



Ministry of Justice

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# **EMWO and RSWO Program Impact Analysis**

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## **Research Report**

B.C. Corrections  
Performance, Research and Evaluation Unit  
Government of British Columbia

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# Executive Summary

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This evaluation examined the impact of the Emotions Management and Relationship Skills for Women programs (EMWO and RSWO) on reducing recidivism. EMWO and RSWO first began as pilot programs for female offenders in June 2004 at Alouette Correctional Centre for Women (ACCW) and were offered at Surrey Pretrial Service Centre (SPSC) and Prince George Regional Custody Centre (PGRCC) later that year. The current report outlines results from a series of related analyses;

Section 1: Data from EMWO and RSWO participants at ACCW, SPSC and PGRCC over 10 years (2004 and 2012).

Section 2: Data from EMWO participants at ACCW only, over 12 years (2002 and 2014). Using a specialized comparison group, with short sentence terms removed.

The data for the present study included up to 701 records (section one) and 424 records (section two), both based on inmates who had completed EMWO and/or RSWO while in custody. Data entry for EMWO underwent a substantial overhaul in February of 2010, and this restructuring was considered significant enough to warrant a review of data before and after Feb 2010 (for both EMWO and RSWO), which is included in section one. Comparison groups were randomly selected and matched with the course participant groups according to EMWO/RSWO eligibility criteria. Eligibility criteria included participant age, CRNA Overall rating, educational level, prior index rating, drug use rating (via the Inmates Needs Assessment (INA), Integrated Offender Management (IOM) participation, and ethnicity.

- (1) To assess the impact of the EMWO and RSWO programs, section one analyses addressed the following: participant recidivism rates with the inclusion of probation breaches,
- (2) participant recidivism rates with the exclusion of probation breaches,
- (3) survival analysis of the time to reoffending,
- (4) review of inmate critical incidents with and without course participation,
- (5) participant recidivism rates before and after February 2010, and
- (6) EMWO compared to RSWO participant reoffending rates.

In June 2014, a further analysis of recidivism at 24 months for EMWO participants was performed using an extended timeframe (June 2004 to April 2014), focusing on ACCW inmates only, who had successfully completed their program (no partial completed records included) and a more stringent set of limits used to compile the comparison group (matched median sentence length and proportional inclusion of randomly selected records with short custody

sentences). The focus was on EMWO participants who had not completed RSWO within two years of release. The comparison group is based on matched median sentence length with EMWO, with the inclusion of randomly selected records with short sentences, in proportional with EMWO short sentences. To further assess the impact of the EMWO, section two analyses addressed the following:

- (1) participant recidivism rates (including breaches),
- (2) survival analysis of the time to a recidivating event,
- (3) changes in the most serious offence (MSO) after course participation, as a measure of change in the seriousness of the index and recidivating offences.

## Results

### Demographics

In the sample used for the section one analyses, the average age of the EMWO, RSWO and comparison group participants was 34 years, with sentences lengths ranging from 106 to 164 days. The majority of participants were Caucasian (58% and 62% for EMWO and RSWO respectively), followed by Aboriginals (35% EMWO and 32% RSWO). Fifty-three percent (EMWO) and 46% (RSWO) participants had a previous jail sentence within two years of their index offence. The majority of participants in EMWO (47%) and RSWO (52%) were rated as high risk by the CRNA<sup>1</sup>. Of those with a completed risk assessment, 32% (EMWO) and 42% (RSWO) had frequent or uncontrolled drug use. Ninety-four percent of the program participants successfully completed their courses, while 6.3% of participants partially completed the program(s).

In the sample used for the section two analyses, demographic characteristics were similar. the average age of the EMWO and comparison group participants was 35 years, with average custody sentences of 114 days (EMWO). The majority of participants were Caucasian (61-64%), followed by Aboriginals (27-34%). Between 35-54% of course participants had a previous jail sentence within two years of their index offence, and the majority of participants in EMWO (49%) were rated as high risk by the CRNA. The percentage of participants who had frequent or uncontrolled drug use was 35%.

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<sup>1</sup> There was a significant portion of each sample that did not have a risk rating, 24.3% (EMWO) and 20.2% (RSWO), matched with 26.6% in the comparison group.

**EMWO and RSWO Recidivism**

- Inmates who've successfully completed EMWO or RSWO show significant increases in the likelihood of reoffending at twelve and twenty-four months after custody release, including and excluding breach offences. EMWO recidivism is 17-34% higher than matched comparison groups; RSWO recidivism is 39-50% higher than matched comparison groups.
- The time to a reoffence is significantly shorter for EMWO or RSWO participants, depending on the timeframe under review (between 6 – 24 months).

