who were terminated or withdrew from the program.

2. **The CMHC was shown to be very effective in producing graduates that remained conviction free in the community during their first year after leaving the program.**

The research showed that for all of the study participants, most recidivism occurred in the period up to one year after leaving the CMHC. However, for the successful CMHC graduates, more than 82% -- 46 of 56 participants -- remained conviction-free during their first year after leaving the program. The subjects who were unsuccessful in completing the CMHC had a lower success rate of 72% -- 31 out of 43 of the subjects that were either terminated or withdrew from the CMHC remained conviction-free during the first year after leaving the program.

3. **The CMHC appears to be a promising approach for reducing the number and severity of reconvictions for participants who completed CMHC.**

The reconviction rate for the successful CMHC participants was less than one-half the rate for the participants that were unsuccessful (91 compared to 225 reconvictions per 100, respectively).

4. **The CMHC recidivists tended to commit post-CMHC crime in Chittenden County.**

For graduates of CMHC, 40 of their 51 new convictions (approximately 78.4%) occurred in Chittenden County. The other reconvictions occurred mostly in Rutland and Washington counties. For people who did not graduate from the CMHC, 87.6% of their reconvictions were in Chittenden County as well.

5. *The analysis revealed that four variables -- Age at First Conviction or Contact, Age at Referral to CMHC, Base Charge Sentence Type, and Total Prior Misdemeanors –* **showed some correlation to recidivism. The resulting regression model, however, did not show strong statistical significance and only correctly assigned approximately 68% of the subjects into recidivist/non-recidivist groups.**

Based on the results of this analysis, the differences in demographic profiles and criminal histories of the study sample were not important factors in determining the tendency of CMHC participants to recidivate.