

# Rates of recidivism among offenders referred to Forum Sentencing

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**Aim:** *To determine whether the NSW Forum Sentencing program is more effective than the conventional sentencing process in reducing recidivism.*

**Method:** *Offenders referred to Forum Sentencing in 2011 were matched with offenders who were 'eligible' for Forum Sentencing but who were sentenced in a NSW Local Court where Forum Sentencing was not operating. These two groups were matched on a large number of covariates using propensity score techniques and were then compared on the time to first new proven offence using Cox regression. All offenders in both groups were followed up for a minimum of 6 months after finalisation of their index offence. The analysis was conducted using an intention-to-treat research design.*

**Results:** *Of the 575 offenders referred to Forum Sentencing, 552 could be matched with an 'equivalent' offender in the control group based on the covariates measured at the index court appearance. Cox regression analyses showed that there was no significant difference between the matched groups in the time to first new offence. This lack of an effect remained even after controlling for other relevant covariates.*

**Conclusion:** *This study finds no evidence that offenders who are referred to the NSW Forum Sentencing program are less likely to re-offend than similar offenders who are dealt with through the normal sentencing process.*

**Keywords:** *Forum Sentencing, re-offending, sentencing, Restorative Justice*

## BACKGROUND

Forum Sentencing is an additional sentencing option available for adult offenders who are likely to serve a prison sentence. It is a restorative justice-based scheme, similar to Youth Justice Conferencing, in which the offender, victim<sup>1</sup> and others affected by a crime come together to discuss what happened and its impact on the individuals involved. As part of the process, an intervention plan is developed by the forum participants which attempts to repair the damage done by the offence and, if accepted by the court, is completed as part of the offender's sentence. The objectives of the program (see Division 3 of the *Criminal Procedure Regulation 2010 (NSW)*) include

(a) to provide for the greater participation in the justice process of offenders and victims and the families and support persons of offenders and victims,

- (b) to increase offenders' awareness of the consequences of their offences for their victims and the community,
- (c) to promote the reintegration of offenders into the community,
- (d) to increase the satisfaction of victims with the justice process,
- (e) to increase the confidence of the community in the justice process,
- (f) to provide a participating court with an additional sentencing option, and
- (g) to reduce re-offending.

Eligibility for the program is defined in Part 7 Division 3 of the *Criminal Procedure Regulation 2010 (NSW)* and Chapter 7 Part 4 of the *Criminal Procedure Act 1986 (NSW)*. It states that the person must

- (a) plead or be found guilty,
- (b) be likely to receive a prison sentence in connection with their current offence,
- (c) be charged with an eligible offence (this **excludes** indictable-only offences, such as murder, manslaughter and serious violent and sexual offences, as well as some other non-indictable offences of serious violence, sexual offences, offences of stalking and intimidation, drug supply, cultivation and manufacture, serious firearms offences),
- (d) have no prior convictions for specified offences (such as murder, manslaughter, serious personal violence, sexual, drug supply and firearms offences, and no repeat prior convictions for a broader group of serious personal violence and sexual offences), and
- (e) be willing to participate in the program.

The pilot program for Forum Sentencing (known as Community Conferencing for Young Adults) commenced operation in NSW in September 2005 in two sites; Liverpool and Tweed Heads (this latter site encompassed Byron Bay, Tweed Heads, Mullumbimby and Murwillumbah Local Courts). In 2005/2006, the NSW Bureau of Crime Statistics and Research (BOCSAR) undertook an evaluation of this pilot scheme and found that there was a very high level of satisfaction with the program amongst both victims and offenders, and, further, that most stakeholders believed the program was effective in achieving its objectives. However, there was no evidence that the proportion of people sentenced to prison in the two pilot sites had reduced. This result was surprising given that the program was intended to target offenders who were facing imprisonment and suggested that net-widening may have been an unintended consequence of the pilot program. The research also found that the proportion of offenders who attended a conference and who subsequently re-offended was very small (4.4%). However, this latter finding was most likely due to the short follow-up period in which re-offending was measured (average of 4.8 months) rather than being attributable to the intervention (People & Trimboli, 2007). Furthermore, the re-offending rates of those referred to a conference were not compared with a suitable comparison group, making it difficult to determine whether this recidivism rate was less than what would be expected had the offender been dealt with through the normal sentencing process.

In 2009, BOCSAR conducted another evaluation of the Forum Sentencing program which compared the re-offending rates of Forum Sentencing participants with a group of offenders who met the eligibility criteria for the Forum Sentencing program but who were sentenced in courts where Forum Sentencing was not available (Jones, 2009). This study compared these two offender groups on four re-offending outcomes: (a) The proportion within

each group who were reconvicted of a further offence within one year of being sentenced. (b) The proportion within each group who were convicted for two or more offences within one year of being sentenced. (c) The time to first new offence. (d) Whether, on average, the Forum Sentencing group committed less serious offences than the comparison group. No significant differences on any of the four re-offending outcomes examined were detected between the Forum Sentencing and control groups.