**EMWO/RSWO before and after Feb 2010**

- EMWO/RSWO analyses before and after Feb 2010 (after a significant restructuring of data entry and course facilitation) showed no significant differences in reoffending rates and survival analysis results.

**EMWO versus RSWO Recidivism**

- EMWO versus RSWO analyses showed no significant differences in reoffending rates and survival analysis results, regardless of the inclusion or exclusion of breach offences. This indicates that program participants are equally likely to recidivate, regardless of which course they take first.

**EMWO Inmate Incidents**

- EMWO participants were 0.4 times less likely to be involved in a custody incident, than comparable inmates. Inmate age was slightly significant; as inmates grow older each year they are 0.03 times (slightly) less likely to be involved in a custodial incident. Longer lengths of stay are associated with a slight increase (0.01) in the likelihood of being involved in a custodial incident.

**EMWO only**

- Inmates who've successfully completed EMWO (only) show significant increase in the likelihood of reoffending and reoffended more quickly than matched comparison groups, at six and twenty-four months after custody release. EMWO recidivism is 21-50% higher than matched comparison groups.

### **MSO Rankings before and after Course Participation**

- Positive results were shown, as a higher proportion of program participants had a decreased MSO (less serious up to two years after program completion); 46% of EMWO (compared to 36% of non-participants).

### **Recommendations**

Due to the results found in this evaluation, the following recommendations are made:

1. Discontinue the EMWO and RSWO programs.
2. Increase the delivery of Essential Skills to Success (ESS) as well as the Substance Abuse Management (SAM) program for women.
3. Add to the ESS inventory the two to three (at maximum) modules from the EMWO and RSWO programs that speak to criminogenic needs.
4. Conduct a literature review of programs for women offenders in and out of custody, as well as assess the current literature on risk, needs and responsivity as related to women offenders.
5. Complete a risk needs analysis of women offenders in custody and community.
6. Develop a new program for women offenders based on the literature review and needs analysis that can be administered in custody (and in the community), approximately 10 to 12 modules in length.
  - a. To be completed by end of 2015
  - b. Training to commence in spring of 2016.



# Introduction – EMWO and RSWO

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## Program Overview

Emotions Management for Women (EMWO) is a 10-session program delivered by trained Corrections Branch staff to adult female offenders in custody. EMWO facilitates the development of self-awareness and addresses the management of anger and other difficult emotions considered to be important factors in female offenders' community reintegration. The purpose of the program is to assist in reintegration and reduce reoffending behaviours.

Relationship Skills for Women (RSWO) is a 12 module program, delivered by trained Corrections Branch staff to adult female offenders in custody. This program focuses on issues related to problematic relationships, family violence, abuse, and intimacy. The modules are intended to provide the women with the foundational tools to achieve pro social success in the community and in the home, and the opportunities to practice and build on pro social skills, behaviours and attitudes.

Both the EMWO and RSWO programs aim to promote healthy lifestyle choices and attitudes that are incompatible with offending behaviour. The focus is on the promotion of personal and social development and addressing practical problems offenders are faced with such as self-management skills and challenging relationship issues.

EMWO was first launched in June 2004 at the Alouette Correctional Centre for Women (ACCW), with RSWO following in the fall of 2004. In time it rolled out to Prince George Regional Correctional Centre (PGRCC) and Surrey Pretrial Services Centre (SPSC) to the female inmates at those centres. Priority enrollment for EMWO and RSWO is given to sentenced women with a High to Medium RNA risk rating. Women with a low risk rating or are on remand may also participate in these programs, if their length of stay is long enough to allow complete program attendance. EMWO is considered a prerequisite for RSWO programming, although participants may take RSWO on its own.

## Evaluation Overview

B.C. Corrections is an evidence based organization that carries out program evaluations to remain consistent with its commitment to practice "what works", and to develop and improve programs to promote effective supervision and rehabilitation of adult offenders. The purpose of this evaluation is to assess the outcomes of EMWO and RSWO. The key objectives of the current outcome evaluation are:

- To assess and compare the reoffending<sup>2</sup> rates of the women who have taken EMWO and/or RSWO modules in comparison with women in custody who did not.
- To assess changes in the seriousness of a reoffending event before and after program participation (for those who reoffend).
- To determine whether EMWO and/or RSWO participation is associated with lower rates of incidents (such as threats, fights and abusive behaviour);

Background and demographic variables, including, for example, risk rating, prior offence index, CRNA behavioural and overall ratings, MSO, and inmate age were included in the analyses to account for their possible influence on differences in recidivism and incident events.

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<sup>2</sup> This report defines reoffending as a reconviction with a return to B.C. Corrections for supervision, with a custody and/or community sentence.

