



Ministry of
Public Safety
and Solicitor General

The Impact of Respectful Relationships and Relationship Violence Treatment Programs on Spousal Assault and Recidivism

Research Report

**B.C. Corrections
Research Unit**
June 24, 2009

Table of Contents

EXECUTIVE SUMMARY	1
PART 1: ALL-INCLUSIVE ANALYSIS	4
Community RR+RVT Group and the Comparison Group	4
Impact on spousal assault-related recidivism.....	4
Impact on general recidivism	6
Custody RR+RVT Group and Comparison Group.....	8
Community RR-only and Comparison Group.....	11
Impact on spousal assault-related recidivism.....	11
Impact on general recidivism	13
Custody RR and Comparison Group	16
PART II. ANALYSIS OF FIXED TRACKING PERIODS.....	18
Findings	18
APPENDIX A: DETAILED REPORT—METHODOLOGY AND DATA INTEGRITY	23
Methodology	23
Data used in the study.....	23
Definition of recidivism.....	23
Selection of the program participants	24
Selection of the comparison group.....	24
Limitations of the analysis	24
APPENDIX B: DETAILED REPORT—FIXED TRACKING PERIOD ANALYSES	26
Community RR+RVT Group and the Comparison Group (K-file recidivism).....	26
Community RR+RVT Group and Comparison Group (general recidivism)	32
Community RR-only Group and the Comparison Group (K-file recidivism).....	37
Community RR-only Group and the Comparison Group (general recidivism).....	44

The Impact of Respectful Relationships and Relationship Violence Treatment Programs on Spousal Assault and Recidivism

Executive Summary

This study analyzes the impact of the Respectful Relationships (RR) and Relationship Violence Treatment Program (RVT) on reducing spousal abuse and general recidivism. In this study, comparative analyses were conducted between the:

- RVT completion group (most participants completed the RR program) and a matched comparison group that did not participate in any program, and
- RR completion group that did not participate in RVT and a matched comparison group that did not participate in any program.

Comparisons were conducted separately for offenders under community supervision and offenders in custody. For offenders under community supervision, analyses were conducted separately with comprehensive follow up periods and 'fixed' followup periods. With the comprehensive method, all valid cases in the programmed groups were included. The range of time at risk for all the cases being studied varies from a few days to a few years. The comprehensive approach examined the general effectiveness of the RR and RVT programs in reducing recidivism within the study period.

The fixed tracking period methodology, examined fixed lengths of time at risk for all the participants in the treatment and comparison groups. Analysis of three, six, nine months, one year and two years were undertaken for community-based programs. The purpose of the fixed tracking analysis is to measure the effectiveness of the programs on reducing recidivism within each time period.

No fixed tracking analyses were conducted for the custody RR+RVT group or custody RR-only group due to small sample sizes.

This analysis utilizes significance-testing procedures that are based on probability (p) calculations. These procedures achieve the following:

- Evaluate the differences between two or more groups on a particular measure (or measures); and

- Determine if the results are reliable enough that they are unlikely to occur by chance or error. If they are reliable, these results are statistically significant.

A “statistically significant difference” means that there is statistical evidence of a reliable difference, but does not indicate a large or important difference. To determine a large or important difference, we use techniques such as odds ratio and effect size. The standard for statistical significance in criminological studies is $p \leq .05$. This means that we only accept results that are unlikely to occur by chance or error 95 times (or more) out of 100. Reliability is closely associated to sample size. Therefore as a sample decreases, it becomes more difficult to find reliable differences.

The findings from this research are summarized below:

- Under community supervision, participation in RR+RVT is associated with a statistically significant reduction in:
 - Spousal assault-related recidivism by about 35% within the study period (July 30, 2003 to March 31, 2007), according to the Cox regression co-efficients.
 - General recidivism by about 53% within the study period (July 30, 2003 to March 31, 2007) according to the Cox regression co-efficients.
 - Spousal assault-related recidivism by about 50% (5.2% of the RR+RVT group recidivated versus 10% of the comparison group) within the two-year tracking period as suggested by the Cox regression co-efficients.
 - General recidivism¹ by about 60% (8.4% of the RR+RVT group recidivated versus 19.3% of the comparison group) within the two-year tracking period as suggested by the Cox regression co-efficients.
- Under community supervision, participation only in the RR program is not associated with a statistically significant reduction of either spousal assault-related recidivism or general recidivism. However, when program maturity was taken into account (i.e. post-January 2005), RR as a stand-alone intervention in the community is associated with a statistically significant reduction in spousal assault recidivism by about 42% (2.4% for RR-only group versus 4.5% for the comparison group) and reduces general recidivism by about 47% (4.2% for the RR-only group versus 8.1% for the comparison group), as indicated by the Cox regression co-efficients.
- A survival analysis of the custody RR+RVT group and the comparison group showed that participation in RR+RVT programs is not associated with a reduction in recidivism. This may be due in part to a small sample size.

¹ General recidivism refers to all new convicted offences except for breach of probation. It also includes new convicted offences related to spousal assault.

- Offenders in custody during the study time period who participated in RR and RVT programs plus many other programs recidivated more often than the comparison group.
- Participation only in RR (no RVT) in custody is not associated with a reduction in recidivism.
- When different fixed tracking periods were used for analysis, the following results emerged:
 - Participants in the community RR+RVT groups recidivated less often than the comparison groups in almost all the fixed tracking periods on both spousal-related offences and general offences.
 - Participating only in the community RR program is not as strongly associated with a reduction in recidivism as participation in RR+RVT programs. This study also indicates that:
 - There is a statistically significant difference between the two groups in a six-month period for both spousal-related and general recidivism.
 - The RR program, as it is currently configured, may have a shorter-term effect on reducing recidivism, but more information is required.

Note: The data collection methods and analyses used to prepare this report do not identify the cause and effect of correctional programs. For this reason, it is impossible to conclude that participation in these programs cause a reduction (or increase) in recidivism.

Part 1: All-Inclusive Analysis

Community RR+RVT Group and the Comparison Group

The study period for the RR+RVT group and the comparison group is from July 30, 2003 when the first offender completed the RVT program, to March 31, 2007 when recidivism data was retrieved from CORNET.

The community RR+RVT group includes participants who completed the RVT program under community supervision. Most of them (84%) also completed the RR program. From July 2003 to June 2006, 1,065 offenders completed the RVT program.

Data integrity concerns resulted in the exclusion of 299 participants from the cohort: 110 were dropped because of incorrect program participation dates or incomplete community supervision admission records in the data extract. There were 198 offenders excluded from the study group due to their participation in other programs, incorrect RVT involvement dates, or their CS numbers merged with other file numbers. The final cohort for the RR+RVT group was comprised of 766 program participants.

During the study period, 3,794 offenders under community supervision were initially selected for the comparison group. This cohort did not participate in any other program. After random selection that proportionally matched the RR+RVT group on prior criminal record indicator, risk level assessment, and jail plus probation, 1,343 cases were included in the final comparison group for statistical analysis.

Impact on spousal assault-related recidivism

A survival analysis of the community RR+RVT participants and the community comparison group concluded that there is a significant difference in the recidivism rates between the RR+RVT program group and the comparison group. During the study period, 5.4% of the RR+RVT group recidivated in contrast to 7.4% of the comparison group that recidivated (Table 1), which is approximately a 27% reduction. The *sig.* value² of .023 in Table 2 shows that the difference is not likely due to chance.

The odds ratio [Exp(B)] in Table 3 in the Cox regression analysis suggests that participation in the RR+RVT program is associated with a reduction in spousal assault-related recidivism within the study period by about 35% $[(1-0.648) \times 100]$. Figure 1 shows the survival curves for the RR+RVT completion group and the comparison group.

² *Sig.* value refers to the proven statistical ranking according to the test of significance.

TABLE 1: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM

Program completion	Total number of offenders	Number of recidivated offenders	Offenders not recidivated in the study period	
			Number	Percent
No program	1343	99	1244	92.6%
RR+RVT programs	766	41	725	94.6%
Overall	2109	140	1969	93.4%

TABLE 2: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS (SPOUSAL ASSAULT-RELATED RECIDIVISM)*

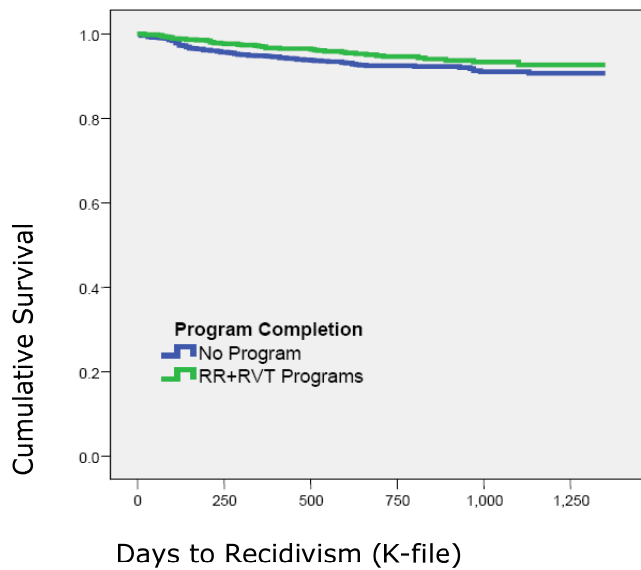
	chi-square	df	sig.
Breslow (Generalized Wilcoxon)	5.179	1	.023

*Test of equality of survival distributions for the different levels of program completion.

TABLE 3: COX REGRESSION VARIABLES IN THE EQUATION (SPOUSAL ASSAULT-RELATED RECIDIVISM)

		B	SE	Wald	df	sig.	Exp(B)
Step 3	RR+RVT	-.434	.195	4.972	1	.026	.648
	Prior record	.194	.083	5.441	1	.020	1.214
	CRNA	.459	.161	8.175	1	.004	1.583

FIGURE 1: SURVIVAL OF COMMUNITY RVT+RR AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)



Impact on general recidivism

A survival analysis of the community RR+RVT participants and the community comparison group concluded that there is a significant difference in the general recidivism rates between the RR+RVT program group and the comparison group. During the study period, eight per cent of the RR+RVT group recidivated versus 14.6% of the comparison group (Table 4), which represents approximately a 45% reduction in recidivism. The *sig.* value of .000 in Table 5 shows that the difference is unlikely due to chance. The odds ratio [exp(B)] in Table 6 in the Cox regression analysis suggests that participation in the RR+RVT program is associated with a reduction in general recidivism within the study period by about 53% [(1-0.473)x100]. Figure 2 shows the survival curves for the RR+RVT completion group and the comparison group.

