Ministry of Public Safety and Solicitor General

SAM Program Impact Analysis

Research Report

B.C. Corrections

Performance, Research and Evaluation Unit

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Executive Summary

This evaluation examines the impact of the Substance Abuse Management Program (SAM) on reducing recidivism. SAM is designed to reduce recidivism directly related to substance abuse and to assist offenders to develop healthier lifestyles. The SAM first began as a pilot program for offenders in 1999, and has undergone five revisions since its inception. The latest version (SAM 5) was launched in May 2010 and is the focus of this evaluation.

Methodology

The current evaluation consists of four sets of analyses:

Section one – Community SAM programming for male offenders

Section two – Custody SAM programming for male offenders

Section three – Community SAM programming for female offenders

Section four – Custody SAM programming for female offenders

To assess the impact of the SAM program, analyses addressed the following: participant actual recidivism rates (including and excluding breach offences), risk of recidivism holding other variables constant (e.g., age, education), the length of time before a recidivating offence (survival time), and the proportion of offenders with High, Medium and Low CRNA/INA Overall ratings, varying CRNA/INA Substance Abuse ratings and differing ethnicities.

The data for the present study includes 1,427 records (section one; in community) and 2,602 records (section two; in custody), based on male offenders who had completed SAM. Comparison group participants were randomly selected offenders serving a community sentence, or a custody sentence between June 1st, 2010 and July 1st, 2015 (sections one and two, respectively).

The data for the present study also includes 102 records (section three; in community) and 254 records (section four; in custody), based on female offenders who had completed SAM. Comparison group participants were randomly selected offenders serving a sentence between June 1st, 2010 and November 6th, 2015 in the community or in custody between June 1st, 2010 and October 31st, 2015 (section three and four, respectively).

Comparison group participants were directly matched with program group offenders according to their CRNA/INA Overall risk rating and CRNA/INA Substance Use risk rating; and proportionally matched by their prior index rating, ethnicity, education level, and age.

Results – Male Offenders

SAM and Recidivism

Community

The evaluation shows the following results for male offenders who successfully completed SAM in the community:

- they recidivated 25% less when contrasted to the comparison group (22% less when breaches were excluded),
- they had a 33% lower risk of recidivating than the comparison group, when taking other factors, such as age and education into account (23% when excluding breaches), and
- for those that did return, they had an extension of time spent conviction-free, between 54 and 74 days longer than comparison group offenders.

Custody

In contrast to participant results in the community, SAM completion within custody had no significant effect on reoffending or the risk of reoffending for male offenders in custody. For those that did reoffend, survival analysis indicated that SAM participants took significantly longer to re-offend than the comparison group (between 27 and 29 days longer than comparison group participants).

Variables Associated with the Risk to Reoffend

Cox regression analyses were used to determine which background and demographic variables were associated with decreased time spent offence-free. In general, offenders in both the community and custody divisions with high CRNA or INA risk ratings; who were younger; and/or who had previous remand or custody sentences prior to SAM were significantly more likely to reoffend within two years of SAM completion. In addition, offenders who had documented frequent or uncontrolled substance use and/or self-reported as Aboriginal were significantly more likely to reoffend within two years of SAM completion.

SAM and Overall Low Risk Offenders

We found that 10% of the male community SAM group had a Low CRNA Overall risk rating; 15% of the male custody SAM group had a Low INA Overall risk rating. As correctional programing is designed to target offenders with a medium or high risk rating, we investigated whether SAM reduces recidivism among the low risk offenders who complete it.

We found no significant difference between groups at two years, indicating SAM completion *does not benefit* offenders with an overall rating of low on the CRNA or INA; it neither affects their reoffence rates nor their time to a next reoffence significantly.

SAM and No Documented Current Substance Misuse

Up to 11% of the male community SAM sample and 12% of the male custody SAM sample presented with no documented current substance usage or difficulties. As correctional programming should be provided to offenders presenting with a criminogenic need in a given area, we investigated whether SAM reduces recidivism among offenders who present with no documented current substance misuse or difficulties (as coded in their INA and/or CRNA risk ratings).

As shown earlier with CRNA/INA Overall low risk offenders, we found no significant difference between groups at two years. SAM completion *does not benefit* offenders rating as having no documented current substance use risk or difficulties.

Ethnicity and Risk of Recidivism

We had the opportunity to review the recidivism rates of Aboriginal offenders exclusively; comparing Aboriginal offenders who have completed SAM to Aboriginal offenders from the comparison group (without SAM completion).

Aboriginals in Community

Overall results demonstrate that, Aboriginal offenders who completed SAM significantly reduced their risk to reoffend and extended their time spent offence-free after program completion despite having an increased recidivism risk as compared to similarly matched Caucasian offenders.

The evaluation shows the following results for Aboriginal offenders who successfully completed SAM in the community (as compared to Aboriginal non-participants):

- they recidivated 30% less when contrasted to Aboriginal offenders in the comparison group (38% less when breaches were excluded),
- they had a 50% lower risk of recidivating than Aboriginal offenders in the comparison group, when taking other factors, such as age and education into account (including and excluding breaches), and
- for those that did return, they had an extension of time spent conviction-free, up to 101 days longer than Aboriginal comparison group offenders.

Aboriginals in Custody

The evaluation shows the following results for Aboriginal offenders who successfully completed SAM in custody (as compared to Aboriginal non-participants):

- they recidivated at rates similar to Aboriginal offenders in the comparison group (79% vs. 75%, respectively including breaches; 71% vs. 66%, respectively excluding breaches),
- they had a 62% *greater* risk of recidivating than Aboriginal offenders in the comparison group, when taking other factors, such as age and education into account (53% greater when excluding breaches), and
- for those that did return, their time spent conviction-free was similar to Aboriginal comparison group offenders.

Results – Female Offenders

SAM and Recidivism

Community

The evaluation shows the following results for female offenders who successfully completed SAM in the community (including breach offences):

- they recidivated 50% less when contrasted to the comparison group and
- for those that did return, they had an extension of time spent conviction-free, 144 days longer than comparison group offenders.

Custody

The evaluation shows the following results for female offenders who successfully completed SAM in custody:

- they recidivated 18% less when contrasted to the comparison group (14% less when excluding breaches), and
- for those that did return, they had an extension of time spent conviction-free, between 66 and 106 days longer than comparison group offenders.

Introduction

Substance Use and Recidivism

Provincial (BC) and federal crime rates have been decreasing since the early 1990s. Both the volume and severity of crimes in BC dropped by 5-6% in 2010 and the overall crime rate (in 2010) reached its lowest point since the early 1970s (Brennan & Dauvergne, 2011).

In contrast to other criminal activities, drug-related offences have continued to increase in Canada since the early 1990s, primarily due to a higher number of cannabis offences (Rezansoff, Moniruzzaman, Gress, & Somers, 2013); between 2009 and 2010, drug-related offenses increased 10% (Brennan & Dauvergne, 2011). This trend was particularly pronounced in British Columbia, which had the highest provincial drug crime rate in 2010 (Brennan & Dauvergne, 2011).