# Methodology

The evaluation consists of two groups of analyses, split into sections:

Section one – EMWO and RSWO in three locations between Sept 2004 and Sept 2012

Section two – EMWO at ACCW only between June 2004 and April 2014

The following information describes the samples, comparison group selection, recidivism definition, and data analyses.

## Samples

### Section One

Section one evaluated the impact of EMWO and RSWO completion or partial completion<sup>3</sup> on reoffending over different periods of time. It includes program analyses based on inmate records for female sentenced offenders in custody at ACCW, PGRCC and SPSC, between September<sup>4</sup> 1<sup>st</sup>, 2004 and September 30<sup>th</sup>, 2012. By September 30<sup>th</sup> 2012, 705 participants had participated in EMWO and/or RSWO and had been released from custody, as shown in Table 1.

Table 1: EMWO and RSWO participants by Centre (2004 to 2012)

Analysis	ACCW	SPSC	PGRCC	All Centres
EMWO	292	35	11	<b>338</b>
RSWO	356	3	8	<b>367</b>

To assess the impact of the EMWO and RSWO programs, section one analyses addressed the following:

- (1) participant recidivism rates with the inclusion of probation breaches,
- (2) participant recidivism rates with the exclusion of probation breaches,
- (3) survival analysis of the time to reoffending,
- (4) review of inmate critical incidents with and without course participation,
- (5) participant recidivism rates before and after February 2010, and
- (6) EMWO compared to RSWO participant reoffending rates.

<sup>3</sup> Reasons for partially complete include client movements such as early releases, transfers, escapes, failure to attend or participate, and voluntary program withdrawal. Over 90% completed the programs.

<sup>4</sup> Although the program began in June 2004, the first few months of data was not included in this analysis to remove any variability due to initial start-up.

Both partially and successfully completed participants were included in the section one analyses and these samples consisted of some instances where inmates may have successfully completed EMWO and/or RSWO more than once.

## **Section two**

In June 2014, a further analysis of recidivism at 24 months for EMWO participants was performed using an extended timeframe (June 2004 to April 2014), focusing on ACCW inmates only, who had successfully completed their program (no partial completed records included) and a more stringent set of limits used to compile the comparison group (matched median sentence length and proportional inclusion of randomly selected records with short custody sentences). EMWO participants who had not completed RSWO within two years of release. The comparison group is based on matched median sentence length with EMWO, with the inclusion of randomly selected records with short sentences, in proportional with EMWO short sentences.

To further assess the impact of the EMWO program, section two analyses address the following:

- (1) participant recidivism rates (including breaches),
- (2) survival analysis of the time to a recidivating event,
- (3) changes in the most serious offence (MSO) after course participation, as a measure of change in the seriousness of the index and recidivating offences.

## **Comparison Group Selection**

The records for a comparison group of female sentenced offenders who did not participate in EMWO or RSWO were retrieved from the Corrections Network (CORNET) offender information system. The comparison group participants were randomly selected from those released from ACCW, PGRCC or SPSC between September 1<sup>st</sup>, 2004 and September 30<sup>th</sup>, 2012. They were matched with program group participants according to EMWO/RSWO eligibility criteria and the following variables: participant age, CRNA rating, educational level, prior index rating, their drug use rating (from the Inmates Needs Assessment; INA), IOM participation<sup>5</sup> and ethnicity. Additionally, section two analyses added sentence length and the proportional inclusion of randomly selected comparison records with short custody sentences as matching criteria.

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<sup>5</sup> IOM participation was noted to ensure the results of this evaluation were not due to another program.

The matched comparison group enabled researchers to analyze differences (e.g. recidivism rates) between these groups without the matched factors interfering with the results.

## Recidivism

Recidivism is defined as the next sentencing date (in CORNET) after custody release for those individuals who return to B.C. Corrections for sentenced supervision. Sentencing related to a violation of probation (breach) was also included. Due to the fact that probation breaches are different from other types of offences, as behaviour that constitutes breaches would be considered normal if not listed on a court order, analyses are conducted with and without breaches.

### Recidivism Tracking Periods

All offenders in the study were tracked for a total of twenty-four months after their release. There were four fixed tracking periods to monitor participant recidivism: three, six, twelve and twenty-four months after custody release (see Table 2). In section one, all EMWO and RSWO participants released from ACCW, SPSC and PGRCC were included at each of the four fixed tracking periods, while section two analyses focused on ACCW participants only.

Table 2: EMWO and RSWO participants during selected Recidivism Tracking Periods

		3 months	6 months	12 months	24 months
Section 1	EMWO	338	324	302	263
	RSWO	363	347	312	248
Section 2	EMWO	332	328	303	251

## Data Analysis

The data was analyzed using significance-testing procedures that are based on probability ( $p$ ) calculations. Probability is the likelihood that something will occur (e.g. the chance that the flip of a coin will come up heads).