Since these two evaluations were undertaken by BOCSAR, the Forum Sentencing program has undergone significant changes. Firstly, it has been extended to include a number of other geographical areas across NSW. By the end of 2012, Forum Sentencing was operating in 13 different sites; these 13 sites service 52 Local Courts in NSW.<sup>2</sup> Secondly, significant changes have been made to the way in which the program operates. In 2008, a number of changes were made to the Forum Sentencing Regulations including; removing the age limit of the program, excluding certain driving offences from the eligibility criteria, restricting the program to only those who have not previously served a custodial sentence, and making 'reducing re-offending' an explicit aim of Forum Sentencing. In 2010, further changes were made to the eligibility criteria for program participation and to victim involvement in the Forum Sentencing process. More specifically, these changes included (a) removing the requirement that only persons who had not previously served a custodial sentence were allowed to participate in the Forum Sentencing program, (b) excluding certain drug, driving and summary offences from the ambit of the program, (c) allowing persons charged with offences of affray and some robbery offences to be eligible for participation, and (d) ensuring that the victims' wishes are communicated to the court and are considered when determining whether to make a forum participation order. The latter regulatory changes were implemented in September 2010 at all sites where the program was operating and have since been adopted by all subsequent sites.

### THE CURRENT STUDY

Given these program changes, the Bureau was asked to repeat its original evaluation (see Jones, 2009) of the effect of Forum Sentencing on recidivism rates. To this end, the primary aim of the current study is to determine whether Forum Sentencing is more effective than the conventional sentencing process in reducing recidivism. This study, like that conducted by Jones (2009), attempts to minimise selection bias arising from treatment allocation by using propensity score matching.<sup>3</sup> However, the current study improves on the earlier evaluation in three ways. Firstly, the control group is restricted to individuals who are appearing for offences where the maximum penalty

includes imprisonment (one of the key eligibility criteria for the Forum Sentencing program and a restriction that was not applied by Jones (2009)). This means the control group used in the current study should be more comparable with the Forum Sentencing cohort. Secondly, the comparison between the treatment and control groups is on the basis of 'intention-to-treat'. Intention-to-treat analyses include all participants who are eligible for a treatment regardless of whether or not they actually participated in or completed that treatment. This method is used to minimise selection bias arising from treatment drop out or deviations from treatment protocol. Thirdly, the sample size for the treatment group is larger than the previous evaluation because the program is operating in more sites. This means that the current analysis has more power to detect a significant effect, if one exists.

## METHOD

### SAMPLE

Details regarding all offenders who were referred to Forum Sentencing in 2011 were provided to BOCSAR by the Judicial Commission of NSW (the agency which maintains the Forum Sentencing database). This initial dataset comprised 650 referral records. Eleven of these referral records were for the same offender and the same offence (all these offences had the same police charge numbers). Where this occurred, the record in which the offender progressed furthest in the program was selected and the duplicate record removed. Twenty referrals belonged to offenders who were charged with an ineligible offence or had a prior conviction for an ineligible offence so were also removed from the analysis. The resulting sample consisted of 611 unique offenders with 619 referrals to the Forum Sentencing program. There were more referrals than offenders in the sample because six of these offenders had two or more referrals recorded on the Forum Sentencing database which related to different offences. To ensure that there was only one record for each individual, one of the referrals for each of these six offenders was selected at random and re-offending data for this appearance were extracted.

The 611 unique offenders were then matched to court records contained in the Bureau's Re-offending Database (ROD) using the offender's first name, last name, date of birth and Criminal Number Index (CNI) (for further discussion of ROD see Hua & Fitzgerald, 2006). Two offenders could not be matched to ROD records using these unique identifiers and were therefore excluded from the sample. Police charge numbers, offence type and offence dates recorded in the Forum Sentencing database were then used to identify the index appearance (the offence for which the offender was referred to forum sentencing) for the

remaining 609 offenders. Based on this information, the index appearance could not be identified for seven offenders and these seven offenders were therefore removed from the sample. Twenty-six of the remaining 602 offenders were also excluded because their matter was finalised after 31 March 2012, so had less than six months of follow-up in which re-offending could be measured. One other offender was excluded because he had no time in the community to re-offend after adjusting for time spent in custody. This left a total of 575 offenders in the Forum Sentencing cohort to be included in the re-offending analyses.

Here it should be noted that, of the 575 offenders who were referred to Forum Sentencing, just over ten per cent (n=63) were assessed by the Program Administrator (or their delegated officer) as unsuitable for the program. Reasons why an offender can be assessed as unsuitable for Forum Sentencing include (a) the offender does not accept responsibility for the offence, (b) the offender does not accept the facts surrounding the offence tendered to the court, (c) the offender is not willing to participate in the program, and (d) the nature of the relationship between the offender and victim could potentially be harmed by the Forum process. There was only limited information recorded in the Forum Sentencing database regarding the reasons why the offenders in the treatment cohort were assessed as unsuitable. Where there was information supplied (n=25), the most common reason was that the offender was unwilling to participate in the program (52.0%). Other reasons included the offender disputed the facts tendered to the court (20.0%) and the offender could not be contacted (12.0%). The intention-to-treat analysis conducted here included all 575 offenders referred to Forum Sentencing for eligible offences, even where they were assessed as unsuitable for participation. This was done because the suitability criteria for entry into the Forum Sentencing program could not be equally applied to the comparison group. Analysing group outcomes on the basis of treatment allocation (rather than participation or completion), as was done here, ensures that any differences found between the treatment and control groups can be more confidently attributed to the intervention rather than self-selection bias arising from treatment drop-out.