For many offenders, there is a link between substance use and crime. A recent study by Somers et al. (2015) found that 32% of BC offenders have a diagnosed substance use disorder in the last five years: 7% have a diagnosis of substance use disorder only and 25% have a dual diagnosis (concurrent substance use and non-substance use mental disorder). Related research has shown that recidivism rates are increased among BC offenders with substance use disorders (Rezansoff et al., 2013).

Treating substance use issues is an important goal of correctional programming and research suggests such treatment results in reductions in recidivism. For example, participation in the Canadian federal Offender Substance Abuse Pre-Release Program (OSAPP) has been related to significant reductions in re-admissions, re-convictions, and violent re-convictions (Serin & Cousineau, 2001).

Risk-Need-Responsivity Principles

Risk, needs, responsivity and the intentional targeting of criminogenic factors are the basis of evidence based programming in corrections (Andrews & Bonta, 2010).

The Risk-Need-Responsivity (RNR) model has three core principles:

1. Risk principle: intensive services should be directed to higher risk offenders;
2. Need principle: correctional programs should target criminogenic needs – dynamic (changeable) risk factors that are directly linked to criminal behaviour; and
3. Responsivity principle: providing treatment in a style and mode that is responsive to the offender's learning style and ability.

Current evidence suggests that adherence to RNR principles is associated with reduced re-offending in both community and custodial settings (Andrews & Bonta, 2010; French & Gendreau, 2006).

Program Overview

Substance Abuse Management (SAM) is a 12-session pre-treatment psycho-educational program related to substance abuse for offenders. The program is delivered by trained Correctional Officers and/or Probation Officers to offenders in custody and in the community. Some offerings in the community may also be co-facilitated by Aboriginal Justice Workers.

SAM is designed to reduce recidivism directly related to substance abuse and to assist participants to develop healthier lifestyles. The intent of the program is to prepare high and medium risk offenders to move to more intensive forms of treatment related to their substance abuse and/or other issues of concern.

After completing the program, offenders should have a clear understanding of the effect of substance use/abuse on their lives and its impact on others; have some skills to assist them to adjust to a healthier lifestyle; and have a clear idea of the resources available to assist with their continued recovery. The program is based on the Bio/Psycho/Social/Spiritual Model of Substance abuse and the Stages of Change Model. In addition, the program discusses elements of Harm Reduction in order to respond to offenders based on where they are in a continuum of use or recovery, with the goal of keeping them alive, engaging them in addiction treatment, and influencing their addictive behaviours. The program approach is consistent with the latest research and the approach taken by Alcohol and Drug Services in the Province of British Columbia.

The latest version (SAM 5) was launched in May 2010. The program is designed to be administered separately to male and female offenders with a medium to high risk to reoffend due to substance abuse problems (who consequently may not be voluntary participants). There are Aboriginal components embedded in the course for when SAM is delivered to groups of Aboriginal offenders or to others who may benefit from the material.

Research Context

This evaluation is the third in a series of reviews of the SAM programs delivered by BC Corrections. Previous evaluations were conducted in 2005 and 2007, focusing on male offenders between April 2000 and September 2003.

Both previous evaluations found no reduction in recidivism for the SAM group (in community or custody), but indicated that a higher index of prior sentence activity (custody sentence within two

years) was associated with an increased recidivism rate and that Aboriginal offenders were at higher risk to reoffend.

Qualitative interview responses about SAM found universal agreement that the SAM program is useful and provides a basis for meaningful change. At the time (2007), there was widespread agreement that the SAM program needed updating, and the changes recommended were implemented in the current SAM 5 program. Previous evaluations highlighted the complexity of obtaining traditional evaluation data on SAM effectiveness, such as individualized follow-up of participants over a meaningful period of time. The practicalities of such research are problematic when faced with dynamic offender populations and generally short supervision periods.

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 SAM. The key objective of the current outcome evaluation is to assess and compare the reoffending[1] rates of the offenders who have taken the SAM program in comparison with offenders who did not, in both custody and community settings.

Background and demographic variables including Community Risk Needs Assessment (CRNA) behavioural and overall risk ratings, Inmate Risk Needs Assessment (INA) behavioural and overall risk ratings, prior offence index, offender age, ethnicity and educational level were included in the analyses to account for their possible influence on recidivism rates.

[1] This report defines reoffending as a reconviction with a return to B.C. Corrections for supervision, with a custody and/or community sentence, and may include community sentence breaches.

Methodology

The evaluation consists of two sets of analyses:

Section one – Community SAM programming for male offenders

Section two – Custody SAM programming for male offenders

Section three – Community SAM programming for female offenders

Section four – Custody SAM programming for female offenders

To assess the impact of the SAM program, analyses addressed the following:

1. recidivism rates with the *inclusion* of probation breaches;
2. recidivism rates with the *exclusion* of probation breaches[2];
3. survival analysis of the time to reoffending;
4. proportion and impact of offenders with High, Medium and Low CRNA and/or INA Overall ratings[3];
5. proportion and impact of offenders with varying CRNA/INA Substance Abuse ratings[3];
6. proportion and impact of offenders by ethnicity[3].

SAM Group Selection

This evaluation focuses on the impact of SAM completion on reoffending two years after program completion. It includes program analyses based on correctional records for sentenced offenders in custody and/or community supervision throughout the province, between June 1st, 2010 and Sept 30th, 2015 (for male offenders) and June 1st, 2010 and Nov 6th, 2015 (for female offenders). All offenders must have had successfully completed SAM to be included in the analyses and these samples consisted of some instances where offenders may have successfully completed SAM more than once.

Any offenders having participated in both SAM and specialized programs such as IOM (Integrated Offender Management) or the DTC (Drug Treatment Court) were excluded from these analyses.

[2] Due to the low numbers of female community offenders with non-breach offences, it was not possible to analyse recidivism rates excluding breaches for this sample.
[3] Due to the small sample sizes for female offenders, the analyses outlined in points 4-6 could not be carried out.

Analyses are based on 1,427 corrections records for male offenders serving a community sentence, 2,602 corrections records for male offenders serving a custody sentence, 102 corrections records for female offenders serving a community sentence, and 254 corrections records for female offenders serving a custody sentence with BC Corrections.

Comparison Group Selection

Records for a comparison group of sentenced offenders who did not successfully complete or did not participate in SAM were retrieved from the Corrections Network (CORNET) offender information system.

Male comparison group offenders were randomly selected offenders serving a community sentence (section one) between June 1st, 2010 and July 1st, 2015, or a custody sentence (section two) between Jan 1st, 2007 and Sept 30th, 2015. Female comparison group participants were randomly selected offenders serving a community sentence (section three) between June 1st, 2010 and November 6th, 2015, or a custody sentence (section four) between June 1st, 2010 and October 31st, 2015. Comparison group clients were directly matched with SAM program group participants according to their CRNA or INA Overall rating and CRNA or INA Substance Use rating; and proportionally matched by their prior index rating, ethnicity, education level, and age.

Recidivism

Recidivism is defined as the next sentencing date (in CORNET)[4] after a custody release or community supervision order is completed, for those individuals who return to B.C. Corrections for sentenced supervision.