These procedures do the following:

- Evaluate differences between two or more groups on a particular measure (or measures); and
- Determine if differences are reliable enough that they are unlikely to occur by chance or error. If so, these results are statistically significant.

A “statistically significant difference” means there is statistical evidence of a reliable difference; it does not indicate that the difference is important. The standard in criminological studies is to only accept differences that are unlikely to occur by chance or error 95 times or more out of 100. The reliability of the statistical findings is closely associated to sample size. Therefore, as the sample size decreases, it becomes more difficult to find reliable statistically significant differences.

The major statistical procedures used in this study are Logistic Regression, Cox Regression and Survival Analysis (Kaplan-Meir).

- Logistic regression analysis determines if program participation (EMWO/RSWO) had a statistically significant impact on recidivism rates. It analyzes the ability of one or more categorical variables, such as program completion, to predict group membership, such as recidivist or non-recidivist. Several background and demographic variables that may differ between groups were included as covariates in the logistic regression to take into account their possible influence on the estimated recidivism rates.
- Cox regression analysis determines if program participation (EMWO/RSWO) had a statistically significant impact on the time to recidivism. It analyzes the ability of one or more categorical variables, such as program completion, to predict the effect of this variable on days without reoffending.
- Kaplan-Meier analyses were performed to determine the percentage of recidivating inmates who did or did not participate in EMWO or RSWO, and to estimate the average number of days to reoffend (survival analysis).

# Section 1 - Results

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## Offender Demographics

As shown in Table 3, the average age of the EMWO, RSWO and comparison group participants was 34 years, with sentences lengths ranging from 106 to 164 days. The majority of participants were Caucasian (58% and 62% for EMWO and RSWO respectively), followed by Aboriginals (35% EMWO and 32% RSWO). Fifty-three percent (EMWO) and 46% (RSWO) participants had a previous jail sentence within two years of their index offence. The majority of participants in EMWO (47%) and RSWO (52%) were rated as high risk by the CRNA<sup>6</sup>. Of those with a completed risk assessment, 32% (EMWO) and 42% (RSWO) had frequent or uncontrolled drug use. Ninety-four percent of the program participants successfully completed their courses, while 6.3% of participants partially completed the program(s).

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<sup>6</sup> There was a significant portion of each sample that did not have a risk rating, 24.3% (EMWO) and 20.2% (RSWO), matched with 26.6% in the comparison group.

Table 3: Offender Demographics and Background Variables

		EMWO		RSWO		Comparison	
Total Number		338		367		338	
Age		34 (+/- 9)		34 (+/- 9)		34 (+/-10)	
Sentence Length (days)		107 (+/- 86)		164 (+/- 112)		106 (+/- 66)	
		Count	%	Count	%	Count	%
Ethnicity	Aboriginals*	119	35.2 %	117	31.9%	116	34.3%
	Caucasian	197	58.3%	229	62.4%	208	61.5%
	Others (inc Black, Asian, Hispanic)**	17	5.0%	20	5.4%	13	3.8%
	Unknown	5	1.5%	1	0.3%	1	0.3%
Prior Index	No previous formal contact	15	4.4%	16	4.4%	15	4.4%
	Previous Community Supervision	32	9.5%	43	11.7%	32	9.5%
	Previous Remand	44	13.0%	28	7.6%	44	13.0%
	Previous jail sentence over 2 years ago	67	19.8%	76	20.7%	67	19.8%
	Previous jail sentence within 2 years	180	53.3%	204	55.6%	180	53.3%
CRNA	High	159	47.0%	190	51.8%	171	50.6%
	Medium	91	26.9%	98	26.7%	71	21.0%
	Low	6	1.8%	5	1.4%	6	1.8%
	Unknown	82	24.3%	74	20.2%	90	26.6%
Drug Use	No current difficulties	29	8.6%	43	11.7%	34	10.1%
	Some drug use	41	12.1%	48	13.1%	30	8.9%
	Frequent or uncontrolled use	108	32.0%	154	42.0%	92	27.2%
	Not stated	160	47.3%	122	33.2%	182	53.8%
Program Completion	Partially Completed	22	6.5%	22	6.3%	n/a	
	Successfully Completed	316	93.5%	345	94.0%	n/a	

\* Aboriginal groups include participants who self-identify as Aboriginal, First Nations, Metis, Native or Inuit

\*\* Other ethnic groups include participants who self-identify as Asian, Black, East Indian, Hispanic, or other.