The comparison group consisted of all offenders who pleaded or were found guilty of an offence and had their first court appearance for this index matter in 2011. Only offenders appearing in NSW Local Courts where Forum Sentencing was not available in 2011 were included in the comparison group. Therefore offenders sentenced in the following courts were excluded; Liverpool, Fairfield, Tweed Heads, Mullumbimby, Murwillumbah, Byron Bay, Campbelltown, Camden, Picton, Moss Vale, Burwood, Newtown, Balmain, Newcastle, Toronto, Belmont, Raymond Terrace, Gosford, Wyong, Woy Woy, Parramatta,

Ryde, Bankstown, Sutherland, Kogarah, Lismore, Ballina, Casino, Kyogle, Coffs Harbour, Grafton, Bellingen, Macksville, Maclean, Downing Centre, Waverley, Central.<sup>4</sup> Where there was more than one court appearance for the same offender in 2011, one appearance was selected at random. Offenders with any proven offences at the index court appearance which would make them ineligible for referral to Forum Sentencing<sup>5</sup> or who were appearing only for offences for which an imprisonment penalty could not be imposed<sup>6</sup> were also excluded from the comparison group. So too, were offenders who had prior convictions for offences which would have resulted in them being ineligible for referral to Forum Sentencing (had it been available in the court where they were sentenced).<sup>7</sup> Offenders who had their matter finalised after 31 March 2012 or who did not have any time in the community to re-offend after adjusting for time spent in custody were excluded from the analysis. Applying each of these criteria resulted in a potential comparison group consisting of 10,279 unique individuals. A subset of these offenders (n=5,000) were randomly selected for matching with the treatment group.

## VARIABLES

Demographic variables, as well as variables related to the offender's index offence and prior offending history were extracted from ROD for both the treatment and the comparison groups and were included in the propensity score and re-offending models as explanatory variables. These explanatory variables (described below) were selected because previous research has shown that they are related to the type of penalty imposed by courts and/or the risk of re-offending (e.g. Donnelly, Trimboli & Poynton, 2013; Jones, 2009; Nagin, Cullen & Johnson, 2009; Smith & Weatherburn, 2012; Weatherburn & Moffatt, 2011).

### Demographic characteristics

- Age - in years at index court appearance
- Gender - whether the defendant was male or female
- Indigenous status - whether the defendant has ever identified as Indigenous in a court appearance
- SEIFA index quartile - The Australian Bureau of Statistics' Socio Economic Index for Area for the offender's postcode (ABS, 2001)
- Remoteness - The Australian Bureau of Statistics' Area of Remoteness Index for the offender's postcode (ABS, 2005)

### Index offence characteristics

- Finalisation date - date when the index court appearance was finalised
- Bail - bail status at index court appearance

- Legal representation - whether or not the defendant was legally represented at the index court appearance.
- Plea - plea issued by defendant for the principal offence at the final court appearance for the index offence
- Number of concurrent offences - number of proven concurrent charges at index appearance
- Principal offence type - the type of principal offence at the index court appearance, at the ANZSOC Division level.
- Penalty type - the penalty imposed for the principal offence at the index court appearance
- Any proven offences - whether any proven offence at the index court appearance was a:
  - i. Violent offence (ANZSOC Division 1, 2, 3 and 6)
  - ii. Break and enter offence (ANZSOC Division 7)

### Prior offending history

- Prior court appearances - number of court appearances within 5 years of the index court appearance that resulted in a conviction
- Prior penalty type - whether the defendant had received any of the following court imposed penalties prior to the index court appearance:
  - i. Full-time prison sentence
  - ii. Suspended sentence
  - iii. Good behaviour bond
- Prior offence type - whether the defendant had been found guilty of any of the following offences prior to the index court appearance:
  - i. Violent offence (ANZSOC Division 01, 02, 03 or 06)
  - ii. Property offence (ANZSOC Division 07, 08 or 09)
  - iii. Drug offence (ANZSOC Division 10)

Re-offending was measured as any new offence occurring after finalisation of the index court appearance which resulted in a proven court outcome. Time to new offence was calculated as the number of days from finalisation date of the index offence to date of first subsequent proven offence, excluding any time spent in custody.<sup>8</sup> In cases where no offences were recorded during the follow-up period the time between the finalisation date of the index offence and the end of the cut-off period (30 September 2012) was calculated, excluding any time spent in custody. Just over 35 per cent of the sample had less than 12 months of follow-up time (days from finalisation of index matter to end of cut-off period) in which re-offending could be measured. As such, the only outcome measure examined in this study was time to first new offence. Other re-offending outcomes such as the number of re-offences or re-offending seriousness were not considered to be appropriate given the short follow-up period for a large number of offenders.



## STATISTICAL ANALYSIS

Propensity score matching was conducted using the `psmatch2` module in StataMP/12 (Leuven & Sianesi, 2003). A logistic regression model was used to derive propensity scores. A propensity score is the conditional probability of receiving the treatment, given a measured set of covariates; in this case, the conditional probability of being referred to Forum Sentencing given the controls listed above. All the explanatory variables described above were considered for inclusion in this model because they are potentially related to referral to Forum Sentencing and/or re-offending. The exception is penalty type imposed for the principal offence at the index court appearance. Penalty type could not be used here because it is potentially affected by treatment participation. One-to-one nearest neighbour matching with no replacement and a caliper of 0.05 was used. This means that an offender referred to Forum Sentencing was matched with the offender in the comparison group who had the closest propensity score (provided it was within 0.05 units). Offenders in the Forum Sentencing group were matched only once with an offender in the comparison group. After matching offenders in the Forum Sentencing group with an 'equivalent' control, the treatment and comparison groups were compared in order to assess whether or not they differed significantly on any of the baseline explanatory variables. The estimated standardised bias (SB; Rosenbaum & Rubin, 1985) was used for this purpose. An SB with an absolute value less than 20 was deemed optimal and indicated good balance across the treated and comparison groups with regard to the explanatory variable of interest (Apel & Sweeten, 2010). The two groups were then compared on the re-offending outcome (i.e. time to first new offence) using Cox Proportional Hazards regression techniques. Time to re-offence was modelled with and without adjustment for other potential covariates and the `vce(cluster)` option in StataMP/12 was used to account for the matched nature of the data.