As sentences related to a violation of probation (breaches) are different from other types of offences, separate analyses were conducted including and excluding breaches for male offenders; analyses of female offenders in the community could be completed only when breach offences were included. All offenders in the study were tracked for a total of twenty-four months (two years) after their release.

Data Analysis

Data were 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:

[4] Offence date may be used in cases where no sentencing date is found.

- 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, Survival Analysis (Kaplan-Meier), and Cox Regression.

- Logistic regression analysis determines if SAM program participation 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 analyses to take into account their possible influence on estimated recidivism rates.
- Kaplan-Meier analyses were performed to determine if SAM program participation had a statistically significant impact on time to recidivism, and to estimate the average number of days to re-offence (survival analysis).
- Cox regression analyzes the ability of one or more categorical variables, such as program completion, to predict the effect of this variable on *days without reoffending*. Several background and demographic variables that may differ between groups were included as covariates in the Cox regression to take into account their possible influence on time to recidivism.

Section 1 – Community SAM for Male Offenders Results

Offender Demographics

As shown in Table 1, the average age of the SAM and comparison group offenders was 36 years, with an average sentence length of 435 days. The majority of offenders were Caucasian (64% SAM; 62% Comparison Group), followed by Aboriginals (19% SAM; 24% Comparison Group). Nineteen percent (19%) of SAM and 26% of Comparison Group offenders had a previous jail sentence within two years of their index offence. The majority of offenders in both groups were rated as medium (60%) or high (30%) risk by the CRNA. Overall, 35% of offenders were assessed as having frequent or uncontrolled substance use.

Table 1 - Offender Demographics (Community SAM – Male Offenders)

		SAM		Comparison	
Total Offender Count		1427		1427	
Age		37 (+/- 12)		35 (+/-11)	
Sentence Length (days)		459 (+/- 181)		411 (+/- 163)	
		Count	%	Count	%
Ethnicity	Aboriginal*	273	19%	347	24%
	Caucasian	911	64%	885	62%
	Other**	229	16%	175	12%
	Unknown	14	1%	20	1%
Prior Index	No previous formal contact	258	18%	251	18%
	Previous community supervision or one remand	315	22%	258	18%
	More than one previous remand	243	17%	223	16%
	Previous custody sentence over two years ago	337	24%	328	23%
	Previous custody sentence within two years	274	19%	367	26%
CRNA	High	431	30%	431	30%
	Medium	861	60%	861	60%
	Low	135	10%	135	10%
Substance Misuse	No current usage or difficulties	163	11%	163	11%
	Some usage	766	54%	766	54%
	Frequent or uncontrolled usage	498	35%	498	35%

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

** Other ethnic groups include self-identified Asian, Black, East Indian, Hispanic, or other offenders.

Recidivism Rates and Survival Analysis

In the first set of analyses, probation breaches were included with offences when calculating recidivism. As seen in Table 2, there was a significant difference between groups at the two year follow-up, indicating that SAM offenders reoffended 25% less than comparison group offenders.

When isolating the effect of SAM completion on recidivism risk (removing the effect of other factors, such as age or ethnicity), the SAM group had a 33% lower risk of recidivating as the comparison group (i.e., the likelihood of SAM offenders re-offending was two-thirds that of comparison group offenders; see Table 3).

For those that did reoffend, survival analysis indicated that SAM participants took significantly longer to reoffend than the comparison group (74 days longer, on average; see Table 4).

Results when excluding breach offences were in keeping with these findings, with SAM participants recidivating 22% less and an average delay of 54 days before their first re-offence (as shown in Tables 2-4).

In summary, when analyzing the effect of SAM completion on male offenders in the community, there was a significant drop in reoffending, a lowered risk of recidivism after program completion, and an extension of time spent conviction-free when contrasted with comparison group offenders.

Table 2 - Recidivism Rates for Community SAM – Male Offenders

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	334 (33%)	483 (44%)	- 25%	25.90	< 0.001	significant
Excluding breaches	280 (28%)	395 (36%)	- 22%	16.07	< 0.001	significant

N = 2,091

Table 3 - Logistic Regression for Community SAM – Male Offenders

	Exp(*B*)	**95% confidence interval**	***p* value**	
Including breaches	0.67	[0.55 - 0.82]	< 0.001	significant
Excluding breaches	0.77	[0.63 - 0.95]	0.015	significant

N = 2,091

Table 4 - Survival Analysis for Community SAM – Male Offenders

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	563	489	+ 74 days	30.07	< 0.001	significant
Excluding breaches	602	548	+ 54 days	18.43	< 0.001	significant

N = 2,091

Variables Associated with Risk of Reoffending

Background and demographic variables (shown in Table 1) were further addressed in a series of Cox regression analyses. Cox regression was used to identify variables associated with significant differences in the length of time it took to reoffend (for those who reoffended), after adjustment for other explanatory variables in the model.

In general, offenders with a high CRNA Overall risk rating, who were younger, and/or who had previous remand or custody sentences were significantly more likely to reoffend within two years. In addition, offenders who had documented frequent or uncontrolled substance use and/or self-reported as Aboriginal were significantly more likely to reoffend within two years (see Appendix A for data and further details). The variables associated with reoffending (previous remand/custody, risk rating, substance use) provide evidence that adherence to RNR principles is important in offender treatment in community settings.

Additional Recidivism Analyses

CRNA Low Risk Offenders

Following RNR principles, offender programming such as SAM is designed to target offenders with a medium or high risk rating. Given these guidelines, we investigated whether SAM reduces recidivism among the low risk offenders who complete it. As shown in Table 1, 10% of the community SAM group had a Low CRNA Overall risk rating (135 offenders in each of the SAM and Comparison groups).

In this analysis, we compared recidivism (including breaches) among low risk offenders who did and did not complete SAM. Analyses found no significant difference between groups at two years. This indicates that SAM completion does not benefit low risk offenders; it neither affects their re-offence rates nor their time to re-offence significantly (see Appendix B for details).

CRNA No Current Substance Use or Difficulties

Following RNR principles, programming should be provided to offenders presenting with a criminogenic need in a given area. Given these guidelines, we investigated whether SAM reduces recidivism among offenders who present with no documented current substance misuse or difficulties. As shown in Table 1, 11% of the community SAM group presented with low CRNA Substance Use risks (no documented current substance usage or difficulties; 163 offenders in each of the SAM and Comparison groups).

In this analysis, we compared recidivism rates among offenders with no documented current substance misuse or difficulties, who did and did not complete SAM. Analyses found no significant difference between groups at two years. This indicates SAM completion does not benefit offenders who present with little to no current substance abuse issues; through their overall re-offence risk or in any difference in their time to first re-offence (see Appendix C for details).

Aboriginal Offenders

Initial analyses (detailed in Appendix A) indicated that Aboriginal offenders had a 32% increase in their risk of reoffending, as compared to Caucasian offenders, after adjustment for other explanatory variables.