TABLE 4: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM

Program completion	Total number of offenders	Number of recidivated offenders	Offenders not recidivated in the study period	
			Number	Percent
No program	1343	196	1147	85.4%
RR+RVT programs	766	61	705	92.0%
Overall	2109	257	1852	87.8%

TABLE 5: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS (GENERAL RECIDIVISM)*

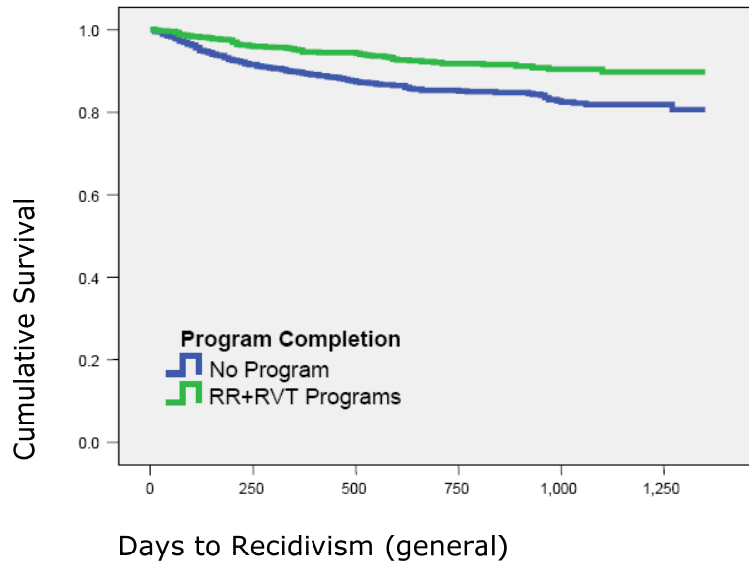
	chi-square	df	sig.
Breslow (Generalized Wilcoxon)	22.824	1	.000

*Test of equality of survival distributions for the different levels of program completion.

TABLE 6: COX REGRESSION VARIABLES IN THE EQUATION (GENERAL RECIDIVISM)

		B	SE	Wald	df	Sig.	Exp(B)
Step 4	RR+RVT	-.748	.152	24.369	1	.000	.473
	Prior record	.237	.061	14.950	1	.000	1.267
	CRNA	.492	.116	18.021	1	.000	1.636
	Age	-.034	.007	24.342	1	.000	.966

FIGURE 2: SURVIVAL OF COMMUNITY RVT+RR AND COMPARISON GROUP (GENERAL RECIDIVISM)



Custody RR+RVT Group and Comparison Group

The study period for the RR+RVT group and the comparison group is from November 1, 2003, when the first offender who completed RVT program was released, to March 31, 2007, when recidivism data was retrieved from CORNET.

Only 57 offenders who completed both RR and RVT programs were in custody during the study period. Two were dropped because of incorrect RVT completion dates. Of the remaining 55, 49 completed other programs such as Substance Abuse Management (SAM), Violence Prevention (VPP) or Breaking Barriers (BB).

The methodology for this study dictates that solely offenders who completed only RR and RVT (and no other programs) should be included in the analysis to fairly assess outcomes. However, this would have resulted in an insufficient cohort for a meaningful statistical analysis.

An exploratory investigation of the 55 RR+RVT participants was undertaken to assess whether there was a reduction in recidivism associated with participating in RR+RVT along with other offender programs. There were 458 K-file offenders initially selected for the comparison group who were released from custody during the study period and did not participate in any program.

After random selection that proportionally matched the RR+RVT group on offenders' prior criminal record indicator and sentence length, 77 cases were included in the final comparison group for statistical analysis. There was insufficient data to undertake analysis by risk level because of this small number and missing risk data in the extract. The two groups were of similar age with the difference in the means of the two groups being 0.765 and the *sig.* value being .625.

A survival analysis of the custody RR+RVT group and the comparison group showed that participation in the RR+RVT programs was not associated with a reduction in spousal assault-related recidivism or general recidivism. In fact, participants in the RR and RVT programs who also took many other programs tended to recidivate more often and sooner than the comparison group (Table 7 and Table 8). Figure 3 and Figure 4 show the survival curves. This is possibly due to inmates with high criminological needs, because offenders with high needs are more likely to recidivate and require more programming. As this sample size is quite small (57), a larger sample size is required before any additional interpretation.

TABLE 7: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM

Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated in the study period	
			Number	Percent
No program	77	7	70	90.9%
RR+RVT programs	55	10	45	81.8%
Overall	132	17	115	87.1%

FIGURE 3: SURVIVAL OF CUSTODY RR+RVT AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)

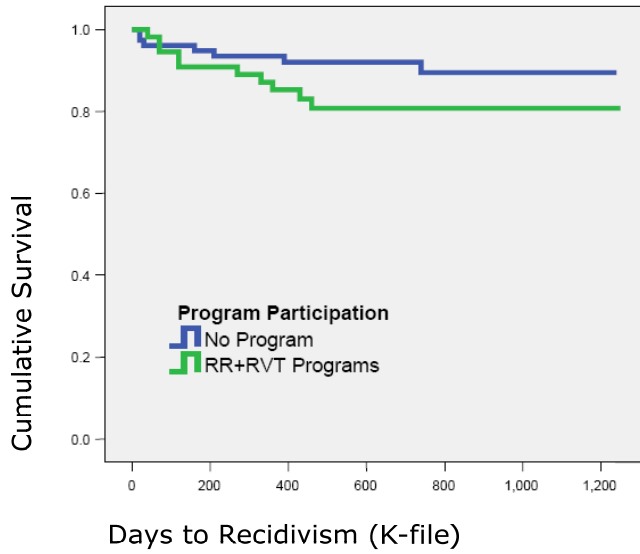
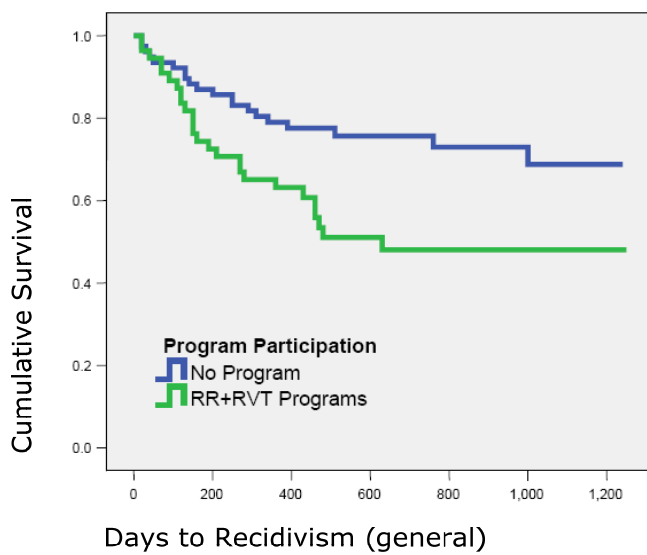


TABLE 8: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM

Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated in the study period	
			Number	Percent
No program	77	20	57	74.0%
RR+RVT programs	55	26	29	52.7%
Overall	132	46	86	65.2%

FIGURE 4: SURVIVAL OF CUSTODY RVT+RR AND COMPARISON GROUP (GENERAL RECIDIVISM)



Several explanations for this outcome may be considered. It is possible that participants in multiple programs were higher risk. Repeat offenders and the prior criminal record indicator used for this analysis may not be adequate to reflect this variance. A higher risk profile would result in a greater likelihood of reoffending behaviour than the comparison group that did not participate in multiple programs (i.e. the comparison group may have been considered a lower risk to reoffend).

Research was conducted to test this theory by searching all prior convictions of these two groups in CORNET since 1996. It discovered that the prior conviction rate of offenders in the RR+RVT group is 5.73 per offender—50% higher than that of the comparison group (3.82 per offender).

A survival analysis was conducted after removing offenders of lower prior conviction rates from the comparison group so the two groups could be compared on prior conviction rates. The results of the survival analysis show that participants in RR and RVT programs, plus other programs, recidivated more often and sooner than the comparison group (Table 9, Table 10).

TABLE 9: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM

Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated in the study period	
			Number	Percent
No program	50	7	43	86.0%
RR+RVT programs	55	10	45	81.8%
Overall	105	17	88	83.8%

TABLE 10: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM

Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated in the study period	
			Number	Percent
No program	50	15	35	70.0%
RR+RVT programs	55	26	29	52.7%
Overall	105	41	64	61.0%

Other factors may make the findings confusing. First, it is possible that the small group of 55 offenders have characteristics that affected the comparison group matching.

For instance, risk level is a key variable used to create an equal comparison group for analysis of the community RVT program. Risk levels are not comprehensively available for matching purposes in custody-delivered programming.

RR and RVT programs may have failed to address the criminogenic needs of the offenders in custody. Correctional best practices and the “what works” literature have determined that programming must target risk and criminogenic needs to be effective. Without validated risk assessment and multiple program offerings to this group, it is possible that the needs of these offenders were not properly targeted.

Responsivity issues within the custody environment may also have played a role in the findings. The challenges of delivering programs in centres with short mean sentence lengths, in addition to the challenges of shift patterns, overcrowding, and staffing shortages, may have resulted in truncated program delivery (fewer programs and compressed delivery).

Only two to three programs are delivered annually by PGRCC and KRCC. The K-file caseloads in adult custody are also declining slightly (11.35% in 01/02 to 9.98% in 06/07).

It is likely that a number of factors were at play. However, it should be stressed that the sample size of the study groups was small. It is possible that the findings are due to chance alone and/or not representative of the offender population. Because of the small sample size, no fixed tracking period analysis was conducted.

Community RR-only and Comparison Group

The study period for the RR-only group and the comparison group was from January 1, 2003, when the RR program started, to March 31, 2007, when recidivism data was extracted from CORNET.

Under community supervision, 3,064 participants completed the RR program. There were 1,604 cases excluded from the study group due to participation in other programs, program completion before 2003, or their CS number merged with other file numbers.

There were 1,460 cases included in the RR-only group, to be compared with the comparison group. There were 3,429 K-file offenders initially selected for the comparison group, who were under community supervision and had not participated in any program. There were 2,828 cases included in the comparison group for statistical analysis. These cases were randomly selected to proportionally match the RR-only group on prior criminal record indicator, and jail plus probation.

Impact on spousal assault-related recidivism

A survival analysis of the community RR participants and the community comparison group shows that there is no statistically significant difference in spousal assault-related recidivism in the study period from January 1, 2003 to March 31, 2007 (Table 11, Table 12 and Figure 5). However, the difference between the two groups becomes significantly different when the study period is between January 1, 2005 and March 31, 2007, although the difference is slight (Table 13, Table 14 and Figure 6). The odds ratio in the Cox regression analysis (Table 15) suggests that participation only in the RR program is associated with a reduction in general recidivism by about 42% within the study period. The reduction of the recidivism rate being statistically significant after removing pre-January 2005 cases (accounting for time post release) might indicate:

- An improvement in the quality of the RR program over time;
- The classification system used to direct offenders into particular programs; or
- A unique result related to this specific sample.

However, it might also indicate that participation only in the RR program has a shorter-term effect, because the pre-January 2005 cases have two to four years to be tracked for re-offences. By removing these cases, what were left in the study cohort have a range of three months to 27 months to be tracked for re-offences.

TABLE 11: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM

Program participation	Total Number	Number of events	Censored	
			N	Percent
No program	2828	182	2646	93.6%
RR program	1460	69	1391	95.3%
Overall	4288	251	4037	94.1%

TABLE 12: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUP*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	2.215	1	.137

*Test of equality of survival distributions for the different levels of Program Participation.