## RESULTS

### CHARACTERISTICS OF FORUM SENTENCING AND COURT COMPARISON GROUPS

Table 1 presents the demographic, index offence and prior offending characteristics for both the Forum Sentencing and court comparison groups. As seen here, most offenders referred to Forum Sentencing were male (73.7%), non-Indigenous (82.3%), lived in inner metropolitan areas (62.4%) and lived in areas of greater socio-economic disadvantage (63.5%). The mean age of offenders in the Forum Sentencing group was 29 years. At their index court appearance, most Forum Sentencing offenders had been granted bail, were legally represented and

had pleaded guilty to their principal offence. The most frequent principal offence for which offenders were referred to Forum Sentencing was violent offences (23.1%), followed by theft (21.4%), driving (12.7%) and fraud (11.7%) offences. Over half of all offenders referred to Forum Sentencing had more than one offence finalised at their index court appearance. Most offenders in the Forum Sentencing group also had extensive prior offending histories. Forty per cent of all offenders referred to Forum Sentencing had three or more convictions in the five years prior to the index court appearance; 44 per cent had previously received a s9 good behaviour bond<sup>9</sup> and 17 per cent had previously been sentenced to full-time imprisonment.

Offenders included in the comparison group differed significantly from Forum Sentencing offenders on a number of characteristics. Compared with offenders in the comparison group, offenders referred to Forum Sentencing were younger (44.9% aged 18-24 vs. 32.9% aged 18-24), were more likely to identify as non-Indigenous (82.3% vs. 67.1%), were more likely to live in inner metropolitan areas (62.4% vs. 34.3%) and in postcodes with a higher level of disadvantage (as measured by SEIFA; 35.5% vs. 24.8%). Offenders referred to Forum Sentencing were also more likely to be granted bail (96.3% vs. 92.0%), be legally represented (85.7% vs. 77.8%) and plead guilty (91.0% vs. 81.5%) at their index court appearance, compared with offenders in the comparison group. With regard to the index offence, offenders referred to Forum Sentencing were more likely to appear for a property offence (40.2% vs. 23.7%) and have one or more concurrent offences (52.0% vs. 35.9%) finalised at their index court appearance compared with offenders in the comparison group. There were no significant differences between the Forum Sentencing and comparison groups in prior offending characteristics.

Table 2 shows the penalty imposed for the principal offence finalised at the index court appearance. These data are shown for both the treatment and the comparison groups. As seen here, there were significant differences between the two groups in the type of penalty imposed for the principle offence. A higher proportion of the Forum Sentencing group received a suspended sentence without supervision (13.6% vs. 2.4%) or a bond without supervision (45.9% vs. 21.0%) compared with the comparison group, while a higher proportion of offenders in the comparison group received full-time imprisonment (9.3% vs. 3.5%) or a fine (32.2% vs. 3.3%) compared with the Forum Sentencing group. As noted earlier, this information on the penalty imposed for the principal offence could not be used to match offenders in the two groups because penalty type can be affected by treatment participation (i.e. participating in the Forum Sentencing program).

Table 1. Demographic, index offence and prior offending characteristics by group

Variable		Court Comparison Group (n=5,000) (%)	Forum sentencing Group (n=575) (%)	Significance
<b>Demographic characteristics</b>				
Age	18-24	32.9	44.9	<.001
	25-34	28.4	27.3	
	35-44	21.0	16.5	
	45+	17.7	11.3	
Gender	Female	25.0	26.3	ns
	Male	75.0	73.7	
Indigenous status	Non-Indigenous	67.1	82.3	<.001
	Indigenous	23.0	13.6	
	Unknown	9.9	4.2	
SEIFA of residence	Quartile 1	24.8	35.5	<.001
	Quartile 2	37.7	28.0	
	Quartile 3	20.0	17.4	
	Quartile 4	10.2	12.0	
	Postcode missing	7.2	7.1	
ARIA of residence	Inner metro	34.3	62.4	<.001
	Inner regional	25.4	13.4	
	Outer regional/remote/very remote	33.1	17.0	
<b>Index offence characteristics</b>				
Date of finalisation	Jan11-Mar11	18.3	3.5	<.001
	Apr11-Jun11	22.7	22.1	
	Jul11-Sep11	25.0	29.4	
	Oct11-Dec11	23.4	26.6	
	Jan12-Mar12	10.6	18.4	
Bail	On bail	92.0	96.4	<.001
	In custody	8.0	3.7	
Legal representation	Not legally represented	22.2	14.3	<.001
	Legally represented	77.8	85.7	
Plea	Not guilty	18.5	9.0	<.001
	Guilty	81.5	91.0	
Principal offence	Principal offence - violence	22.2	23.1	<.001
	Principal offence - break and enter	2.8	7.1	
	Principal offence - theft	15.3	21.4	
	Principal offence - fraud	5.7	11.7	
	Principal offence - drugs	2.4	0.4	
	Principal offence - prohibited weapons	0.7	0.2	
	Principal offence - property damage	10.8	8.9	
	Principal offence - public order	6.0	4.5	
	Principal offence - traffic vehicle	13.5	12.7	
	Principal offence - against justice procedures	11.1	6.3	
	Principal offence - other	9.4	3.8	
	Concurrent offences	No concurrent offences	64.1	
1 concurrent offence		19.7	21.7	
2 concurrent offences		8.0	8.9	
3 or more concurrent offences		8.1	21.4	
<b>Prior offending characteristics</b>				
	3+ court appearances in 5 yrs prior	41.1	41.0	ns
	Prior prison (% yes)	19.8	16.9	ns
	Prior suspended sentence (% yes)	15.4	15.8	ns
	Prior good behaviour bond (% yes)	42.5	44.0	ns
	Prior violence offence (% yes)	37.2	33.4	ns
	Prior property offence (% yes)	31.1	34.3	ns

ns: no significant differences (at the 0.05 level) between the two groups on this covariate