This result led to an expansion of our analyses, reviewing the recidivism rates of Aboriginal offenders exclusively, comparing Aboriginal offenders who have completed SAM to Aboriginal offenders from the comparison group (without SAM completion). In the first set of analyses, probation breaches were included with offences when calculating recidivism. Results showed there was a significant difference between groups at two years: Aboriginal SAM participants reoffended 30% less than Aboriginal comparison group offenders (see Table 5). This result highlights the positive effect of SAM completion for an at-risk population that has an increased risk to reoffend overall.

When isolating the effect of SAM completion on recidivism risk for Aboriginal offenders only (removing the effect of other factors, such as age), Aboriginal SAM participants had a 50% lower risk of reoffending than Aboriginal comparison group offenders (see Table 6).

For those that did reoffend, survival analysis indicated that Aboriginal SAM participants took significantly longer to reoffend than those in the comparison group (101 days longer, on average; see Table 7).

Results when excluding breach offences were in keeping with these findings, with Aboriginal SAM participants recidivating 38% less, and an average delay of 97 days before their first re-offence (as shown in Tables 5-7).

Overall, these results demonstrate that SAM completion significantly reduced Aboriginal offenders' risk to reoffend and extended their time spent offence-free after program completion, despite having an increased recidivism risk as compared to similarly matched Caucasian offenders.

Table 5 - Recidivism Rates for Community SAM – Aboriginal Male Offenders

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	75 (39%)	146 (56%)	- 30%	13.30	< 0.001	significant
Excluding breaches	54 (28%)	118 (45%)	- 38%	14.29	< 0.001	significant

N = 455

Table 6 - Logistic Regression for Community SAM – Aboriginal Male Offenders

	Exp(*B*)	**95% confidence interval**	***p* value**	
Including breaches	0.47	[0.30 - 0.73]	0.001	significant
Excluding breaches	0.49	[0.31 - 0.78]	0.002	significant

N = 455

Table 7 - Survival Analysis for Community SAM – Aboriginal Male Offenders

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	516	415	+ 101 days	13.25	< 0.001	significant
Excluding breaches	596	499	+ 97 days	14.50	< 0.001	significant

N = 455

Section 2 – Custody SAM for Male Offenders Results

Offender Demographics

As shown in Table 8, the average age of the SAM and comparison group offenders was 36 years, with an average custody sentence length of 156 days. The majority of offenders were Caucasian (58% SAM; 62% Comparison Group), followed by Aboriginals (32% SAM; 28% Comparison Group). Sixty-five percent (65%) of SAM and 73% of Comparison Group offenders had a previous jail sentence within two years of their index offence. The majority of offenders in both groups were rated as medium (57%) or high (27%) risk by the INA. Overall, 62% of all offenders reviewed were assessed as having documented frequent or uncontrolled substance use.

Table 8 - Offender Demographics (Custody SAM – Male Offenders)

		SAM		Comparison	
Total Offender Count		2602		2602	
Age		35 (+/- 10)		36 (+/-10)	
Sentence Length (days)		201 (+/- 132)		111 (+/- 111)	
		Count	%	Count	%
Ethnicity	Aboriginal*	838	32%	736	28%
	Caucasian	1514	58%	1603	62%
	Other**	241	9%	257	10%
	Unknown	9	0.3%	6	0.2%
Prior Index	No previous formal contact	86	3%	69	3%
	Previous community supervision or one remand	88	3%	43	2%
	More than one previous remand	206	8%	141	5%
	Previous custody sentence over two years ago	537	21%	459	18%
	Previous custody sentence within two years	1685	65%	1890	73%
INA	High	710	27%	710	27%
	Medium	1491	57%	1491	57%
	Low	401	15%	401	15%
Substance Misuse	No current usage or difficulties	319	12%	319	12%
	Some usage	683	26%	683	26%
	Frequent or uncontrolled usage	1600	62%	1600	62%

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

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

Recidivism Rates and Survival Analysis

Two sets of analyses, including and excluding probation breaches when calculating recidivism, assessed the impact of SAM completion on recidivism. Results indicate *no significant difference in recidivism between groups at two years (including or excluding breaches)*: SAM offenders reoffended at a similar rate as comparison group offenders. Logistic regression analyses confirmed this finding: after adjusting for variables significantly associated with reoffending, the SAM group has a similar risk to reoffend as the non-SAM comparison group (see Tables D1 and D2 in Appendix D for details).

For those that did reoffend, survival analysis indicated that SAM offenders took significantly longer to reoffend than the comparison group (29 days longer, on average; see Table 9). When excluding breach offences, this positive effect was maintained for 27 days (on average).

Table 9 - Survival Analysis for Custody SAM – Male Offenders

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	359	330	+ 29 days	7.68	0.006	significant
Excluding breaches	423	396	+ 27 days	5.97	0.015	significant

N = 3,897

Variables Associated with Risk of Reoffending

Background and demographic variables (shown in Table 8) were further addressed in a series of Cox regression analyses. Cox regression was used to identify variables associated with significant differences in the length of time it took to reoffend (for those who reoffended) after adjustment for the other explanatory variables in the model.

In general, offenders with an INA Overall high or medium risk rating, who were younger, and/or who had previous remand or custody sentences were significantly more likely to reoffend within two years. In addition, offenders who had documented frequent/uncontrolled or some substance use, and those who self-reported as Aboriginal were significantly more likely to reoffend within two years (see Appendix A, Table A2 for details). The variables associated with reoffending (previous remand/custody, risk rating, substance use) provide evidence that adherence to RNR principles is important in offender treatment in custody settings.

Additional Recidivism Analyses

INA Low Risk (Overall and Substance Use)

SAM completion had no significant effect on reoffending or the risk of reoffending for custody offenders generally. Additional analyses on INA low risk (Overall) and INA Substance abuse low risk offenders also found no significant differences between program and comparison groups (results shown in Appendices B and C, respectively).

Aboriginal Offenders

Initial analyses (shown in Appendix A) indicated that Aboriginal offenders had a 27% greater risk of reoffending, as compared to Caucasian offenders, after adjustment for other explanatory variables. This result led to an expansion of our analyses (as performed with Community SAM data), comparing recidivism rates of Aboriginal offenders who completed SAM to those of Aboriginal offenders who did not.

The actual rate of return demonstrates no significant effect of SAM completion on reoffending when comparing Custody SAM Aboriginal offenders and Aboriginal offenders who did not take SAM (see Appendix E, Table E1). This contrasts with the beneficial results seen with community offenders, where Aboriginal SAM offenders reoffended 30% less than Aboriginal non-offenders (shown in Table 5) at the end of the two-year review period.

When isolating the effect of SAM completion on the risk of future recidivism for Aboriginal offenders (removing the effect of other factors, such as age), Aboriginal SAM offenders were at 53% and 62% *greater* risk to reoffend (excluding and including breaches, respectively) than Aboriginal offenders who did not complete SAM (see Table 10).

For those who did reoffend, survival analysis indicated that Aboriginal SAM offenders had a similar length of time to re-offence as those in the comparison group (see Appendix E, Table E2).