FIGURE 5: SURVIVAL FOR COMMUNITY RR AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)

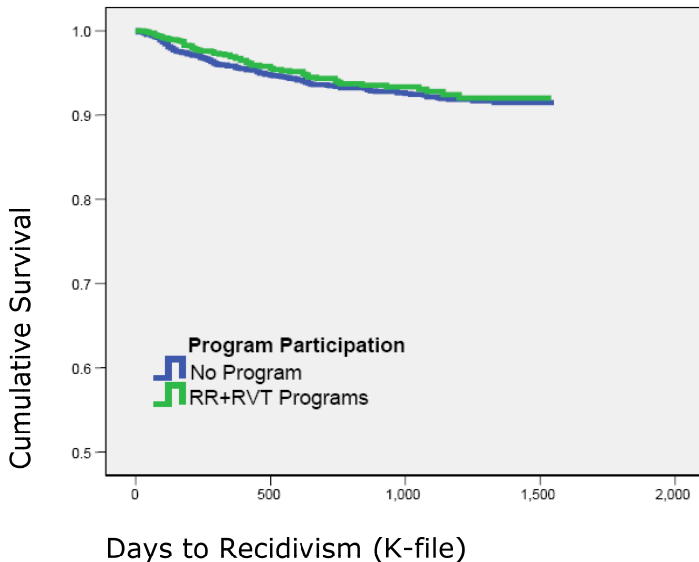


TABLE 13: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM

Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated in the study period	
			Number	Percent
No program	1345	61	1284	95.5%
RR program	858	21	837	97.6%
Overall	2203	82	2121	96.3%

TABLE 14: OVERALL COMPARISONS BETWEEN RR AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)*

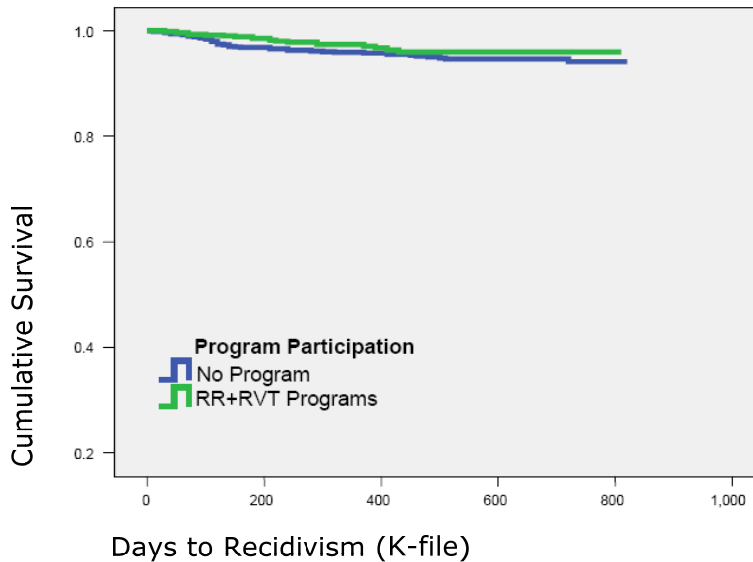
	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	4.718	1	.030

*Test of equality of survival distributions for the different levels of program participation.

TABLE 15: COX REGRESSION VARIABLES IN THE EQUATION (SPOUSAL ASSAULT-RELATED RECIDIVISM)

	B	SE	Wald	df	Sig.	Exp(B)
Program	-.553	.273	4.116	1	.042	.575
CRNA	.616	.170	13.127	1	.000	1.852

FIGURE 6: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)



Impact on general recidivism

A survival analysis found there is a statistically significant difference in the general recidivism rates between the RR program group and the comparison group, although the difference is slight (Table 16 and Table 17). However, a Cox regression analysis cannot confirm the recidivism reduction effects of the RR program with the significance value being .069 (Table 18). The different and somewhat conflicting results from two separate statistical procedures demonstrate the marginal discrepancies that are seen in Table 13 above.

However, the difference between the two groups becomes more statistically significant when the study period is between January 1, 2005 and March 31, 2007 (Table 19 and Table 20). The Cox regression co-efficients can also confirm the recidivism reduction rate of about 47% at the 95% confidence interval (Table 21).

As with the analysis of spousal-related recidivism, the reduction of recidivism rate becoming statistically significant after removing pre-January 2005 cases (accounting for time post-release) cases might indicate an improvement in the quality of the RR program over time. However, it might also indicate that the RR program alone has a shorter-term effect because the pre-January 2005 cases have two to four years to be tracked for re-offences. By removing these cases, what were left in the study cohort have a range of three months to 27 months to be tracked for re-offences.

TABLE 16: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM

Program participation	Total number of offenders	Number of recidivated offenders	Offenders who did not recidivate in the study period	
			Number	Percent
No program	2828	358	2470	87.3%
RR program	1460	132	1328	91.0%
Overall	4288	490	3798	88.6%

TABLE 17: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (GENERAL RECIDIVISM)

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	4.629	1	.031

TABLE 18: COX REGRESSION VARIABLES IN THE EQUATION (GENERAL RECIDIVISM)

	B	SE	Wald	df	Sig.	Exp(B)
RR program	-.190	.105	3.315	1	.069	.827
Age	-.030	.005	36.476	1	.000	.971
CRNA	.509	.080	40.610	1	.000	1.663
Prior record	.266	.045	35.485	1	.000	1.304

TABLE 19: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM (POST-JAN. 2005)

Program participation	Total number	Number of events	Censored	
			Number	Percent
No program	1345	109	1236	91.9%
RR program	858	36	822	95.8%
Overall	2203	145	2058	93.4%

TABLE 20: OVERALL COMPARISON BETWEEN COMMUNITY RR AND COMPARISON GROUP* (GENERAL RECIDIVISM, POST-JAN. 2005)

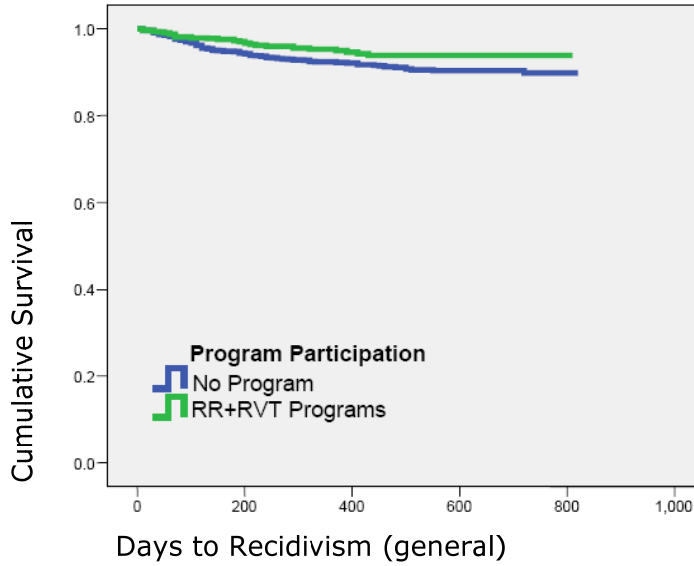
	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	7.968	1	.005

*Test of equality of survival distributions for the different levels of program participation.

TABLE 21: COX REGRESSION VARIABLE IN THE EQUATION (GENERAL RECIDIVISM, POST-JAN. 2005)

	B	SE	Wald	df	Sig.	Exp(B)
Program	-.639	.204	9.816	1	.002	.528
Age	-.036	.009	15.194	1	.000	.965
Prior history	.336	.083	16.212	1	.000	1.399
Risk level	.369	.160	5.322	1	.021	1.446

FIGURE 7: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (GENERAL RECIDIVISM)



Custody RR and Comparison Group

There are 577 offenders who completed the RR program in custody during the study period. A total of 497 offenders completed the RR program in custody without participating in the RVT program. Most completed other programs such as Breaking Barriers (BB), Substance Abuse Management (SAM) and Violence Prevention (VPP) in addition to RR. Only a small number of offenders (70) completed the RR program without completing or partially completing other programs.

There were 1,052 K-file offenders initially selected for the comparison group who were released from custody and did not participate in any program. After proportionally matching the two groups on prior record and sentence length, 300 cases were included in the comparison group for statistical analysis. The two groups were close in age (the difference in means = 0.3, and significance = 0.797).

A survival analysis of the custody RR participants and the custody comparison group shows that there is no significant difference in either spousal assault-related recidivism rates (Table 22, Table 23 and Figure 8) or general recidivism rates of the RR program participants, and participants who did not receive any program treatment (Table 24, Table 25 and Figure 9).

Because of the small sample size, no fixed tracking period analysis will be conducted of the custody RR-only and comparison group.

TABLE 22: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM

Program participation	Total number of offenders	Number of recidivated offenders	Offenders who did not recidivate in the study period	
			Number	Percent
No program	300	43	257	85.7%
RR program	70	7	63	90.0%
Overall	370	50	320	86.5%

TABLE 23: OVERALL COMPARISONS OF SPOUSAL ASSAULT-RELATED RECIDIVISM RATES*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	.272	1	.602

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 8: SURVIVAL OF CUSTODY RR-ONLY AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)

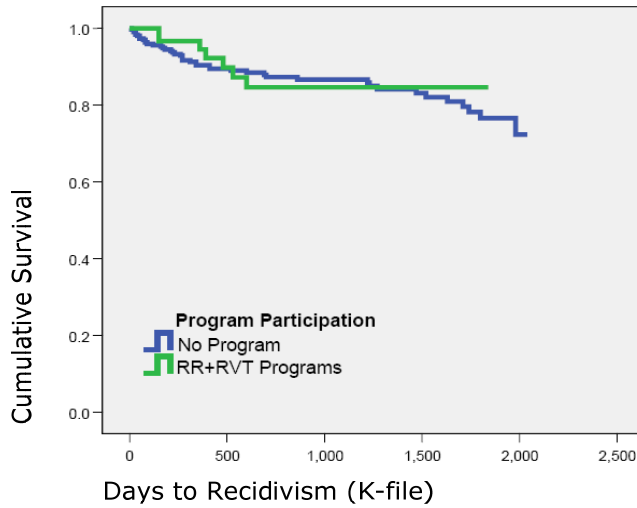


TABLE 24: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM

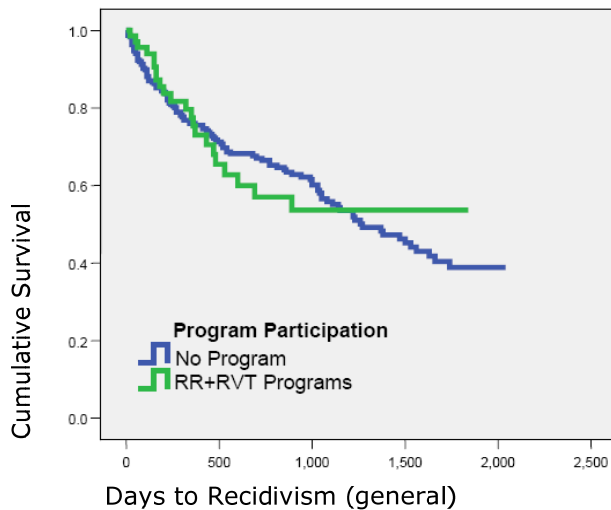
Program participation	Total number of offenders	Number of recidivated offenders	Offenders who did not recidivate in the study period	
			Number	Percent
No program	300	118	182	60.7%
RR program	70	22	48	68.6%
Overall	370	140	230	62.2%

TABLE 25: OVERALL COMPARISONS OF GENERAL RECIDIVISM RATES*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	.031	1	.861

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 9: SURVIVAL OF CUSTODY RR-ONLY AND COMPARISON GROUP (GENERAL RECIDIVISM)



Part II. Analysis of Fixed Tracking Periods

This part of the study focused on the impact of the RR and RVT programs on recidivism in fixed tracking time periods of three months, six months, nine months, one year and two years. All the principles defined in the methodology section apply to the analysis of fixed tracking time periods with the exception of the selection of cases (offenders) in the program group and the comparison group regarding the study period.