## EMWO Recidivism

### EMWO Recidivism including Breaches and Survival Analysis

In this set of analyses, probation breaches were included with offences when calculating recidivism. As seen in Table 4, logistic regression analyses found no significant differences at three months, indicating the two groups recidivated at approximately the same rate. At six, 12 and 24 months, however, EMWO participants were associated with a significant increase in reoffending after custody release when compared to women in custody that did not take the program.

In raw recidivism rates, the increase in re-offending ranged from a 23% increase (24 months) to a 34% increase (12 months). When the statistical analysis adjusted for the variables that were significantly associated with reoffending, the EMWO group was 1.65, 1.98 and 1.94 times more likely to recidivated as the comparison group at six, 12, and 24 months respectively.

For those that did reoffend, survival analysis results indicated similar results (see Table 5). There were no significant differences at three months, but the EMWO participants reoffended significantly sooner than the comparison group at six, 12, and 24 months (on average, 9, 28, and 74 days sooner, respectively).

Table 4: Recidivism Rates for EMWO (including breaches)

		Recidivism		EMWO increase in recidivism	Statistical Significance	
		Inmates	%		p value	Exp(B)
3 months	Comparison	not significant				
	EMWO					
6 months	Comparison	95	29%	33%	0.008	1.65
	EMWO	124	38%			
12 months	Comparison	123	39%	34%	0.000	1.98
	EMWO	158	52%			
24 months	Comparison	137	48%	23%	0.002	1.94
	EMWO	156	59%			

\* = statistically significant

Table 5: Survival Analysis for EMWO (including breaches)

		Time to recidivating offence		EMWO Survival days	Significant differences	
		Days	Months		p value	Exp(B)
3 months	Comparison	not significant				
	EMWO					
6 months	Comparison	145	4.7	-9 days	0.022	1.381
	EMWO	136	4.5			
12 months	Comparison	260	8.5	-28 days	0.005	1.425
	EMWO	232	7.6			
24 months	Comparison	459	15.1	-74 days	0.004	1.436
	EMWO	385	12.6			

### EMWO Recidivism excluding Breaches

In this set of analyses, probation breaches were excluded when calculating recidivism. As seen in Table 6, logistic regression analyses found no significant differences at three and six months, indicating the two groups recidivated at approximately the same rate. At 12 and 24 months, however, EMWO participants were associated with a significant increase in reoffending after custody release when compared to women in custody that did not take the program.

In raw recidivism rates, the increase in re-offending ranged from a 17% increase (24 months) to a 34% increase (12 months). When the statistical analysis adjusted for the variables that were significantly associated with reoffending, the EMWO group was 1.9 and 1.56 times more likely to recidivate as the comparison group at 12 and 24 months respectively.

For those that did reoffend, survival analysis results indicated similar results (see Table 7). There were no significant differences at three or six months, but the EMWO participants reoffended significantly sooner than the comparison group at 12 and 24 months (on average, 15 and 51 days sooner, respectively).

Table 6: Recidivism rates for EMWO (excluding breaches)

		Recidivism		EMWO increase in recidivism	Statistical Significance	
		Inmates	%		p value	Exp(B)
3 months	Comparison	not significant				
	EMWO					
6 months	Comparison	not significant				
	EMWO					
12 months	Comparison	106	34%	34%	0.001	1.90
	EMWO	136	45%			
24 months	Comparison	131	46%	17%	0.028	1.56
	EMWO	141	54%			

Table 7: Survival Analysis for EMWO (excluding breaches)

		Time to recidivating offence		EMWO Survival days	Statistical Significance	
		Days	Months		p value	Exp(B)
3 months	Comparison	not significant				
	EMWO					
6 months	Comparison	not significant				
	EMWO					
12 months	Comparison	281	9.2	-15 days	0.008	1.423
	EMWO	266	8.7			
24 months	Comparison	495	16.2	-51 days	0.034	1.311
	EMWO	444	14.5			

## RSWO Recidivism

### RSWO Recidivism including Breaches

In this set of analyses, probation breaches were included when calculating recidivism. As seen in Table 8, logistic regression analyses found no significant differences at three and six months, indicating the two groups recidivated at approximately the same rate. At 12 and 24 months, however, RSWO participants were associated with a significant increase in reoffending after custody release when compared to women in custody that did not take the program.

In raw recidivism rates, the increase in re-offending ranged from a 39% increase (12 months) to a 45% increase (24 months). When the statistical analysis adjusted for the variables that were significantly associated with reoffending, the RSWO group was 1.88 and 2.03 times more likely to recidivate as the comparison group at 12 and 24 months respectively.

For those that did reoffend, survival analysis results indicated similar results (see Table 9). There were no significant differences at three or six months, but the RSWO participants reoffended significantly sooner than the comparison group at 12 and 24 months (on average, 35 and 116 days sooner, respectively).