Table 10 - Logistic Regression for Custody SAM – Aboriginal Male Offenders

	Exp(*B*)	95% confidence interval	*p* value	
Including breaches	1.62	[1.20 - 2.19]	0.002	significant
Excluding breaches	1.53	[1.12 - 2.00]	0.002	significant

N = 1,197

Overall, these analyses of Aboriginal offenders in custody demonstrate that 1) Aboriginal offenders serving custody sentences have an increased recidivism risk as compared to similarly matched

Caucasian offenders; 2) SAM completion within custody is not associated with a reduction in reoffending, nor does it extend offenders' time spent offence-free after program completion for aboriginal offenders specifically; and 3) Aboriginal offenders who complete SAM in custody also have a significantly higher risk of reoffending than Aboriginal offenders who do not participate in Custody SAM programming.

Section 3 – Community SAM for Female Offenders Results

Offender Demographics

The average age of the SAM and comparison group offenders was 36 years, with an average sentence length of 382 days. The majority of offenders were Caucasian (64% SAM; 52% Comparison Group), followed by Aboriginals (31% SAM; 46% Comparison Group). Twenty percent (20%) of SAM and 21% of Comparison Group offenders had a previous jail sentence within two years of their index offence. The majority of offenders in both groups were rated as medium (60%) or high (25%) risk by the CRNA. Overall, 42% of offenders were assessed as having frequent or uncontrolled substance use.

Table 11 - Offender Demographics (Community SAM – Female Offenders)

		SAM		Comparison	
Total Offender Count		102		77	
Age		38 (+/- 10)		34 (+/-11)	
Sentence Length (days)		397 (+/- 123)		362 (+/- 142)	
		Count	%	Count	%
Ethnicity	Aboriginal*	32	31%	35	46%
	Caucasian	65	64%	40	52%
	Other**	5	5%	1	1%
	Unknown	0	0	1	1%
Prior Index	No previous formal contact	24	24%	13	17%
	Previous community supervision or one remand	32	31%	22	29%
	More than one previous remand	11	11%	8	10%
	Previous custody sentence over two years ago	15	15%	18	23%
	Previous custody sentence within two years	20	20%	16	21%
CRNA	High	25	25%	20	26%
	Medium	63	62%	45	58%
	Low	14	14%	12	16%
Substance Misuse	No current usage or difficulties	13	13%	9	12%
	Some usage	46	45%	36	47%
	Frequent or uncontrolled usage	43	42%	32	42%

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

** Other ethnic groups include self-identified Asian, Black, East Indian, Hispanic, or other offenders.

Note. Percentages may not sum to 100% due to rounding.

Recidivism Rates and Survival Analysis

Probation breaches were included with offences when calculating recidivism[5].

There was a significant difference between groups at the two year follow-up, indicating that SAM offenders reoffended 50% less than comparison group offenders (see Table 12). For those that did reoffend, survival analysis indicated that SAM participants took significantly longer to reoffend than the comparison group (144 days longer, on average; shown in Table 13).

Due to the high proportion of breaches among female offenders serving community sentences (69%; 40 of 58 reoffences), analysis of recidivism rates excluding breaches was not possible.

Table 12 - Recidivism Rates for Community SAM – Female Offenders

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	23 (23%)	35 (46%)	- 50%	10.51	0.001	significant

N = 179

Table 13 - Survival Analysis for Community SAM – Female Offenders

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	627	483	+ 144 days	11.77	0.001	significant

N = 179

[5] Because of the small sample sizes risk to recidivate (Cox Regression) could not be performed.

Section 4 – Custody SAM for Female Offenders Results

Offender Demographics

The average age of the SAM and comparison group offenders was 34 years, with an average custody sentence length of 109 days. The majority of offenders were Caucasian (59% SAM; 58% Comparison Group), followed by Aboriginals (37% SAM; 37% Comparison Group). Sixty-two percent (62%) of SAM and 72% of Comparison Group offenders had a previous jail sentence within two years of their index offence. For those offenders with an INA rating, the majority in both groups were rated as medium (43%) or high (21%) risk. Overall, 54% of all offenders with an INA rating were assessed as having documented frequent or uncontrolled substance use.

Table 14 - Offender Demographics (Custody SAM – Female Offenders)

		SAM		Comparison	
Total Offender Count		254		298	
Age		35 (+/- 9)		34 (+/-10)	
Sentence Length (days)		147 (+/- 100)		77 (+/- 80)	
		Count	%	Count	%
Ethnicity	Aboriginal*	95	37%	110	37%
	Caucasian	148	58%	176	59%
	Other**	10	4%	10	3%
	Unknown	1	0.34	2	0.7%
Prior Index	No previous formal contact	8	3%	5	2%
	Previous community supervision or one remand	9	4%	11	4%
	More than one previous remand	37	15%	29	10%
	Previous custody sentence over two years ago	43	17%	39	13%
	Previous custody sentence within two years	157	62%	214	72%
INA	High	52	21%	62	21%
	Medium	113	45%	125	42%
	Low	25	10%	34	11%
	Unknown	64	25%	77	26%
Substance Misuse	No current usage or difficulties	13	5%	17	6%
	Some usage	38	15%	45	15%
	Frequent or uncontrolled usage	139	55%	159	53%
	Unknown	64	25%	77	26%

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

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

Note. Percentages may not sum to 100% due to rounding.

Recidivism Rates and Survival Analysis[6]

In the first set of analyses, probation breaches were included with offences when calculating recidivism. There was a significant difference between groups at the two year follow-up, indicating that SAM offenders reoffended 18% less than comparison group offenders (see Table 15). For those that did reoffend, survival analysis indicated that SAM participants took significantly longer to reoffend than the comparison group (106 days longer, on average; see Table 16).

Results when excluding breach offences were in keeping with these findings, with SAM participants recidivating 14% less and an average delay of 66 days before their first re-offence (as shown in Tables 15 & 16).

In summary, when analyzing the effect of SAM completion on female offenders in custody, there was a significant drop in reoffending and an extension of time spent conviction-free when contrasted with comparison group offenders.

Table 15 - Recidivism Rates for Custody SAM – Female Offenders

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	135 (53%)	195 (65%)	- 18%	8.61	0.003	significant
Excluding breaches	121 (48%)	167 (56%)	- 14%	3.39	0.049	significant

N = 552

Table 16 - Survival Analysis for Custody SAM – Female Offenders

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	443	337	+ 106 days	12.83	< 0.001	significant
Excluding breaches	498	432	+ 66 days	5.22	0.022	significant

N = 552

[6] Because of the small sample sizes risk to recidivate (Cox Regression) could not be performed.

Conclusions

For the current report, SAM participants were analysed to determine if program completion has a significant impact on reducing recidivism. Two analyses were undertaken for male offenders: section one included records from 1,427 community offenders between June 1st, 2010 and Sept 30th, 2015; section two focused on 2,602 custody offender records between June 1st, 2010 and Sept 30th, 2015. In addition, two analyses were also undertaken for female offenders: section three included records from 102 community offenders between June 1st, 2010 and Nov 6th, 2015; section four focused on 254 custody offender records between June 1st, 2010 and Oct 31st, 2015. In all analyses, SAM participant records were compared with matched comparison group offender records.