For the analysis to have sufficient data for each specific fixed time period and to keep the sample size at the maximum level, the samples used in each fixed tracking period have different date boundaries. For the two-year fixed tracking period, for instance, only offenders who completed the RR or RVT programs before March 31, 2005 are included in the study group—instead of all the offenders who completed the RR/RVT before the end of 2006. This ensures that every case in the study group has two years to be tracked. For the same reason, the comparison group uses the same date boundary for case selection.

Survival analyses were conducted to test whether there is a statistically significant difference in recidivism rates between the study group and the comparison group. In addition to survival analysis, Cox regression analyses were conducted to estimate the potential recidivism reduction rate associated with participation in the RR and RVT programs. The Cox regression model was used in this study, because it is not based on any assumptions concerning the nature or shape of the underlying survival distribution. Therefore, this non-parametric model is the preferred method because it is more robust and less stringent than its corresponding parametric models.

Findings

The community RR+RVT groups recidivated less often than the comparison group in almost all the fixed tracking periods on both spousal-related offences (Table 26) and general offences (Table 28). The exception is the three-month period in spousal-related offences.

The explanation might well be a data collection issue with CORNET. Before CORNET2 was implemented in 2005, the issue date of sentencing orders was used for the analysis because no offence date was available. It would normally take more than a few months for the criminal justice system to convict and sentence offenders.

The Cox regression co-efficients (Table 27) suggest that the completion of RR+RVT programs used in community supervision is associated with a reduction in the spousal assault-related recidivism rate by about 50% [$100\% - (100\% \times 0.499) = 50.1\%$, Table 27]. It is also associated with reduced general recidivism by about 60% [$100\% - (100\% \times 0.404) = 59.6\%$, Table 29] within the two-year fixed tracking period.

Participation only in the community RR program does not appear to be as strongly associated with a reduction in recidivism as the RR+RVT programs. There is a statistically significant difference

between the two groups in the six-month time period for both spousal assault-related recidivism (Table 30) and general recidivism (Table 32).

At nine months, the effect almost reaches the criterion of .05 for statistical significance for spousal assault-related recidivism and at one-year for general recidivism. However, there is no statistically significant difference between the two groups in the two-year fixed tracking period regarding either spousal-related or general recidivism.

This finding suggests that participation in the RR program, as it is currently configured, may have a shorter-term effect in reducing recidivism. The Cox regression co-efficients suggest that the completion of RR programs used in community supervision is associated with a reduction in the spousal assault-related recidivism rate by about 41% [$100\% - (100\% \times 0.594) = 40.6\%$, Table 31] for the six-month tracking period. Participation is also associated with a reduction in general recidivism by about 28% [$100\% - (100\% \times 0.718) = 28.1\%$, Table 33] within the nine-month fixed tracking period.

The above analyses suggest an association between program participation and reductions in recidivism over time, potentially indicating program improvement. Because of this concern, RR participants before 2003 were excluded from the current analysis.

Due to the nature of fixed tracking period analysis, RR participants in more recent years had to be excluded in the one-year and two-year tracking period. Results might be better if the same analyses are conducted again in one or two years.

TABLE 26: SUMMARY OF COMMUNITY RR+RVT GROUP AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)

	Time boundaries case selection		Total number of offenders	Offenders recidivated within study period		Breslow (Generalized Wilcoxon)	
				Number	Percent	chi-square	Sig.*
Three months	From: 30/07/2003	RR+RVT	766	6	0.8%	1.67	.196
	To: 31/12/2006	Comparison	1343	19	1.4%		
Six months	From: 30/07/2003	RR+RVT	766	11	1.4%	19.678	.000
	To: 30/09/2006	Comparison	1343	72	5.4%		
Nine months	From: 30/07/2003	RR+RVT	766	18	2.3%	19.017	.000
	To: 30/06/2006	Comparison	1343	90	6.7%		
One year	From: 30/07/2003	RR+RVT	709	21	3.0%	16.054	.000
	To: 31/03/2006	Comparison	1234	90	7.3%		
Two years	From: 30/07/2003	RR+RVT	404	21	5.2%	8.321	0.004
	To: 31/03/2005	Comparison	657	66	10.0%		

*Sig. value of .05 is normally used as the criterion for statistical significance.

TABLE 27: COX REGRESSION ANALYSIS OF COMMUNITY RR+RVT AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)

	B	SE	Wald	df	Sig.	Exp(B)
Three months	-0.60	0.47	1.62	1	0.204	0.551
Six months	-1.34	0.32	17.03	1	0.000	0.263
Nine months	-1.07	0.26	17.23	1	0.000	0.342
One year	-0.93	0.24	14.71	1	0.000	0.395
Two years	-0.70	0.25	7.71	1	0.005	0.499

TABLE 28: SUMMARY OF COMMUNITY RR+RVT GROUP AND COMPARISON GROUP (GENERAL RECIDIVISM)

	Time boundaries case selection		Total number of offenders	Offenders recidivated within study period		Breslow (Generalized Wilcoxon)	
				Number	Percent	chi-square	Sig.
Three months	From: 30/07/2003	RR+RVT	766	11	1.4%	16.227	.000
	To: 31/12/2006	Comparison	1343	65	4.8%		
Six months	From: 30/07/2003	RR+RVT	766	18	2.3%	34.635	.000
	To: 30/09/2006	Comparison	1343	121	9.0%		
Nine months	From: 30/07/2003	RR+RVT	766	31	4.0%	35.061	.000
	To: 30/06/2006	Comparison	1343	157	11.7%		
One year	From: 30/07/2003	RR+RVT	709	35	4.9%	36.202	.000
	To: 31/03/2006	Comparison	1234	167	13.5%		
Two years	From: 30/07/2003	RR+RVT	404	34	8.4%	24.199	.000
	To: 31/03/2005	Comparison	657	127	19.3%		

TABLE 29: COX REGRESSION ANALYSIS OF COMMUNITY RR+RVT AND COMPARISON GROUP (GENERAL RECIDIVISM)

	B	SE	Wald	df	Sig.	Exp(B)
Three months	-1.23	0.33	14.30	1	0.000	0.291
Six months	-1.38	0.25	29.72	1	0.000	0.252
Nine months	-1.10	0.20	31.54	1	0.000	0.332
One year	-1.06	0.19	32.56	1	0.000	0.346
Two years	-0.91	0.19	21.98	1	0.000	0.404

TABLE 30: SUMMARY OF COMMUNITY RR-ONLY GROUP AND THE COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)

	Time boundaries case selection		Total number of offenders	Offenders recidivated within study period		Breslow (Generalized Wilcoxon)	
				Number	Percent	chi-square	Sig.
Three months	From: 01/01/2003	RR-only	1460	10	0.7%	1.722	.189
	To: 31/12/2006	Comparison	2828	31	1.1%		
Six months	From: 01/01/2003	RR-only	1184	19	1.6%	4.221	.040
	To: 30/09/2006	Comparison	2865	72	2.5%		
Nine months	From: 01/01/2003	RR-only	1116	26	2.3%	3.743	.053
	To: 30/06/2006	Comparison	2482	88	3.5%		
One year	From: 01/01/2003	RR-only	953	35	3.7%	1.166	.280
	To: 31/03/2006	Comparison	2314	104	4.5%		
Two years	From: 01/01/2003	RR-only	661	41	6.2%	.190	.663
	To: 31/03/2005	Comparison	1649	110	6.7%		

TABLE 31: COX REGRESSION ANALYSIS OF COMMUNITY RR-ONLY AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM)

	B	SE	Wald	df	Sig.	Exp(B)
Three months	-0.47	0.36	1.69	1	0.194	0.623
Six months	-0.52	0.26	4.08	1	0.043	0.594
Nine months	-0.43	0.22	3.66	1	0.056	0.652
One year	-0.21	0.20	1.13	1	0.288	0.812
Two years	-0.08	0.18	0.18	1	0.672	0.925

TABLE 32: SUMMARY OF COMMUNITY RR-ONLY GROUP AND COMPARISON GROUP (GENERAL RECIDIVISM)

	Time boundaries case selection		Total number of offenders	Offenders recidivated within study period		Breslow (Generalized Wilcoxon)	
				Number	Percent	chi-square	Sig.
Three months	From: 01/01/2003	RR-only	1460	25	1.7%	1.097	.295
	To: 31/12/2006	Comparison	2828	62	2.2%		
Six months	From: 01/01/2003	RR-only	1184	39	3.3%	4.095	.043
	To: 30/09/2006	Comparison	2865	127	4.4%		
Nine months	From: 01/01/2003	RR-only	1116	55	4.9%	4.563	.033
	To: 30/06/2006	Comparison	2482	169	6.8%		
One year	From: 01/01/2003	RR-only	952	65	6.8%	3.753	.053
	To: 31/03/2006	Comparison	2314	206	8.9%		
Two years	From: 01/01/2003	RR-only	661	79	12.0%	1.202	.273
	To: 31/03/2005	Comparison	1649	225	13.6%		

TABLE 33: COX REGRESSION ANALYSIS OF COMMUNITY RR-ONLY AND THE COMPARISON GROUP (GENERAL RECIDIVISM)

	B	SE	Wald	df	Sig.	Exp(B)
Three months	-0.25	0.24	1.10	1	0.294	0.780
Six months	-0.37	0.18	4.06	1	0.044	0.692
Nine months	-0.33	0.16	4.56	1	0.033	0.718
One year	-0.28	0.14	3.75	1	0.053	0.759
Two year	-0.14	0.13	1.19	1	0.275	0.867

Appendix A: Detailed Report – Methodology and Data Integrity

Methodology

Data used in the study

A data extract from the Research Information System (RIS), Community Management Information (CMI) and Adult Custody Information (ACI) was prepared for this study. An assessment of recidivism events revealed a significant discrepancy in the number of recidivism events between the data extract and the court sentencing orders recorded in the Corrections Network System (CORNET). CORNET is an operational system used by adult custody and community corrections to track clients within B.C. that have contact with the Corrections Branch.

Using a sample of 787 offenders who completed the RVT and RR programs, 50 recidivism events were found in the data extract from February 1st 2003 to December 31, 2006. When court sentencing orders in CORNET were scanned, 32 additional recidivism events were found for the same group of offenders for the same time period.

An initial investigation of the 32 inconsistent events showed that most were legitimate occurrences of recidivism. Based on this finding, it was decided that court sentencing orders in CORNET would be used to measure recidivism rates in the study. Data integrity issues continue to be explored.

Definition of recidivism

Recidivism is defined as any court sentencing orders for convicted criminal offences recorded in CORNET, except for breach of probation³. For offenders who completed RVT and RR programs under community supervision, the recidivism date was the next offence date recorded in CORNET after the completion of the RR or RVT program when the offence date was available.