Table 2: Penalty imposed for the principal offence by group

Penalty type	Court Comparison Group (n=5,000)		Forum Sentencing Group (n=575)		Total	
	n	%	n	%	n	%
Imprisonment	464	9.3	20	3.5	484	8.7
Home detention	8	0.2	1	0.2	9	0.2
Intensive Correction Order	34	0.7	1	0.2	35	0.6
Suspended sentence with supervision	162	3.2	30	5.2	192	3.4
Suspended sentence without supervision	118	2.4	78	13.6	196	3.5
Community Service Order	279	5.6	8	1.4	287	5.1
Bond with supervision	550	11.0	63	11.0	613	11.0
Bond without supervision	1,048	21.0	264	45.9	1,312	23.5
Fine	1,612	32.2	19	3.3	1,631	29.3
Nominal sentence	58	1.2	2	0.3	60	1.1
Bond without conviction	502	10.0	83	14.4	585	10.5
No conviction recorded	164	3.3	3	0.5	167	3.0
Other	1	0.0	3	0.5	4	0.1
<b>Total</b>	<b>5,000</b>	<b>100.0</b>	<b>575</b>	<b>100.0</b>	<b>5,575</b>	<b>100.0</b>

### MATCHING

Propensity scores were derived from a logistic regression model predicting whether or not an offender was referred to Forum Sentencing. The final propensity score model is summarised in Table 3. This model significantly predicted group membership (pseudo  $R^2 = 0.185$ , Likelihood ratio chi-square  $p$ -value  $<.001$ ). Older offenders, Indigenous offenders, offenders from regional or remote areas, offenders from areas with lower levels of disadvantage, and offenders who were bail refused at the index court appearance were all less likely to be referred to Forum Sentencing. Offenders who were legally represented, pleaded guilty, had their index matter finalised in 2012, had one or more concurrent offences, had at least one proven break and enter offence at their index court appearance and whose principal offence at the index court appearance was a property offence were all more likely to be referred to Forum Sentencing.

As noted earlier, the treatment probabilities estimated from the model shown in Table 3 were used to match offenders in the Forum Sentencing group with offenders in the comparison group, using one-to-one nearest neighbour matching with no replacement and a caliper of 0.05. Only 23 offenders (4.0%) from the treatment group could not be matched with a corresponding case from the comparison group based on these criteria. The propensity score model using this matched sample did not significantly predict group membership (pseudo  $R^2 = 0.017$ , Likelihood ratio chi-square  $p$ -value = 0.999).

The SB was used to assess whether the two groups were adequately balanced after matching on the covariates used to derive the propensity scores. Figure 1 presents the results of this covariate balance check. Two SBs for each covariate are shown in this figure; one before matching (unadjusted SB) and one after matching (adjusted SB). Where the SB is negative in value this indicates that a greater proportion of individuals in the comparison group possess the characteristic. Where the SB is positive in value this indicates that a greater proportion of individuals in the treatment group possess the characteristic. If the matching procedure was successful we would expect to see the adjusted SBs for all the covariates in the propensity score model to have an absolute value of less than 20 (Apel & Sweeten, 2010). As seen here, prior to matching, 15 variables had an SB with an absolute value greater than or equal to 20. These were; age (18-24yrs), Indigenous status (non-Indigenous, Indigenous and Unknown), postcode disadvantage (quartile 1 and quartile 2), remoteness of area (inner metropolitan, inner regional and outer regional/remote), finalisation date (1<sup>st</sup> and 5<sup>th</sup> quantile), legal representation, guilty plea, principal offence (break and enter and fraud) and concurrent offences (0 and 3+ concurrent offences). After matching, however, all variables examined had SBs with an absolute value less than or equal to 20 (all were less than |10|). The variable with the largest |SB| after matching was prior drug offence which was well below the balance threshold (SB = -8.8). Together, the diagnostics presented here suggest that the treatment and matched sample groups can be considered equal (within the limits of chance) with respect to the set of observed covariates.

Table 3. Logistic regression model of the likelihood of being referred to forum sentencing