Male Offenders

SAM and Recidivism

Overall, for male community offenders, successfully completing SAM was associated with less recidivism (by 22% and 25%), a lowered risk of recidivating (the likelihood of SAM offenders re-offending was two-thirds that of comparison group offenders) and staying offence-free 54 and 74 days longer than matched comparison offenders (including and excluding breaches, respectively). These positive results were not found when analyzing male custody SAM offender records: Results indicate no significant difference in recidivism between groups at two years (including or excluding breaches). Further, SAM completion was not found to be a significant factor in custody offender recidivism after adjusting for other variables such as Prior Index or INA risk rating. For those offenders who did reoffend, custody SAM participants took significantly longer to re-offend than the comparison group (27 and 29 days longer, on average; including and excluding breaches, respectively).

Cox regression analyses were used to determine which background and demographic variables were associated with increased time spent offence-free. In general, male offenders in both the community and custody divisions with high CRNA or INA risk ratings; who were younger; and/or who had previous remand or custody sentences were significantly more likely to reoffend within two years. In addition, offenders who had documented frequent or uncontrolled substance use and/or self-reported as Aboriginal were significantly more likely to reoffend within two years. The variables associated with reoffending (previous remand/custody, risk rating, substance use) provide evidence that adherence to RNR principles is important in offender treatment in community and custody settings.

SAM and Criminogenic Risk Factors

Psychological traits such as depression and anxiety are often considered significant obstacles to substance abuse treatment programs (De Leon, 2000). Specifically, individual reactivity (excitability, responsivity and/or arousal of behaviour, and physiology) and self-regulation (behavioural and neural processes that modulate underlying reactivity) have been central targets of cognitive behavioural substance abuse therapies, in order for offenders to identify drug taking patterns and habits, and to cope effectively with a range of associated problems (Welsh et al., 2014).

While anxiety and depression are not criminogenic factors, as defined by RNR principles (Andrews & Bonta, 2010), there is evidence of their importance as specific responsivity factors for effective substance abuse treatment programming (Welsh et al., 2014). As stated by Andrews et al. (2011);

> "We must clarify a misunderstanding of our focus on criminogenic needs. In our frustration with ineffective treatment and with clinical attempts to block effective treatment, we have been adamant about the need to focus predominately on criminogenic needs. Not to do so is to generate null or negative results. This does not say that non-criminogenic needs are irrelevant, only that offending behavior is unlikely to change if addressed in isolation. We fully acknowledge that dealing with a non-criminogenic need may be an important strategy in the context of addressing a specific responsivity factor. In fact, there are many preconditions that must be satisfied prior to tackling the still vital criminogenic needs of the offender. Treatment providers must build on strengths and remove barriers to effective participation. *Addressing non-criminogenic needs may also facilitate offender motivation and create a more effective therapeutic environment for the offender*, two important conditions that we have already reviewed." (p. 746).

Given the markedly differing recidivism results between male custody and community SAM participants, it may be worth exploring engagement levels for program attendees.

Low Risk (Overall) Offenders

BC Corrections offender programming, including Substance Abuse Management, is developed following RNR guidelines, and is designed to target offenders with an overall high or medium risk rating. We reviewed the effect of SAM completion on low risk male offenders (10% and 15% of the SAM participants groups in the community and in custody, respectively). In both the community and custody settings, analyses found no significant difference between SAM and comparison group recidivism rates, or the risk to reoffend. SAM completion does not benefit low risk offenders, and program participation should be limited to high and medium risk offenders only, in keeping with RNR principles.

No Current Substance Use Offenders

RNR principles also state that offender programming should address an offender's demonstrated criminogenic need(s). Given 11% of custody and 12% of community male offenders were rated as having no documented current substance usage or difficulties on the CRNA or INA, we reviewed the effect of SAM completion on low (substance use) risk participants. As noted with overall low risk offenders, SAM participants with a low documented substance use risk showed no significant benefit from completing SAM programming. In both the custody and community divisions, SAM participants had reoffence rates, risk to reoffend, and time spent offence-free periods similar to matched comparison group members.

Aboriginal Offenders

Initial analyses indicated that male Aboriginal offenders have a 27% and 32% increase in their risk to reoffend (in custody and community, respectively), as compared to Caucasian offenders. Given this additional risk, we reviewed the effects of SAM completion on reoffending for Aboriginal participants specifically.

In the community, male Aboriginal SAM offenders 1) reoffended 30% less, 2) had one half the risk of recidivism, and 3) were offence-free for up to 101 days longer (on average), than Aboriginal comparison group offenders.

In custody, male Aboriginal offenders who completed SAM had similar reoffence rates to non-participants, and showed no difference in their offence-free survival time after program completion. Interestingly, Aboriginal offenders serving a custody sentence while completing SAM programming were up to 62 percent *more likely* to reoffend, which stands in contrast to Aboriginal participants serving community sentences who had a significantly *lowered* recidivism risk.

While male Aboriginal offenders do have higher recidivism rates, and reoffend faster than other ethnic groups generally, it seems the beneficial effect of SAM completion on recidivism (in the community division) is also amplified. Conversely, while SAM completion in custody had no significant effect on overall recidivism, Aboriginal offenders participating in Custody SAM showed a greater risk of reoffending than non-participants. These results seemingly indicate a bi-directional intensification of overall SAM reoffending trends; positive for community offenders and negative for custody offenders.

These results are in keeping with previous research findings (Evaluation Branch, 2009; Serin & Cousineau, 2001), which found that correctional programming in custody may not be as effective for certain groups of offenders, including Aboriginal offenders. In its 2009 evaluation of Federal offender programming, the CSC found that although male Aboriginal offenders did benefit from substance abuse programming, they did so to a lesser degree than non-Aboriginal offenders

(Evaluation Branch, 2009). It is also important to note that the Aboriginal offenders reviewed in the current evaluation were more likely to have a high INA rating, more documented frequent/uncontrolled substance use patterns, more serious prior indicators, and to be slightly younger than the overall sample, on average.

Female Offenders

Overall, for female community offenders, successfully completing SAM was associated with less recidivism (by 50%) and staying offence-free 144 days longer than matched comparison offenders (including breaches).

Similar positive results were found when analyzing female custody SAM offender records. For female custody offenders, successfully completing SAM was associated with less recidivism (by 18% and 14%) and staying offence-free 106 and 66 days longer than matched comparison offenders (including and excluding breaches, respectively).

Overall, successfully completing SAM in the community or in custody has a positive impact on the recidivism of female offenders.

Evaluation Limitations

As with any evaluation, there are a few limitations with this one. 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., type of substance predominantly used).

The current evaluation assumes equivalent program delivery across the province, and between the custody and community divisions. SAM was designed to be most effective when delivered in twelve 2.5 hour sessions, with an ideal group size of eight to ten participants. Delivery of the program in a different format (e.g., longer sessions over a shorter duration, a larger group size or to mentally disordered participants) may alter the efficacy of the program.