When the offence date was not available, the first court-order issue date was used. Using the court-order issue date instead of the sentence effective date has the advantage of excluding jail plus probation as a recidivism event.

For the comparison groups under community supervision, the next offence date, or next court-order issue date recorded in CORNET after the first admission date into the community supervision for K-file offences, was used as the recidivism event.

For offenders who completed RVT and RR programs in custody, the recidivism date was the next offence date (or court-order issue date) recorded in CORNET after they were released from custody.

³ Breach of probation orders are excluded from this impact analysis mainly to be consistent with earlier research, such as the evaluation of the Violence Prevention Program (VPP) by Bill Glackman, PhD. He believes behaviour that becomes a breach of probation order is likely to be otherwise normal behaviour without the probation orders.

For the comparison groups in custody, the next offence date or court-order issue date recorded in CORNET after the first release date for a K-file offence, was used.

Selection of the program participants

Initial analysis revealed that many offenders participated in other programs such as Breaking Barriers (BB), Violence Prevention (VPP) and Substance Abuse Management (SAM), in addition to the RVT and RR programs. Because the focus of this study was assessing the impact of the RVT and RR programs, only participants who completed the RVT and RR programs, without other program involvement, were included.

Selection of the comparison group

All K-file offenders who were released from custody or admitted into community supervision in the study period and did not participate in any program were initially selected into the comparison group. Initial statistical analysis (Cox regression) shows that age, prior criminal record, risk level and pre and post-CORNET2 implementation date⁴ were significantly associated with recidivism rates. Risk levels were calculated by combining SARA and CRNA assessments for community clients⁵. Therefore, they must be controlled in the analysis of recidivism rates and the time to recidivate. Proportional matching was done on five levels of prior criminal record and on the pre and post-CORNET2 implementation date.

Because the programs specifically target spousal assault offenders, the K-file indicator was used to select the comparison groups. The RVT and RR-only group and the comparison group are similar in age.

Limitations of the analysis

Selection of the program-completed group and the comparison group under community supervision may have a unique bias: Participants who completed the programs may be the ones who had the desire not to reoffend and therefore would be less likely to reoffend. Participants who were more likely to reoffend could have reoffended halfway through the program and not completed the programs.

Until June 1, 2006, 11 offenders under community supervision failed to complete the RVT program because they committed new crimes. Considering that only 61 of the RVT group in the study reoffended, 11 is a significant size.

⁴ On average, there is a three-month time lag from offence date to conviction date, which is close to the court order issue date. Because of this time lag, using court order issue dates could include offences that were committed before the start date of tracking recidivism events in the study. Thus, using court order issue dates could result in a higher count of recidivism events than using offence dates. After CORNET2 was implemented in April 2005, 89% of court orders had offence dates in the system in contrast to only three per cent before CORNET2. For this reason, offenders—admitted to B.C. Corrections before CORNET2 and included in the study and comparison groups—were more likely to have court-order issue dates than offence dates. This resulted in higher recidivism rates for pre-CORNET2 offenders than for offenders admitted to B.C. Corrections post-CORNET2.

⁵ A “High” rating is given in the new risk level index when “High” results are recorded in a SARA or CRNA. A “Medium” rating is given when “Medium” or “Low” results are recorded in a SARA or CRNA.

For offenders in custody, there is a different potential bias: Offenders who participated in many programs are likely to have a longer criminal record. They are more likely to reoffend sooner than the comparison group who tend to have a shorter prior record.

Potential bias was addressed in this study by proportionally matching the two groups with a prior criminal record indicator and different risk levels. However, more research needs to be conducted to assess whether:

- The prior record indicator and risk levels used in the study adequately addressed the issue; and
- In particular, whether there is a need to create a more adequate prior criminal record indicator.

A concern was raised regarding the methodology used in counting recidivism events for the community RVT group and the comparison group: The two groups did not have an equal start time to count recidivism events. For the comparison group, the counting of recidivism events started immediately after they were sentenced to serve probation orders. For the RVT group, recidivism events were counted after they completed the RVT program—about nine months (on average) after they started serving the probation sentence.

Thus, the community RVT group might begin with fewer recidivism events. To the researcher of this analysis, the starting time makes no difference to the time to recidivate or the rate of recidivism for offenders under community supervision; there is no difference in the environment surrounding the two groups except for individuals who only served jail sentences.

Some research has been conducted to address this concern and no relevant findings have been discovered. Most published program evaluations are related to in-custody programs. The Violence Prevention Program evaluation by Bill Glackman, PhD, is the only study to date of B.C. Corrections offender treatment programs used in community supervision. According to his report, he did not have this concern, but more research is warranted.

When the purpose of research is to evaluate program efficacy, there is a problem with using the court-order issue date (which is close to the conviction date) as the recidivism date. The problem is including offences that were convicted after the recidivism tracking date when offences were committed before the recidivism tracking date. Using the offence date can correct this error.

However, offence dates were not recorded before CORNET2 was implemented. A unique problem is created when the offence date is used in combination with the court-order issue date as the recidivism date: There is the potential of counting fewer recidivism events every time an offence date is used than when a court-order issue date is used. Relative to the CORNET2 implementation date, the number of offenders in the study is proportionally controlled between the RR/RVT groups and the comparison groups. This control, however, may not be adequate.

Appendix B: Detailed Report – Fixed Tracking Period Analyses

Community RR+RVT Group and the Comparison Group (K-file recidivism)

(Findings on spousal assault-related recidivism at three, six, nine months, one year and two years.)

Three months

A survival analysis concluded that few offenders recidivated after three months (Table 34). There is no statistically significant difference between the RR+RVT group and the comparison group in spousal-related recidivism after three months (Table 35).

TABLE 34: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: THREE MONTHS

Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	1343	19	1324	98.6%
RR+RVT programs	766	6	760	99.2%
Overall	2109	25	2084	98.8%

TABLE 35: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS
(SPOUSAL ASSAULT-RELATED RECIDIVISM: THREE MONTHS)*

	chi-square	Df	Sig.
Breslow (Generalized Wilcoxon)	1.670	1	.196

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 10: SURVIVAL OF COMMUNITY RR+RVT AND COMPARISON GROUP
(SPOUSAL ASSAULT-RELATED RECIDIVISM: THREE MONTHS)

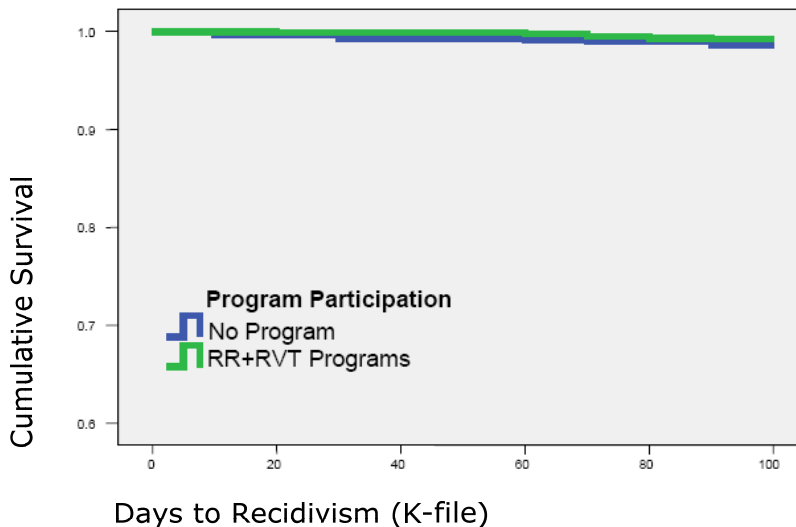


TABLE 36: GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. Deviation	Sig. (two-tailed)
Age	RR+RVT programs	766	37.82	9.78	0.72
	No program	1342	37.99	10.36	
Prior record index	RR+RVT programs	766	1.56	1.20	0.82
	No program	1343	1.55	1.19	
Risk level	RR+RVT programs	753	2.09	0.46	0.67
	No program	1343	2.08	0.46	
Education level	RR+RVT programs	726	6.19	1.71	0.04
	No program	1161	6.02	1.85	

Six months

A survival analysis concluded that the RR+RVT groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 37 and Table 38).

TABLE 37: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: SIX MONTHS

Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	1343	72	1271	94.6%
RR+RVT programs	766	11	755	98.6%
Overall	2109	83	2026	96.1%

TABLE 38: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS (SPOUSAL ASSAULT-RELATED RECIDIVISM: SIX MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	19.678	1	.000

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 11: SURVIVAL OF COMMUNITY RR+RVT AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM: SIX MONTHS)

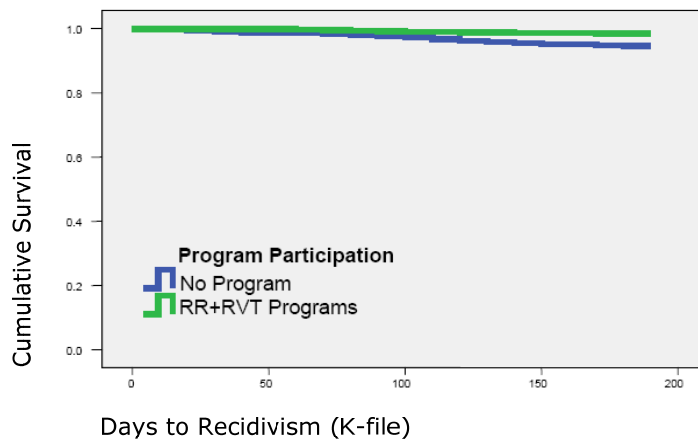


TABLE 39: SIX-MONTH GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. deviation	Sig. (two-tailed)
Age	RR+RVT programs	766	37.82	9.78	0.72
	No program	1342	37.99	10.36	
Prior record index	RR+RVT programs	766	1.56	1.20	0.82
	No program	1343	1.55	1.19	
Risk level	RR+RVT programs	753	2.09	0.46	0.67
	No program	1343	2.08	0.46	
Education level	RR+RVT programs	726	6.19	1.71	0.04
	No program	1161	6.02	1.85	

Nine months

A survival analysis concluded that the RR+RVT group recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 40 and Table 41).