Variable		Odds ratio	p-value	95% CI	
<b>Demographic characteristics</b>					
Age	25-34 vs other	0.60	<.001	0.467	0.761
	35-44 vs other	0.52	<.001	0.389	0.696
	45+ vs other	0.48	<.001	0.346	0.654
Gender	Female vs male	0.96	0.742	0.768	1.207
Indigenous status	Indigenous vs other	0.50	<.001	0.370	0.663
	Unknown vs other	0.44	<.001	0.275	0.694
SEIFA of residence	Quartile 2 vs other	0.68	0.002	0.530	0.869
	Quartile 3 vs other	0.61	0.001	0.465	0.810
	Quartile 4 vs other	0.51	<.001	0.370	0.709
	Missing postcode vs other	0.60	0.015	0.402	0.908
ARIA of residence	Inner regional vs other	0.29	<.001	0.220	0.388
	Outer regional/remote vs other	0.33	<.001	0.250	0.424
<b>Index offence Characteristics</b>					
Date of finalisation	Apr11-Jun11 vs other	5.57	<.001	3.395	9.129
	Jul11-Sept11 vs other	6.23	<.001	3.827	10.134
	Oct11-Dec11 vs other	6.35	<.001	3.889	10.354
	Jan12-Mar12 vs other	9.62	<.001	5.764	16.046
Bail	In custody vs on bail	0.23	<.001	0.138	0.400
Legal representation	Yes vs no	1.52	0.003	1.157	2.000
Plea	Guilty vs not guilty	2.27	<.001	1.644	3.145
Type of offence	Any proven violence offence vs other	1.36	0.258	0.799	2.311
	Any proven break and enter offence vs other	1.97	<.001	1.346	2.873
	Principal offence violence vs other	2.03	0.046	1.012	4.062
	Principal offence break and enter vs other	5.85	<.001	3.229	10.590
	Principal offence other theft vs other	3.22	<.001	1.973	5.270
	Principal offence fraud vs other	3.83	<.001	2.233	6.554
	Principal offence illicit drugs vs other	0.53	0.396	0.119	2.323
	Principal offence property damage vs other	2.28	0.003	1.336	3.883
	Principal offence public order vs other	1.43	0.252	0.775	2.645
	Principal offence pca vs other	2.78	<.001	1.658	4.675
Concurrent offences	Principal offence driving (excl pca) vs other	14.12	<.001	5.531	36.048
	Principal offence against justice procedures vs other	1.56	0.126	0.883	2.747
	1 vs none	1.30	0.039	1.013	1.667
	2 vs none	1.29	0.163	0.903	1.833
	3+ vs none	3.32	<.001	2.486	4.431
<b>Prior offending characteristics</b>					
Prior court appearances	Court finalisations in previous 5 years	1.01	0.776	0.946	1.077
Prior penalties	Prison (yes vs no)	1.00	0.983	0.714	1.391
	Suspended sentence (yes vs no)	1.19	0.265	0.874	1.629
	s9 Bond (yes vs no)	1.11	0.471	0.836	1.475
Prior proven offences	Violence offence (yes vs no)	0.81	0.127	0.620	1.061
	Property offence (yes vs no)	1.15	0.314	0.873	1.525
	Drug offence (yes vs no)	0.92	0.566	0.693	1.222



Figure 1. Standardised bias (SB) for each variable for the Forum Sentencing unmatched and matched samples



**RE-OFFENDING**

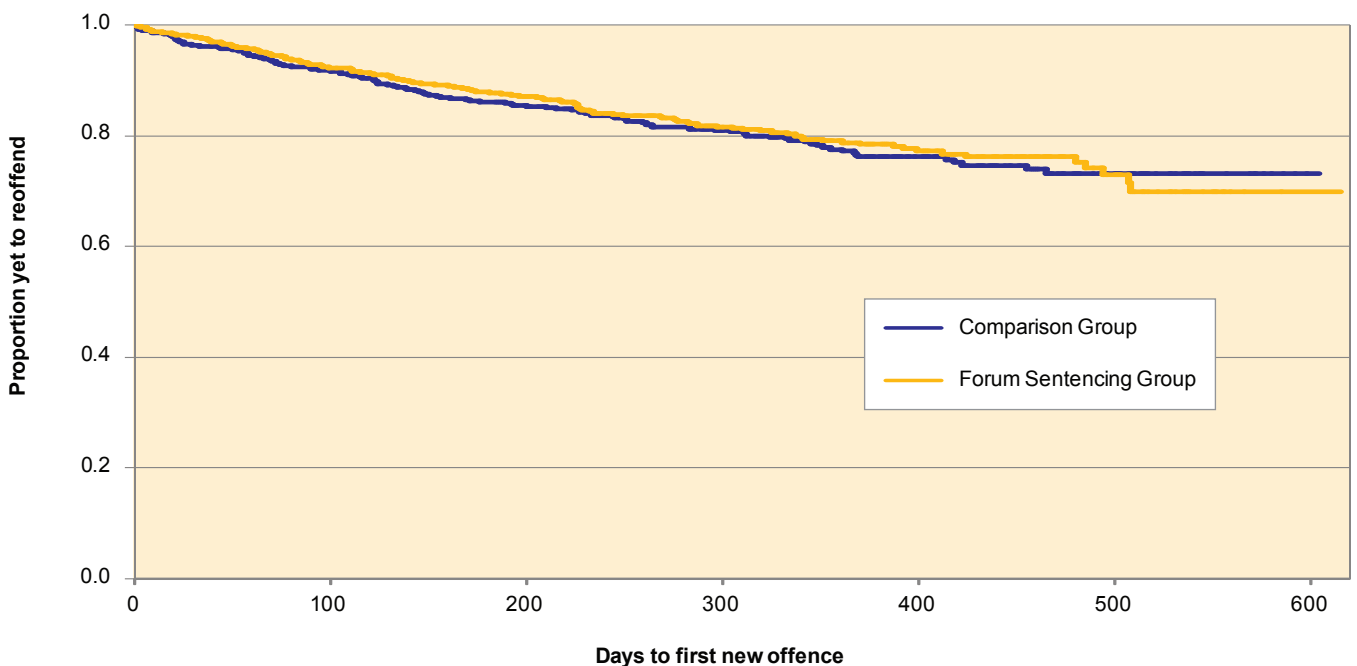
Table 4 presents the proportion of offenders referred to Forum Sentencing and offenders in the matched sample who re-offended within 6 months of their index offence being finalised. Also shown in this table is the mean number of days of follow up in which re-offending was measured for each group, the number of days until 10 per cent of the Forum Sentencing and comparison groups had committed a new offence, and the number of days until 20 per cent of the Forum Sentencing and comparison groups had committed a new offence. As seen here, the differences between the two groups in terms of re-offending

were minimal. Five per cent of offenders referred to Forum Sentencing recorded a new proven offence within 6 months of the index offence being finalised compared with seven per cent of the matched controls (Chi-square = 1.062; *p-value* = 0.303). Twenty per cent of the Forum Sentencing group had committed a new offence 340 days after finalisation of their index court matter, while it took approximately 324 days after finalisation date of their index court matter for the same proportion of the comparison group to re-offend. There was no significant difference between the two groups in the average number of days (excluding time spent in custody) in which re-offending could be measured (*t* = -1.4512, *p-value* = 0.147).