Appendix A – Cox Regression Analyses (Male Offenders)

Cox regression was used to identify variables associated with significant differences in the length of time it took to reoffend (for those who recidivated), after adjustment for the other explanatory variables in the model.

Community

Variables included in the model were: SAM completion, prior index, CRNA substance use, CRNA overall risk rating, length of sentence, age, education, and ethnicity (as shown in Table A1).

SAM Program Completion: After two years, the risk of reoffending for offenders who completed SAM was 30% lower than for comparison group offenders, after adjusting for other explanatory variables in the model.

Prior Index: The more recent (and serious) an offender's contact with Corrections, the more likely they were to re-offend. When comparing to offenders with no previous correctional experience, offenders who had served a custody sentence within the past two years had a 163% increased risk of recidivism; offenders with a custody sentence over two years past had a 38% increased risk of recidivism. Offenders with more than one prior remand had a 59% increased risk of recidivism, as compared to offenders without previous correctional experience.

Substance Misuse: Based on CRNA substance use risk ratings, offenders with documented frequent or uncontrolled usage ratings had a 68% increased recidivism risk, as compared to offenders with no current substance use risks.

CRNA Risk Rating: Overall CRNA risk rating was significantly associated with risk of reoffending. When compared to CRNA high risk offenders, those with a medium rating had a 45% drop in their risk to reoffend; there was a 72% drop in risk to reoffend for low risk offenders.

Age: Age was significantly associated with risk of reoffending: the risk of reoffending decreased by 2% if an offender is a year older.

Ethnicity: Ethnicity was significantly associated with risk of reoffending. Specifically, compared to Caucasian offenders, Aboriginal offenders had a 32% increase in risk of recidivism, after adjustment for other explanatory variables in the model. Compared to Caucasian offenders, Asian offenders had a 46% decrease in risk of recidivism, after adjustment for other explanatory variables in the model.

Table A17 - Variables Associated with Time to Reoffence for Community SAM – Male Offenders

Variable		Exp(*B*)	*p* value	
SAM	vs Comparison Group	0.705	< 0.001	significant
Prior Index	More than one remand vs None	1.593	< 0.001	significant
	Custody > two years vs None	1.379	0.031	significant
	Custody < two years vs None	2.627	< 0.001	significant
Substance Misuse	Freq use vs No current usage	1.675	< 0.001	significant
CRNA	Low vs High	0.277	< 0.001	significant
	Medium vs High	0.547	< 0.001	significant
Age	With each year older	0.979	< 0.001	significant
Ethnicity	Aboriginal vs Caucasian	1.321	0.001	significant
	Asian vs Caucasian	0.544	0.048	significant
Sentenced Days		Not significant		
Education		Not significant		

Custody

Variables included in the model were: SAM completion, prior index, INA substance use, INA overall risk rating, length of sentence, age, education, and ethnicity (as shown in Table A2).

SAM Program Completion: After two years, the risk of reoffending for offenders who completed SAM was not significantly different than for comparison group offenders, after adjusting for other explanatory variables in the model.

Prior Index: The more recent (and serious) an offenders' contact with Corrections, the more likely they were to re-offend. When comparing to offenders with no previous correctional experience, offenders who had served a custody sentence within the past two years had a 648% increased risk of recidivism; offenders with a custody sentence over two years past had a 288% increased risk of recidivism. Offenders with more than one prior remand had a 196% increased risk of recidivism, as compared to offenders without previous correctional experience.

Substance Misuse: Based on INA substance use risk ratings, offenders with documented frequent or uncontrolled usage ratings had a 52% increased recidivism risk, as compared to offenders with no current substance use risks. Offenders with some current usage had a 35% increased recidivism risk, as compared to offenders with no documented current substance use risks.

INA Risk Rating: Overall INA risk rating was significantly associated with risk of reoffending. When compared to INA high risk offenders, those with a medium rating had a 22% drop in their risk to reoffend; there was a 34% drop in risk to reoffend for low risk offenders.

Age: Age was significantly associated with risk of reoffending: the risk of reoffending decreased by 1% with each year older.

Ethnicity: Ethnicity was significantly associated with risk of reoffending. Specifically, compared to Caucasian offenders, Aboriginal offenders had a 27% increase in risk of recidivism, after adjustment for other explanatory variables in the model. Compared to Caucasian offenders, offenders who self-identified as an "Other" ethnicity had a 40% decrease in risk of recidivism, after adjustment for other explanatory variables in the model.

Table A18 - Variables Associated with Time to Reoffence for Custody SAM – Male Offenders

Variable		**Exp(*B*)**	***p* value**	
SAM	vs Comparison Group	Not significant		
Prior Index	More than one remand vs None	2.959	< 0.001	significant
	Custody > two years vs None	3.879	< 0.001	significant
	Custody < two years vs None	7.484	< 0.001	significant
Substance Misuse	Some use vs No current usage	1.348	< 0.001	significant
	Freq use vs No current usage	1.518	< 0.001	significant
INA	Low vs High	0.657	< 0.001	significant
	Medium vs High	0.783	< 0.001	significant
Age	With each year older	0.991	< 0.001	significant
Ethnicity	Aboriginal vs Caucasian	1.270	< 0.001	significant
	Other vs Caucasian	0.598	0.018	significant
Sentenced Days		Not significant		
Education		Not significant		

Appendix B – Low Risk Male Offenders

As shown in Table 1, 10% of the community SAM sample had a CRNA risk rating of Low; and 15% of the custody SAM sample had an INA risk rating of Low (see Table 8). Following RNR principles, offender programming should target offenders with a medium or high risk rating. Given this, we investigated whether SAM reduces recidivism among the low risk offenders who complete it.

Community

In this analysis, we compared recidivism (including breaches) among low risk offenders who did and did not complete SAM. Analyses found no significant difference in recidivism between groups at two years, indicating that low risk SAM and comparison group offenders reoffended at a similar rate (13% vs. 15%, respectively). Logistic regression analyses confirmed this finding: after adjusting for variables significantly associated with reoffending, the SAM group has a similar risk to reoffend as the non-SAM comparison group. Similarly, there was no significant difference in time to reoffence between low risk SAM and comparison group offenders (670 vs. 681 days, respectively), see Tables B1, B2, and B3 for details.

Table B19 - Recidivism Rates for Community SAM – Low Risk Male Offenders

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	13 (13%)	15 (15%)	- 13%	0.10	0.748	Not significant

N = 199

Table B20 - Logistic Regression for Community SAM – Low Risk Male Offenders

	Exp(*B*)	**95% confidence interval**	***p* value**	
Including breaches	0.98	[0.40 - 2.43]	0.966	Not significant

N = 199

Table B21 - Survival Analysis for Community SAM – Low Risk Male Offenders

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	670	681	- 11 days	0.06	0.802	Not significant

N = 199

Custody

In this analysis, we compared recidivism (including breaches) among low risk offenders who did and did not complete SAM. Logistic regression analyses found no significant difference between groups at two years, indicating that low risk SAM and comparison group offenders reoffended at a similar rate (44% vs. 48%, respectively). Logistic regression analyses confirmed this finding: after adjusting for variables significantly associated with reoffending, the SAM group has a similar risk to reoffend as the non-SAM comparison group. Similarly, there was no significant difference in time to reoffence between low risk SAM and comparison group offenders (16 vs. 15 months, respectively), see Tables B4, B5, and B6 for details.