TABLE 40: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: NINE MONTHS

Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	1343	90	1253	93.3%
RR+RVT programs	766	18	748	97.7%
Overall	2109	108	2001	94.9%

TABLE 41: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS (SPOUSAL ASSAULT-RELATED RECIDIVISM: NINE MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	19.017	1	.000

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 12: SURVIVAL OF COMMUNITY RR+RVT AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM: NINE MONTHS)

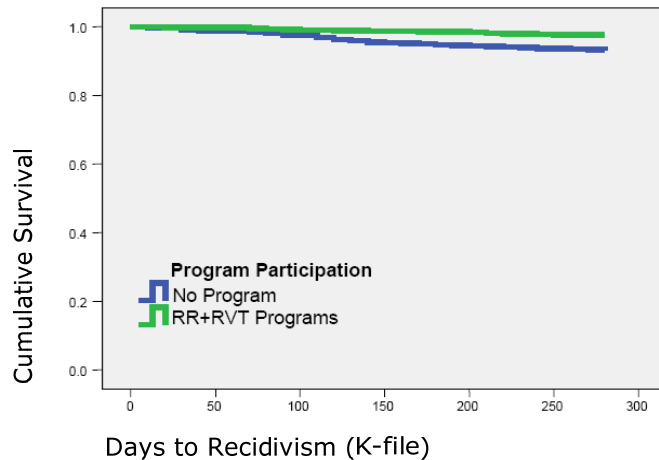


TABLE 42: NINE-MONTH GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. deviation	Sig. (two-tailed)
Age	RR+RVT programs	766	37.82	9.78	0.72
	No program	1342	37.99	10.36	
Prior record index	RR+RVT programs	766	1.56	1.20	0.82
	No program	1343	1.55	1.19	
Risk level	RR+RVT programs	753	2.09	0.46	0.67
	No program	1343	2.08	0.46	
Education level	RR+RVT programs	726	6.19	1.71	0.04
	No program	1161	6.02	1.85	

One year

A survival analysis concluded that the RR+RVT groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 43 and Table 44).

TABLE 43: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: ONE YEAR

Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	1234	90	1144	92.7%
RR+RVT programs	709	21	688	97.0%
Overall	1943	111	1832	94.3%

TABLE 44: OVERALL COMPARISONS BETWEEN COMMUNITY RVT+RR AND COMPARISON GROUPS (SPOUSAL ASSAULT-RELATED RECIDIVISM: ONE YEAR)*

	chi-square	Df	Sig.
Breslow (Generalized Wilcoxon)	16.054	1	.000

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 13: SURVIVAL OF COMMUNITY RR+RVT AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM: ONE YEAR)

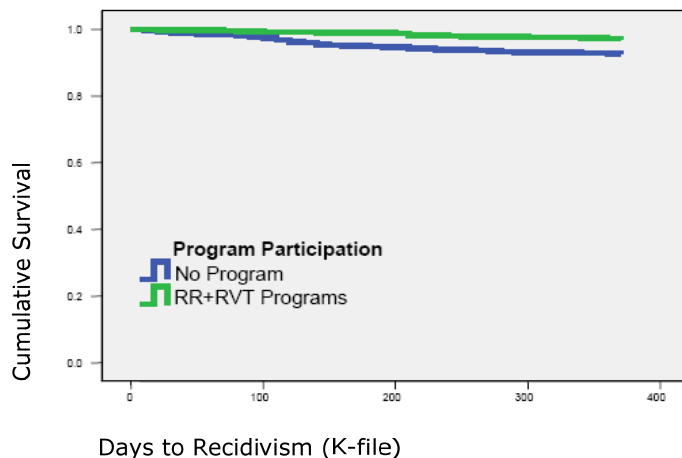


TABLE 45: ONE-YEAR GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. deviation	Sig. (two-tailed)
Age	RR+RVT programs	709	37.92	9.79	0.78
	No program	1233	38.05	10.36	
Prior record index	RR+RVT programs	709	1.57	1.21	0.81
	No program	1234	1.56	1.19	
Risk level	RR+RVT programs	697	2.09	0.46	0.71
	No program	1234	2.08	0.46	
Education level	RR+RVT programs	675	6.22	1.70	0.03
	No program	1078	6.03	1.85	

Two years

A survival analysis found that the RR+RVT groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 46 and Table 47).

TABLE 46: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: TWO YEARS

Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	657	66	591	90.0%
RR+RVT programs	404	21	383	94.8%
Overall	1061	87	974	91.8%

TABLE 47: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS (SPOUSAL ASSAULT-RELATED RECIDIVISM: TWO YEARS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	8.321	1	.004

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 14: SURVIVAL OF COMMUNITY RR+RVT AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM: TWO YEARS)

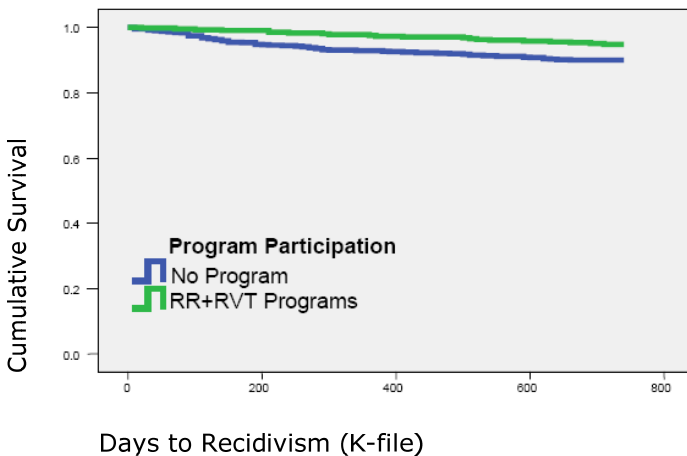


TABLE 48: TWO-YEAR GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. deviation	Sig. (two-tailed)
Age	RR+RVT programs	404	37.94	9.67	0.73
	No program	657	38.16	10.03	
Prior record index	RR+RVT programs	404	1.52	1.20	0.28
	No program	657	1.60	1.21	
Risk level	RR+RVT programs	394	2.09	0.46	0.68
	No program	657	2.08	0.46	
Education level	RR+RVT programs	388	6.30	1.67	0.01
	No program	608	5.98	1.87	

Community RR+RVT Group and Comparison Group (general recidivism)

(Findings on general recidivism at three, six, nine months, one year and two years.)

Three months

A survival analysis concluded that few offenders recidivated after three months (Table 49). However, the RR+RVT groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 50).

TABLE 49: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM: THREE MONTHS

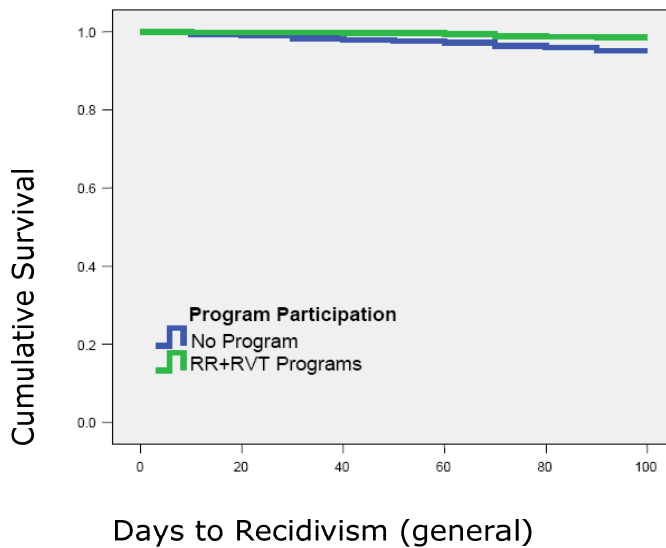
Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	1343	65	1278	95.2%
RR+RVT programs	766	11	755	98.6%
Overall	2109	76	2033	96.4%

TABLE 50: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS
(GENERAL RECIDIVISM: THREE MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	16.227	1	.000

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 15: SURVIVAL OF COMMUNITY RR+RVT AND COMPARISON GROUP
(GENERAL RECIDIVISM: THREE MONTHS)



Six months

A survival analysis concluded that the RR+RVT groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 51 and Table 52).

TABLE 51: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM: SIX MONTHS

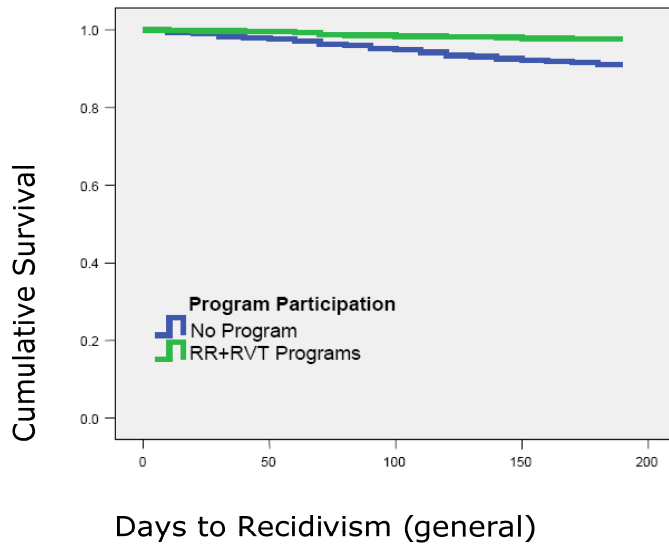
Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	1343	121	1222	91.0%
RR+RVT programs	766	18	748	97.7%
Overall	2109	139	1970	93.4%

TABLE 52: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS (GENERAL RECIDIVISM: SIX MONTHS)*

	chi-square	df	Sig.
Breslow Generalized Wilcoxon)	34.635	1	.000

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 16: SURVIVAL OF COMMUNITY RR+RVT AND COMPARISON GROUP (GENERAL RECIDIVISM: SIX MONTHS)



Nine months

A survival analysis concluded that the RR+RVT groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 53 and Table 54).

TABLE 53: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM: NINE MONTHS

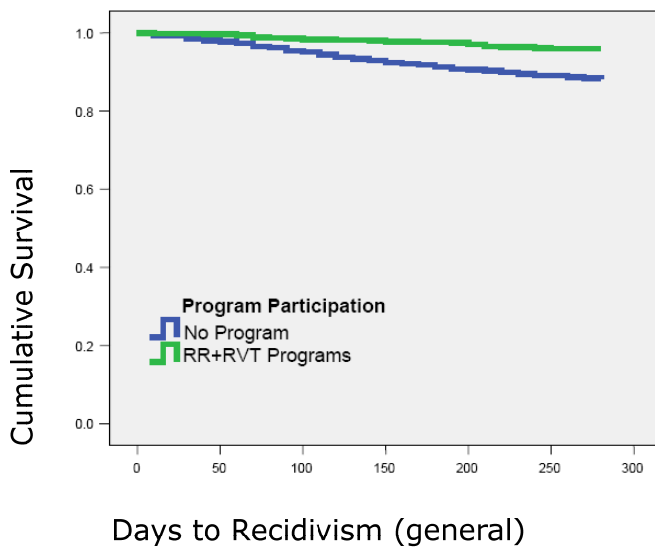
Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	1343	157	1186	88.3%
RR+RVT programs	766	31	735	96.0%
Overall	2109	188	1921	91.1%

TABLE 54: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS (GENERAL RECIDIVISM: NINE MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	35.061	1	.000

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 17: SURVIVAL OF COMMUNITY RVT+RR AND COMPARISON GROUP (GENERAL RECIDIVISM: NINE MONTHS)



One year

A survival analysis concluded that the RR+RVT groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 55 and Table 56).