**Table 4: Re-offending outcomes for forum sentencing and control groups, matched (n=1,104)**

		Court Comparison Group	Forum Sentencing Group
<i>Reoffended within 6 months of index finalisation date</i>	per cent	6.5	5.1
	95% CI	(4.6, 8.9)	(3.4, 7.2)
<i>Mean number of days of follow-up</i>	mean	360.3	370.1
	95% CI	(350.4, 370.2)	(361.2, 379.0)
<i>Number of days for 10 per cent of each group to reoffend</i>	Free days	122	137
	95% CI	(80, 150)	(96, 190)
<i>Number of days for 20 per cent of each group to reoffend</i>	Free days	324	340
	95% CI	(245, 369)	(269, 480)

**Figure 2. Kaplan Meier estimates of time to reoffend, Forum Sentencing versus court comparison group, matched**



**Table 5. Time to first new offence for forum sentencing and court comparison groups, matched (n=1,104)**

Time to first new offence	Court Comparison Group	Forum Sentencing Group	p-value	95% CI <sup>a</sup>
Unadjusted hazard ratio	1.00	0.95	0.721	0.738, 1.234
Adjusted <sup>b</sup> hazard ratio	1.00	0.93	0.594	0.708, 1.218

<sup>a</sup> Standard errors have been adjusted to account for matched nature of the data

<sup>b</sup> Adjusted for demographic, offence and prior offending variables

Figure 2 presents the Kaplan-Meier survival curves showing the time to first new offence for the Forum Sentencing and comparison groups, after matching offenders on propensity scores. As can be seen here, the survival curves for the two groups are very similar. Twelve months after finalisation of the index matter, approximately 21 per cent of the Forum Sentencing group were estimated to have re-offended compared with approximately 23 per cent of the court comparison group.

The results of the Cox regression modelling for the matched sample are shown in Table 5. The hazard ratios shown in this table can be interpreted as the instantaneous risk of re-offending at any given point in time for the Forum Sentencing group compared with the comparison group. A hazard ratio greater than 1 indicates that the risk of re-offending at any given time is greater for the Forum Sentencing group and a hazard ratio less than one indicates that the risk of re-offending at any given time is less for the treatment group. The unadjusted hazard ratio for the treatment group compared to the comparison group is 0.95 and not significant (*p-value* = 0.721), suggesting that there is no significant difference in the risk of re-offending across the two groups. This lack of effect remained even after adjusting for other relevant covariates.<sup>10</sup>

## DISCUSSION

The aim of the current study was to examine whether offenders referred to Forum Sentencing are less likely to re-offend than offenders who are dealt with through the normal sentencing process. This study built on an earlier BOCSAR evaluation of Forum Sentencing (Jones, 2009) in three important ways (a) it attempted to minimise selection bias arising from treatment allocation by matching offenders referred to Forum Sentencing with a more suitable comparison group, (b) it attempted to minimise selection bias arising from treatment drop out by conducting an intention-to-treat analysis, and (c) it attempted to maximise the chances of detecting a treatment effect by using a larger sample size than had previously been examined. Despite the application of this more rigorous research methodology, the results of the current analysis are consistent with the previous evaluation of Forum Sentencing in demonstrating no effect of the program on the risk of re-offending.

One limitation of the current study, that should be acknowledged, is the short follow-up period in which re-offending was measured. About 45 per cent of the matched sample was followed up for less than 12 months after their index court appearance. This means that many new offences would not have been captured in this analysis and that other, potentially more sensitive, outcome measures such as frequency of re-offending and seriousness of subsequent offending could not be examined. While it is true that most re-offending occurs a short time after the reference conviction (Holmes, 2011), suggesting that the current study would have captured a large proportion of repeat offending, further research measuring re-offending over a 24- or 36-month period and including additional measures of re-offending should be undertaken to substantiate these findings.

It should also be recognised that while this study matched offenders in the Forum Sentencing and comparison groups on a large range of covariates related to treatment allocation and re-offending, it remains possible that some other important variable has not been accounted for in the propensity score models. One relevant factor would be the magistrate’s assessment of whether or not an offender is “likely” to receive a prison sentence for their index matter. This is a key criteria for referral to the Forum Sentencing program. Although this information could not be measured in the current analysis, any bias created by its omission is likely to be small given that the comparison group was restricted to offenders who were appearing for an imprisonable offence and offenders were matched on all available legal factors related to the likelihood of a receiving a custodial penalty (e.g. prior offending, plea, concurrent offences).