Table 8: Recidivism Rates for RSWO (including breaches)

		Recidivism Rates		Comparison over RSWO Recidivism	Statistical Significance	
		Inmates	%		p value	Exp(B)
3 months	Comparison	not significant				
	RSWO					
6 months	Comparison	not significant				
	RSWO					
12 months	Comparison	122	38%	39%	0.004	1.88
	RSWO	163	52%			
24 months	Comparison	129	45%	45%	0.003	2.03
	RSWO	163	66%			

Table 9: Survival Analysis for RSWO (including breaches)

		Time to recidivating offence		RSWO Survival Days	Statistical Significance	
		Days	Months		p value	Exp(B)
3 months	Comparison	not significant				
	RSWO					
6 months	Comparison	not significant				
	RSWO					
12 months	Comparison	266	8.7	-35 days	0.01	1.43
	RSWO	232	7.6			
24 months	Comparison	482	15.8	-116 days	0.001	1.55
	RSWO	366	12.0			

### RSWO Recidivism excluding Breaches

In this set of analyses, probation breaches were included when calculating recidivism. As seen in Table 10, logistic regression analyses found no significant differences at three and six months, indicating the two groups recidivated at approximately the same rate. At 12 and 24 months, however, RSWO participants were associated with a significant increase in reoffending after custody release when compared to women in custody that did not take the program.

In raw recidivism rates, the increase in re-offending ranged from a 40% increase (24 months) to a 50% increase (12 months). When the statistical analysis adjusted for the variables that were significantly associated with reoffending, the RSWO group was 2.14 and 1.98 times more likely to recidivate as the comparison group at 12 and 24 months respectively.

For those that did reoffend, survival analysis results indicated similar results (see Table 11). There were no significant differences at three or six months, but the RSWO participants reoffended significantly sooner than the comparison group at 12 and 24 months (on average, 31 and 114 days sooner, respectively).

Table 10: Recidivism rates for RSWO (excluding breaches)

		Recidivism		Comparison over RSWO Recidivism	Statistical Significance	
		Participants	%		p value	Exp(B)
3 months	Comparison	not significant				
	RSWO					
6 months	Comparison	not significant				
	RSWO					
12 months	Comparison	98	31%	50%	0.001	2.14
	RSWO	141	47%			
24 months	Comparison	116	41%	40%	0.002	1.98
	RSWO	150	57%			

Table 11: Survival Analysis for RSWO (excluding breaches)

		Time to recidivating offence		RSWO Survival Days	Statistical Significance	
		Days	Months		p value	Exp(B)
3 months	Comparison	not significant				
	RSWO					
6 months	Comparison	not significant				
	RSWO					
12 months	Comparison	290	9.5	-31 days	0.003	1.57
	RSWO	258	8.5			
24 months	Comparison	528	17.3	-114 days	0.002	1.56
	RSWO	415	13.6			

## **Additional recidivism analyses**

### **EMWO and RSWO recidivism (before and after February 2010)**

In February 2010, staff adjusted the manner in which data was entered for EMWO and RSWO. This difference was considered significant enough to warrant additional analyses for both EMWO and RSWO recidivism rates, including and excluding breaches.

Recidivism rates were reviewed at three, six, twelve and twenty-four months for both EMWO and RSWO (including and excluding breaches respectively). While there were differences between the recidivism rates of participants before and after the program changes, these differences were not found to be significant at any timeframe tested and the results remain unchanged from the results presented above.

### **EMWO vs RSWO – Does one perform better?**

Additional analyses were performed to determine the relative rates of recidivism between EMWO only participants and RSWO only participants. In total, 341 EMWO and 367 RSWO participants were compared. These participants were matched by sentence length, participant age, prior index, INA drug use classification, ethnicity, program completion status, CRNA rating and program location. This matching scheme enabled researchers to analyze differences (e.g. recidivism rates) between groups without the matched factors interfering with the results.

As with previous sets of analyses in section one, recidivism tracking periods were fixed at three, six, twelve and twenty-four months after the participants' custody release date, and separate reviews were undertaken including and excluding breach offences.

EMWO vs RSWO recidivism rates (including and excluding breaches) were reviewed at three, six, twelve and twenty-four months. Logistic regression analyses found no significant differences between EMWO participant and RSWO participant recidivism rates. This means that neither program did any better than the other and the results remain unchanged from the results presented above.

## Section 2 - Results

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### **Offender Demographics**

As shown in Table 12, the average age of the EMWO and comparison group participants was 35 years, with average custody sentences of 114 days (EMWO). The majority of participants were Caucasian (61-64%), followed by Aboriginals (27-34%). Between 35-54% of course participants had a previous jail sentence within two years of their index offence, and the majority of participants in EMWO (49%) were rated as high risk by the CRNA. The percentage of participants who had frequent or uncontrolled drug use was 35%.