Table B22 - Recidivism Rates for Custody SAM – Low Risk Male Offenders

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	129 (44%)	154 (48%)	- 8%	1.03	0.311	Not significant

N = 609

Table B23 - Logistic Regression for Custody SAM – Low Risk Male Offenders

	Exp(*B*)	**95% confidence interval**	***p* value**	
Including breaches	1.04	[0.70 - 1.55]	0.851	Not significant

N = 609

Table B24 - Survival Analysis for Custody SAM – Low Risk Male Offenders

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	480	451	+ 29 days	1.16	0.281	Not significant

N = 609

Appendix C – No Documented Current Substance Misuse (Male Offenders)

As shown in Tables 1 and 8, respectively, 11% of the community SAM sample and 12% of the custody SAM sample presented with no documented current substance usage or difficulties. Following RNR principles, offender programming should be provided to offenders presenting with a criminogenic need in a given area. Consequently, we investigated whether SAM reduces recidivism among offenders who present with no documented current substance misuse or difficulties.

Community

In this analysis, we compared recidivism (including breaches) among offenders with no documented current substance misuse or difficulties who did and did not complete SAM. Analyses found no significant difference in recidivism between groups at two years, indicating that SAM and comparison group offenders with no documented current substance misuse or difficulties reoffended at similar rates (25% vs. 26%, respectively). Logistic regression analyses confirmed this finding: after adjusting for variables significantly associated with reoffending, the SAM group has a similar risk to reoffend as the non-SAM comparison group. Similarly, there was no significant difference in time to reoffence between SAM and comparison group offenders with no documented current substance misuse or difficulties (610 vs. 655 days, respectively). These findings were consistent when recidivism was calculated excluding breaches; see Tables C1, C2, and C3.

Table C25 – Recidivism Rates for Community SAM – Males with No Current Substance Misuse

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	26 (25%)	32 (26%)	- 4%	0.00	0.951	Not significant
Excluding breaches	18 (18%)	27 (22%)	- 18%	0.61	0.436	Not significant

N = 228

Table C26 – Logistic Regression for Community SAM – Males with No Current Substance Misuse

	Exp(*B*)	**95% confidence interval**	***p* value**	
Including breaches	0.81	[0.40 - 1.67]	0.572	Not significant
Excluding breaches	0.65	[0.31 - 1.39]	0.271	Not significant

N = 228

Table C27 – Survival Analysis for Community SAM – Males with No Current Substance Misuse

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	610	600	+ 10 days	0.01	0.92	Not significant
Excluding breaches	655	626	+ 29 days	0.67	0.41	Not significant

N = 228

Custody

In this analysis, we compared recidivism (including breaches) among offenders with no documented current substance misuse or difficulties who did and did not complete SAM. Analyses found no significant difference between groups at two years, indicating that SAM and comparison group offenders with no documented current substance misuse or difficulties reoffended at similar rates (43% vs. 45%, respectively). Logistic regression analyses confirmed this finding: after adjusting for variables significantly associated with reoffending, the SAM group has a similar risk to reoffend as the non-SAM comparison group. Similarly, there was no significant difference in time to reoffence between SAM and comparison group offenders with no documented current substance misuse or difficulties (16.3 vs. 16.7 months, respectively). These findings were consistent when recidivism was calculated excluding breaches; see Tables C4, C5, and C6.

Table C28 - Recidivism Rates for Custody SAM – Males with No Current Substance Misuse

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	98 (43%)	110 (45%)	- 4%	0.21	0.643	Not significant
Excluding breaches	88 (38%)	103 (42%)	- 10%	0.64	0.422	Not significant

N = 476

Table C29 - Logistic Regression for Custody SAM – Males with No Current Substance Misuse

	Exp(*B*)	**95% confidence interval**	***p* value**	
Including breaches	1.25	[0.79 - 1.96]	0.343	Not significant
Excluding breaches	1.18	[0.75 - 1.86]	0.482	Not significant

N = 476

Table C30 - Survival Analysis for Custody SAM – Males with No Current Substance Misuse

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	501	489	+ 12 days	0.21	0.644	Not significant
Excluding breaches	538	515	+ 23 days	0.79	0.373	Not significant

N = 476

Appendix D – Custody SAM Recidivism Data (Male Offenders)

When analysing the number of reoffences by Custody SAM and Comparison group offenders (including and excluding breaches), there was no significant difference between groups (see Table D1).

Logistic regression analysis also found no difference in the risk of recidivism due to program completion, when removing the effect of other factors, such as age or ethnicity (see Table D2).

Table D31 - Recidivism Rates for Custody SAM – Male Offenders

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	1177 (65%)	1408 (68%)	- 4%	3.69	0.055	Not significant
Excluding breaches	1062 (58%)	1271 (61%)	- 5%	2.85	0.091	Not significant

N = 3,897

Table D32 - Logistic Regression for Custody SAM – Male Offenders

	Exp(*B*)	**95% confidence interval**	***p* value**	
Including breaches	1.13	[0.96 - 1.32]	0.146	Not significant
Excluding breaches	1.11	[0.95 - 1.29]	0.181	Not significant

N = 3,897

Appendix E – Custody SAM Aboriginal Data (Male Offenders)

As seen in Table E1, there was no significant difference in recidivism between groups at two years: SAM offenders reoffended at a similar rate as comparison group offenders.

After adjusting for variables significantly associated with reoffending, however, the Aboriginal SAM group's risk of recidivism was 1.62 times that of the Aboriginal comparison group (i.e., the likelihood of Aboriginal SAM offenders reoffending was 62% greater than that of Aboriginal comparison group offenders; see Table 10 in text).

For those that did reoffend, survival analysis indicated that Aboriginal SAM offenders had a similar length of time to reoffence as those in the comparison group (see Table E2).

Table E33 - Recidivism Rates for Custody SAM – Aboriginal Male Offenders

	SAM *N* (%)	**Comparison** *N* (%)	**SAM % change in recidivism**	χ^2	***p* value**	
Including breaches	494 (79%)	430 (75%)	+ 5%	2.53	0.111	Not significant
Excluding breaches	441 (71%)	376 (66%)	+ 8%	3.21	0.073	Not significant

N = 1,197

Table E34 - Survival Analysis for Custody SAM – Aboriginal Male Offenders

	SAM (days)	**Comparison** (days)	**Time to Reoffence** (SAM – Comparison)	χ^2	***p* value**	
Including breaches	265	278	- 13 days	1.1	0.285	Not significant
Excluding breaches	361	372	- 11 days	1.4	0.234	Not significant

N = 1,197

Overall, these results demonstrate that Aboriginal offenders had an increased recidivism risk as compared to similarly matched Caucasian offenders; and that SAM completion did not significantly reduce their risk to reoffend or extend their time spent offence-free after program completion.

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