TABLE 55: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM: ONE YEAR

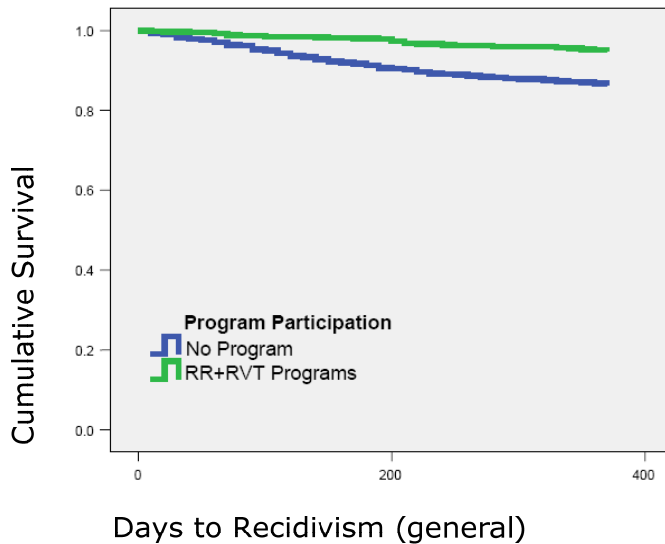
Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	1234	167	1067	86.5%
RR+RVT programs	709	35	674	95.1%
Overall	1943	202	1741	89.6%

TABLE 56: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS (GENERAL RECIDIVISM: ONE YEAR)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	36.202	1	.000

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 18: SURVIVAL OF COMMUNITY RR+RVT AND COMPARISON GROUP (GENERAL RECIDIVISM: ONE YEAR)



Two years

A survival analysis concluded that the RR+RVT groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 57 and Table 58).

TABLE 57: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM: TWO YEARS

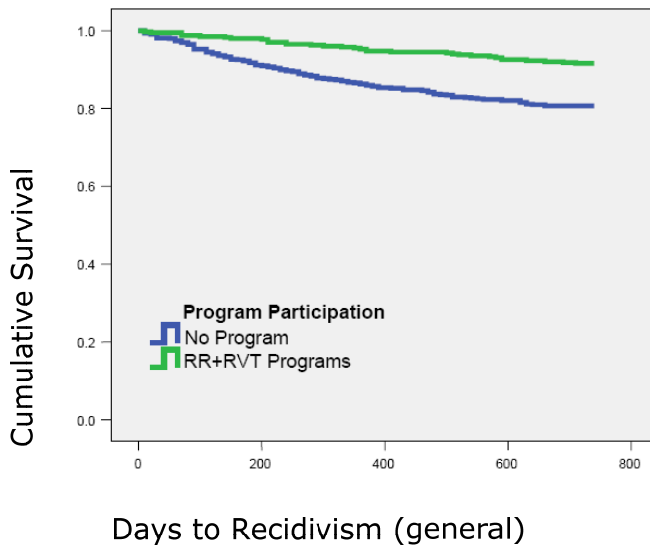
Program completion	Total number	Number of events	Censored	
			Number	Percent
No program	657	127	530	80.7%
RR+RVT programs	404	34	370	91.6%
Overall	1061	161	900	84.8%

TABLE 58: OVERALL COMPARISONS BETWEEN COMMUNITY RR+RVT AND COMPARISON GROUPS (GENERAL RECIDIVISM: TWO YEARS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	24.199	1	.000

*Test of equality of survival distributions for the different levels of program completion.

FIGURE 19: SURVIVAL OF COMMUNITY RVT+RR AND COMPARISON GROUP (GENERAL RECIDIVISM: TWO YEARS)



Community RR-only Group and the Comparison Group (K-file recidivism)

(Findings on spousal assault-related recidivism at three, six, nine months, one year and two years.)

Three months

A survival analysis concluded that few offenders recidivated after three months (Table 59). Although the RR-only groups recidivated less often than the comparison group, the difference is not statistically significant (Table 60).

TABLE 59: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: THREE MONTHS

Program completion	Total number of offenders	Number of recidivated offenders	Offenders not recidivated within the study period	
			Number	Percent
No program	2828	31	2797	98.9%
RR program	1460	10	1450	99.3%
Overall	4288	41	4247	99.0%

TABLE 60: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (SPOUSAL ASSAULT-RELATED RECIDIVISM: THREE MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	1.722	1	.189

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 20: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM: SIX MONTHS)

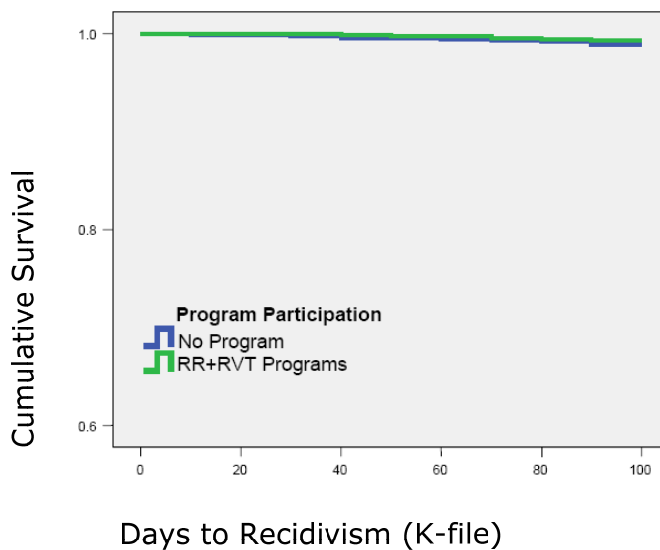


TABLE 61: GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. deviation	Sig. (two-tailed)
Age	RR program	1460	36.92	10.46	0.02
	No program	2827	37.75	10.79	
Prior record index	RR program	1460	1.36	1.17	0.56
	No program	2828	1.38	1.17	
Risk level	RR program	1460	1.83	0.59	1.00
	No program	2828	1.83	0.59	
Education level	RR program	1309	6.19	1.72	0.11
	No program	2461	6.09	1.81	

Six months

The study period for the RR-only group and the comparison group is from January 1, 2003 to March 31, 2007 when recidivism data was retrieved from CORNET. The members in both groups are retrieved from January 1, 2003 to September 30, 2006 to ensure that everyone in the study has six months of data for analysis. A survival analysis concluded that the RR-only groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 62 and Table 63).

TABLE 62: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: SIX MONTHS

Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated within the study period	
			Number	Percent
No program	2685	72	2613	97.3%
RR program	1184	19	1165	98.4%
Overall	3869	91	3778	97.6%

TABLE 63: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (SPOUSAL ASSAULT-RELATED RECIDIVISM WITHIN SIX MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	4.221	1	.040

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 21: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM: SIX MONTHS)

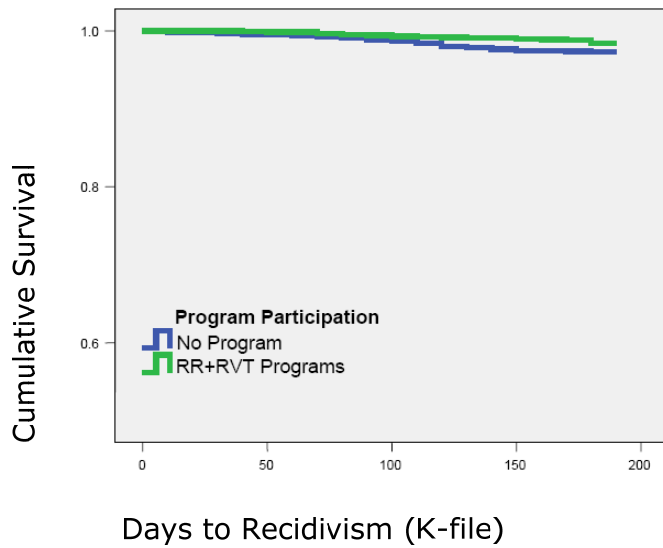


TABLE 64: SIX-MONTH GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. deviation	Sig. (two-tailed)
Age	RR program	1184	36.96	10.51	0.04
	No program	2684	37.74	10.77	
Prior record index	RR program	1184	1.35	1.16	0.29
	No program	2685	1.39	1.17	
Risk level	RR program	1184	1.81	0.59	0.29
	No program	2685	1.83	0.59	
Education level	RR program	1079	6.17	1.72	0.27
	No program	2347	6.10	1.81	

Nine months

A survival analysis concluded that the RR-only groups recidivated less often than the comparison group. The difference is marginally statistically significant (Table 65 and Table 66).

TABLE 65: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: NINE MONTHS

Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated within the study period	
			Number	Percent
No program	2482	88	2394	96.5%
RR program	1116	26	1090	97.7%
Overall	3598	114	3484	96.8%

TABLE 66: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS
(SPOUSAL ASSAULT-RELATED RECIDIVISM: NINE MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	3.743	1	.053

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 22: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP
(SPOUSAL ASSAULT-RELATED RECIDIVISM: NINE MONTHS)

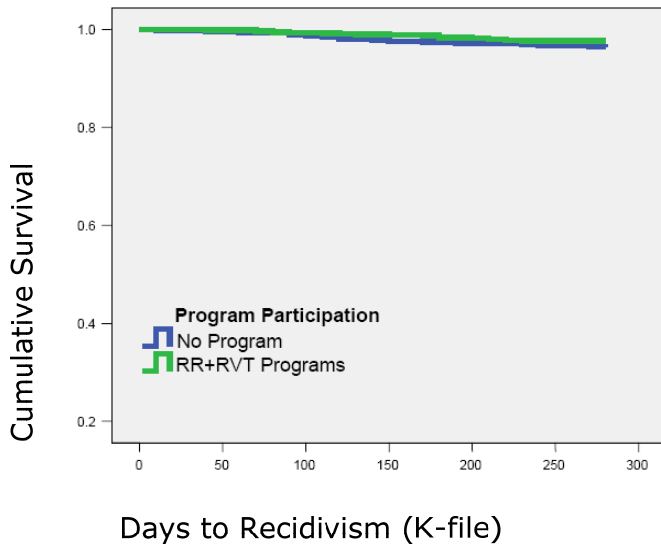


TABLE 67: NINE-MONTH GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. deviation	Sig. (two-tailed)
Age	RR program	1116	36.96	10.44	0.06
	No program	2481	37.69	10.82	
Prior record index	RR program	1116	1.34	1.16	0.19
	No program	2482	1.40	1.18	
Risk level	RR program	1116	1.80	0.59	0.16
	No program	2482	1.83	0.59	
Education level	RR program	1019	6.18	1.73	0.23
	No program	2185	6.10	1.82	

One year

A survival analysis concluded that although the RR-only group recidivated less often than the comparison group, the difference is not statistically significant (Table 68 and Table 69).

TABLE 68: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: ONE YEAR

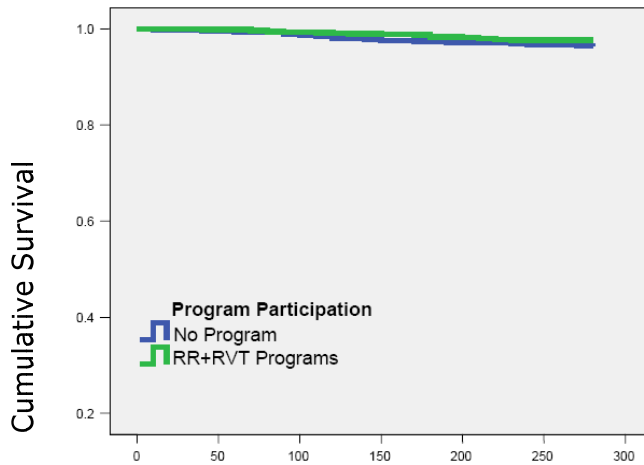
Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated within the study period	
			Number	Percent
No program	2314	104	2210	95.5%
RR program	952	35	917	96.3%
Overall	3266	139	3127	95.7%

TABLE 69: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (SPOUSAL ASSAULT-RELATED RECIDIVISM: ONE YEAR)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	1.166	1	.280

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 23: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM: ONE YEAR)



Days to Recidivism (K-file)

TABLE 70: ONE-YEAR GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. deviation	Sig. (two-tailed)
Age	RR program	952	36.89	10.31	0.02
	No program	2313	37.82	10.81	
Prior record index	RR program	952	1.33	1.16	0.09
	No program	2314	1.41	1.18	
Risk level	RR program	952	1.80	0.59	0.07
	No program	2314	1.84	0.60	
Education level	RR program	876	6.17	1.71	0.38
	No program	2055	6.11	1.82	

Two years

A survival analysis concluded that there is no statistically significant difference in recidivism rates between the two groups (Table 71 and Table 72).