Table 12: Offender Demographics and Background Variables

		EMWO only		EMWO + RSWO	
Total Number		332		270	
Age		35 (+/- 9 years)			
Sentence Length (days)		114 (+/- 87 days)		196 (+/- 113)	
		Count	%	Count	%
Ethnicity	Aboriginals*	113	34%	74	27%
	Caucasian	201	61%	174	64%
	Others (inc Black, Asian, Hispanic)**	17	5%	22	8%
Prior Index	No previous formal contact	26	8%	28	10%
	Previous Community Supervision	36	11%	35	13%
	Previous Remand	48	14%	37	14%
	Previous jail sentence over 2 years ago	74	22%	73	27%
	Previous jail sentence within 2 years	148	45%	97	36%
CRNA (before participation)	High	163	49%	145	54%
	Medium	105	32%	83	31%
	Low	16	5%	12	4%
	Unknown	48	14%	30	11%
Drug Use (INA)	No current difficulties	41	12%	44	16%
	Some drug use	47	14%	46	17%
	Frequent or uncontrolled use	116	35%	105	39%
	Unknown	128	39%	75	28%
Mental Stability (INA)	No current difficulties	41	12%	44	16%
	Some drug use	47	14%	46	17%
	Frequent or uncontrolled use	116	35%	105	39%
	Unknown	128	39%	75	28%

\* Aboriginal groups include participants who self-identify as Aboriginal, First Nations, Metis, Native or Inuit

\*\* Other ethnic groups include participants who self-identify as Asian, Black, East Indian, Hispanic, or other.

## EMWO only Recidivism

In this set of analyses, probation breaches were included when calculating recidivism. Due to the low number of women who took only EMWO, this analysis looked at the 24 month time period only, which permitted a large enough sample size. As seen in Table 13, logistic regression analyses found significant differences at 24 months. EMWO participants were associated with a significant increase in reoffending after custody release when compared to women in custody that did not take the program.

In raw recidivism rates, the increase in re-offending was 21% increase. When the statistical analysis adjusted for the variables that were significantly associated with reoffending, the EMWO group was 1.94 times more likely to recidivated than the comparison group at 24 months.

For those that did reoffend, survival analysis results indicated similar results (see Table 14). EMWO participants reoffended significantly sooner than the comparison group at 24 months (on average, 56 days sooner).

Table 13: Recidivism Rates for EMWO only

		Recidivism		EMWO over Comparison Recidivism	Statistical Significance	
		Inmates	%		p value	Exp(B)
24 months	Comparison	116	45%	21%	0.002	1.94
	EMWO	137	55%			

Table 14: Survival Analysis for EMWO only

		Time to recidivating offence		EMWO Survival days	Statistical Significance	
		Days	Months*		p value	Exp(B)**
24 months	Comparison	523	17.2	-56 days	0.012	1.46
	EMWO	467	15.3			

## Changes in the Seriousness of Offending after EMWO

Changes in the seriousness of reoffences were determined by comparing the most serious offence (MSO) of each reoffending program participant before and after participation. MSO categories are based on a nationally standardized system (Statistic Canada). For this analysis, offences up to two years before the current custody sentence were compared with the MSO of all reoffences up to two years after custody exit.

Overall, results indicate a higher proportion of program participants with a decreasing MSO (less serious up to two years after program completion); 46% of EMWO (compared to 36% of non-participants). This means that for EMWO participants, 46% had a decreased MSO after course participation (compared to 36% of matched non-participants).

Table 15: Change in MSO after **EMWO** completion

Changes to MSO	EMWO Group	Comparison Group
% Rating Increased	10%	13%
% Rating Decreased	46%	36%
% no change	44%	51%

## EMWO Inmate Incidents

Based on recommendations with program facilitators, an analysis of inmate incidents within ACCW from Dec 1<sup>st</sup>, 2007 to May 18<sup>th</sup>, 2012 was completed.

Table 16 outlines the demographics of the inmates associated with critical incidents at ACCW. A total of 201 EMWO participant records were matched to 173 comparison group sample of non-participant inmates with similar CRNA overall ratings, CRNA drug use ratings, CRNA emotional ratings, prior index rates and inmate ages.

Records indicated that 148 inmate incidents (including behavioral, contraband, violent and security incidents) took place between Dec 1<sup>st</sup>, 2007 to May 18<sup>th</sup>, 2012. Logistic regression analyses found that on average, EMWO participants were less than half as likely (0.4) to be involved in a custodial incident, than the matched comparison group (Table 17). Inmate age

was significant, although the difference was small; as inmates grow older each year they are 0.03 times less likely to be involved in a custodial incident. Regression analyses also found that on average, as a length of stay increases (in days) there is a slight increase (0.01) in the likelihood of being involved in a custodial incident. Variables not associated with changes to incident activity levels included CRNA ratings (overall, drug use, and emotional ratings), prior index rating and IOM participation.

Table 16: Inmate Demographics associated with ACCW Incidents

		EMWO		Comparison	
Total inmate number		210		173	
Age		34.6		33.6	
Length of Stay (days)		125.7 (SD = 102.4)		126.0 (SD = 76.8)	
		Count	%	Count	%
Prior Index	No previous formal contact	8	4%	8	5%
	Previous Community Supervision	18	9%	20	12%
	Previous Remand	26	12%	16	9%
	Previous jail sentence over 2 years ago	44	21%	33	19%
	Previous jail sentence within 2 years	114	54%	96	55%
CRNA Overall Rating	High	98	47%	88	51%
	Medium	48	23%	34	20%
	Low	2	1%	4	2%
	Unknown	62	30%	47	27%
CRNA Drug Use	No current difficulties	19	9%	17	10%
	Some drug use	46	22%	43	25%
	Frequent or uncontrolled use	78	37%	65	38%
	Unknown	67	32%	48	28%
CRNA Needs Rating	High	85	40%	80	46%
	Medium	58	28%	45	26%
	Low	2	1%	1	1%
	Unknown	65	31%	47	27%
CRNA Emotional Rating	No current difficulties	27	13%	16	9%
	Some behavioural /emotional problems	85	41%	72	42%
	Severe behavioural /emotional problems; need for assistance	29	14%	34	20%
	Unknown	69	33%	51	30%

Table 17: Variables associated with ACCW Incidents

<b>Variables</b>	<b>Exp (B)</b>	<b>Significance</b>
EMWO participation	0.400	Significant (p = 0.034)
Inmate Age	0.003	Significant (p = 0.049)
Length of Stay (days)	0.010	Significant (p = 0.000)

# Conclusions

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## Results

For the current report, EMWO and RSWO participants were analysed to determine if the program participation has a significant impact on reducing recidivism. Two analyses were undertaken, Section one included records from participants at Alouette Correctional Centre for Women (ACCW), Prince George Regional Correctional Centre (PGRCC) and/or Surrey Pretrial Service Centre (SPSC) between Sept 2004 and Sept 2012; Section two focused on ACCW participants between 2004 and 2012, with a matched comparison group linked by median sentence length.

The majority of findings for both programs (through separate and combined analysis) were statistically significant and showed an increase in recidivism at 6 months, 12 months and 24 months after custody release. Changes to data entry in February 2010 did not impact the results.

Analysis of inmate incidents at ACCW from late 2007 to mid- 2012 found that on average, EMWO participants were 0.4 times less likely to be involved in a custodial incident, than a matched comparison group, while longer lengths of stay were associated with a slight increase (0.01) in the likelihood of being involved in a custodial incident.

## Evaluation Limitations

As with any evaluation, there are a few limitations. The research design of the evaluation was a post-test comparison group. A major challenge to this design was the creation/selection of two matched groups. Despite efforts to match the two groups on background characteristics as described in the methodology section there may be other characteristics that could influence recidivism rates (e.g., length of custody sentence).

The current evaluation assumes equivalent program delivery across all correctional centres. EMWO was designed to be most effective when delivered in ten 2.5 hour sessions, with an ideal

group size of eight to ten participants, and RSWO delivered in twelve 2.5 hour sessions. Delivery of these programs in a different format (e.g., longer sessions over a shorter duration, a larger group size or to MDO inmates), may alter the efficacy of the program(s).

## **Recommendations**

Due to the results found in this evaluation, the following recommendations are made:

1. Discontinue the EMWO and RSWO programs.
2. Develop a new program for women offenders based on the literature review and needs analysis that can be administered in custody (and in the community), approximately 10 to 12 modules in length.
  - a. To be completed by end of 2015
  - b. Training to commence in spring of 2016.
3. Increase the delivery of Essential Skills to Success (ESS) as well as the Substance Abuse Management (SAM) program for women.
4. Add to the ESS inventory the two to three (at maximum) modules from the EMWO and RSWO programs that speak to criminogenic needs.
5. Conduct a literature review of programs for women offenders in and out of custody, as well as assess the current literature on risk, needs and responsivity as related to women offenders.
6. Complete a risk needs analysis of women offenders in custody and community.
7. Communicate these results and recommendations to the wardens, program staff, etc.
8. Removal of the program from external communications, contact partners utilizing the program.