TABLE 71: CASE PROCESSING SUMMARY OF SPOUSAL ASSAULT-RELATED RECIDIVISM: TWO YEARS

Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated within the study period	
			Number	Percent
No program	1649	110	1539	93.3%
RR program	661	41	620	93.8%
Overall	2310	151	2159	93.5%

TABLE 72: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (SPOUSAL ASSAULT-RELATED RECIDIVISM: TWO YEARS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	.190	1	.663

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 24: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (SPOUSAL ASSAULT-RELATED RECIDIVISM: TWO YEARS)

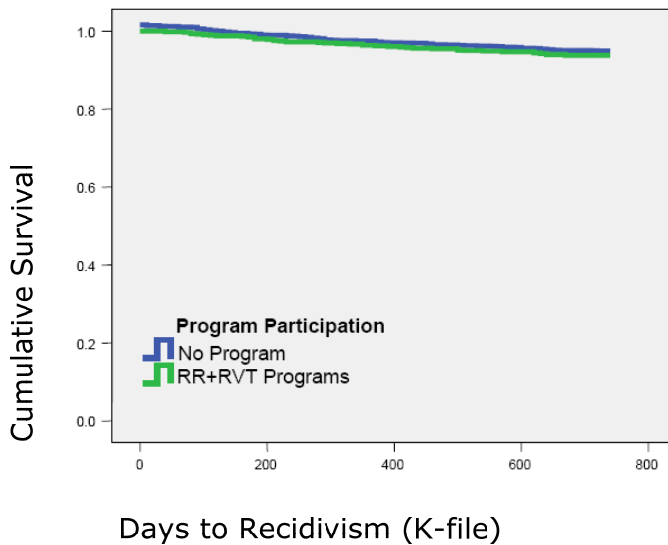


TABLE 73: TWO-YEAR GROUP CHARACTERISTICS

	Program completion	Number	Mean	Std. deviation	Sig. (two-tailed)
Age	RR program	661	36.63	10.09	0.02
	No program	1649	37.81	10.73	
Prior record index	RR program	661	1.35	1.16	0.13
	No program	1649	1.44	1.18	
Risk level	RR program	661	1.83	0.59	0.67
	No program	1649	1.84	0.59	
Education level	RR program	622	6.14	1.73	0.73
	No program	1524	6.11	1.83	

Community RR-only Group and the Comparison Group (general recidivism)

(Findings on general recidivism at three, six, nine months, one year and two years.)

Three months

A survival analysis concluded that few offenders recidivated after three months (Table 74). Although the RR-only groups recidivated less often than the comparison group, the difference is not statistically significant (Table 75).

TABLE 74: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM: THREE MONTHS

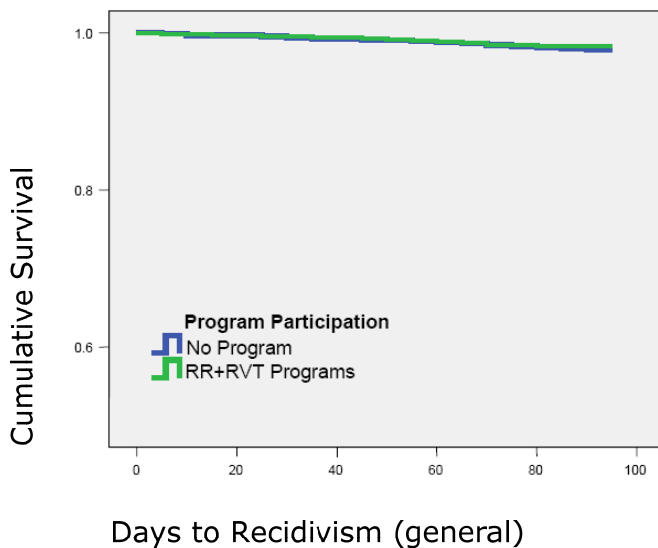
Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated within the study period	
			Number	Percent
No program	2828	62	2766	97.8%
RR program	1460	25	1435	98.3%
Overall	4288	87	4201	98.0%

TABLE 75: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (GENERAL RECIDIVISM: THREE MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	1.097	1	.295

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 25: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (GENERAL RECIDIVISM: THREE MONTHS)



Six months

A survival analysis concluded that the RR-only groups recidivated less often and more slowly than the comparison group at a statistically significant level of confidence (Table 76 and Table 77).

TABLE 76: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM; SIX MONTHS

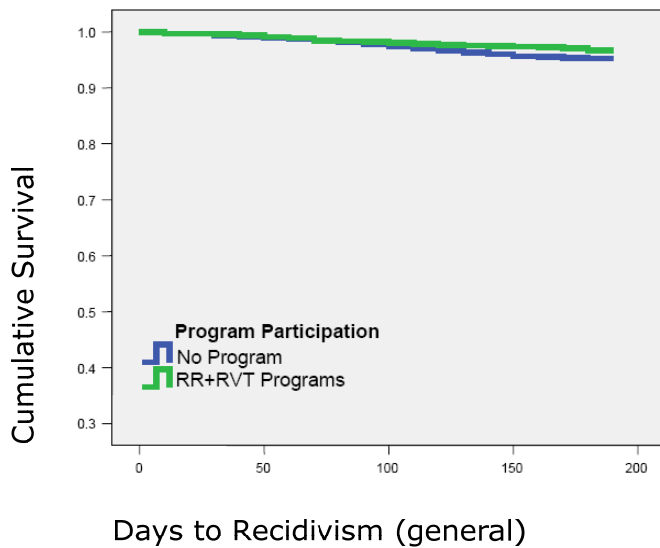
Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated within the study period	
			Number	Percent
No program	2685	127	2558	95.3%
RR program	1184	39	1145	96.7%
Overall	3869	166	3703	95.7%

TABLE 77: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (GENERAL RECIDIVISM; SIX MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	4.095	1	.043

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 26: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (GENERAL RECIDIVISM; SIX MONTHS)



Nine months

A survival analysis concluded that although the RR-only group recidivated less often than the comparison group, the difference is marginally statistically significant (Table 78 and Table 79).

TABLE 78: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM

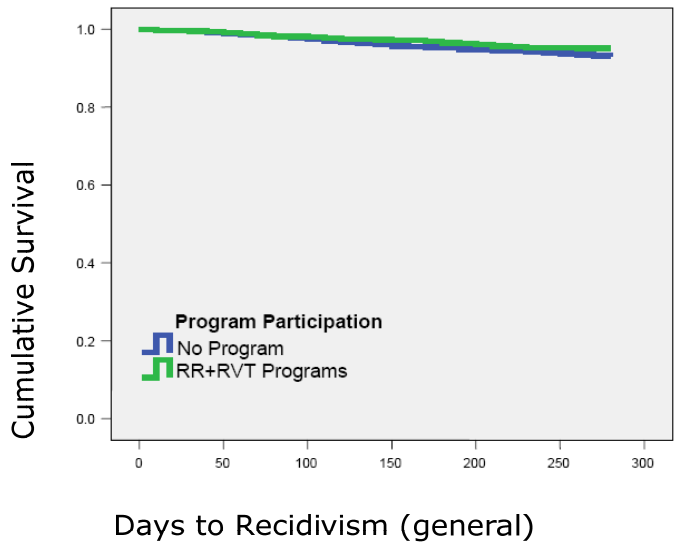
Program participation	Total number	Number of events	Censored	
			Number	Percent
No program	2482	169	2313	93.2%
RR program	1116	55	1061	95.1%
Overall	3598	224	3374	93.8%

TABLE 79: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (GENERAL RECIDIVISM: NINE MONTHS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	4.563	1	.033

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 27: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (GENERAL RECIDIVISM: NINE MONTHS)



One year

A survival analysis concluded that although the RR-only group recidivated less often than the comparison group, the difference is marginally statistically significant (Table 80 and Table 81).

TABLE 80: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM: ONE YEAR

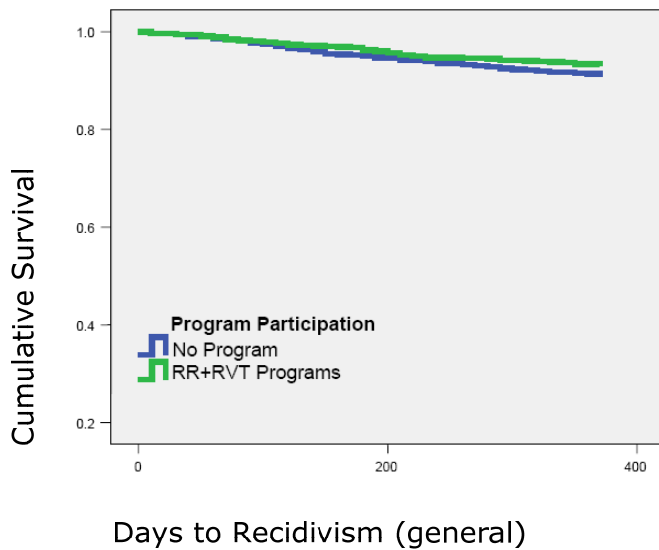
Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated within the study period	
			Number	Percent
No program	2314	206	2108	91.1%
RR program	952	65	887	93.2%
Overall	3266	271	2995	91.7%

TABLE 81: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (GENERAL RECIDIVISM: ONE YEAR)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	3.753	1	.053

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 28: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (GENERAL RECIDIVISM: ONE YEAR)



Two years

A survival analysis concluded that there is no statistically significant difference in recidivism rates between the two groups (Table 82 and Table 83).

TABLE 82: CASE PROCESSING SUMMARY OF GENERAL RECIDIVISM: TWO YEARS

Program participation	Total number of offenders	Number of recidivated offenders	Offenders not recidivated within the study period	
			Number	Percent
No program	1649	225	1424	86.4%
RR program	661	79	582	88.0%
Overall	2310	304	2006	86.8%

TABLE 83: OVERALL COMPARISONS BETWEEN COMMUNITY RR AND COMPARISON GROUPS (GENERAL RECIDIVISM: TWO YEARS)*

	chi-square	df	Sig.
Breslow (Generalized Wilcoxon)	1.202	1	.273

*Test of equality of survival distributions for the different levels of program participation.

FIGURE 29: SURVIVAL OF COMMUNITY RR AND COMPARISON GROUP (GENERAL RECIDIVISM: TWO YEARS)