With these limitations in mind, the null effect found in the current research is consistent with the evidence base for the effectiveness of restorative justice (RJ) programs in reducing re-offending rates. There have been several major reviews of the evidence bearing upon this issue. Those which were conducted prior to 2007 conclude that RJ programs (both those targeting adults and juveniles) can reduce repeat offending (see for example Bonta, Jesseman, Ruge & Cormier, 2006; Latimer, Dowden & Muise, 2005; Sherman & Strang, 2007). However, as Weatherburn and MacAdam (2012) note, many of

the studies included in these earlier reviews contain numerous methodological weaknesses. These studies, for example, generally fail to deal with high drop-out rates of offenders referred to RJ programs and often fail to adequately match offenders in the treatment and comparison groups on factors known to affect re-offending (e.g. age, gender and prior record). These limitations make it difficult to determine whether the reduced re-offending rates observed amongst RJ participants is due to the RJ intervention or to selection bias arising from the fact that RJ programs tend to target less serious offenders. If we consider only studies which include adequate controls and an intention-to-treat research design, the evidence for RJ practices reducing re-offending is much weaker. Restricting their review to studies which employed these more rigorous approaches, Weatherburn and MacAdam (2012) could identify only three studies published since 2007 which showed any reduction in re-offending rates that could be attributed to RJ practices. The remaining seven studies which met the authors' inclusion criteria (i.e. studies that analysed the recidivism date on the basis of ITT and included controls for prior criminal record, conviction offence type, age, race and sex) found no significant differences between the re-offending rates of RJ participants and their matched controls.

It has been argued that one of the reasons why interventions based on RJ principles have been shown to have little impact on re-offending rates is that they typically are not designed to address criminogenic risk factors, such as drug and alcohol abuse, unemployment and delinquent peer association (e.g. Braithwaite, 1999; Jones, 2009; MacKenzie, 2002; Weatherburn & MacAdam, 2012). Criminal justice interventions that do address these underlying problems have been shown to be effective in reducing the re-offending rates of both adult and juvenile offenders and are generally cost effective. These interventions include drug treatment programs, cognitive-behavioural therapy, Functional Family Therapy, and employment and work programs (Aos, Miller & Drake, 2006). Weatherburn and MacAdam (2012) suggest that combining programs based on RJ principles with these other correctional measures or, alternatively, using RJ programs as an opportunity to refer offenders to such programs, may result in RJ interventions having a greater impact on repeat offending.

While the current study provides no evidence that Forum Sentencing reduces re-offending, the evidence presented here is not sufficient to conclude that the program, as it currently operates in NSW, is not meeting its intended aims. Reducing re-offending is just one of six objectives of the Forum Sentencing program as stipulated in the *Criminal Procedure Regulation 2010* (NSW). Other objectives of the program include; to increase

victim participation in and satisfaction with the justice process, increase offender awareness of the consequences of their offending and promote their reintegration into the community and to increase the confidence of the community with the justice process. There is good evidence that victims who participate in RJ programs are satisfied or very satisfied with the process, are generally more satisfied than victims whose matter are dealt with through the normal sentencing process and that these high levels of satisfaction can be sustained months after participation in the RJ process. Shapland and her colleagues (2007), for example, found that 71 per cent of victims involved in three RJ programs were quite satisfied or very satisfied with the criminal justice system's response to the offence compared with just 59 per cent of victims in a court control group. Similarly, Triggs (2005) found that over 85 per cent of victims involved in an RJ conference were satisfied with the process (including the outcome plan agreed upon in the conference), compared with just 65 per cent of victims involved in court matters. This significant difference between the court and RJ groups was still evident when victims were interviewed 12-months after their matter was finalised. There is also good evidence that the general public are very supportive of the principles of RJ. Moore (2012) administered a telephone survey to 2,530 NSW residents and found that over 85 per cent of people surveyed agreed that offenders' sentences should include unpaid work in the community and that victims should be given the opportunity to inform offenders of the harm their crime had caused. A further 74 per cent of her sample agreed that victims should have a say in how offenders make amends for any harms caused.

Determining whether these broader objectives of the NSW Forum Sentencing program are being met was beyond the scope of the current study. People and Trimboli (2007) considered these issues in their evaluation of NSW Community Conferencing for Young Adults Pilot scheme (the predecessor to Forum Sentencing) and, consistent with other RJ studies, found very high levels of satisfaction amongst both victims and offenders involved in the conferences. Since this evaluation, however, the Forum Sentencing program in NSW has undergone significant changes, not only in terms of the number of sites in which it is available but also in terms of the eligibility criteria for entry into the program. As such there is a need for further research to examine whether or not the NSW Forum Sentencing program, in its current form, achieves any other of its stated objectives beyond reducing re-offending. Other research is currently being undertaken (Rossner, Bruce & Meher, in press) which is documenting how this new, expanded NSW Forum Sentencing program operates. This study aims to identify elements that contribute towards positive forum dynamics and to uncover any methods by which the program can be improved.

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## NOTES

- Note that some forums may proceed without a victim or a victim representative in attendance.
- By the end of 2011, the Forum Sentencing program was operating in 11 different sites; these 11 sites serviced 37 Local Courts in NSW.
- In propensity score matching, individuals who receive a treatment (e.g. forum sentencing) are matched with untreated individuals in terms of factors related to treatment allocation and/or the outcome measure (e.g. re-offending).
- No offenders in the Forum Sentencing group were referred from Cessnock, Maitland, Muswellbrook, Singleton, Dungog, Scone, Murrurundi, Kurri Kurri, East Maitland, Port Macquarie, Kempsey, Taree, Wauchope, Foster, Gloucester courts in 2011 so offenders dealt with in these courts were included in the control group.
- Offences which cannot be referred to Forum Sentencing include: Any strictly indictable offences; any offence under section 35, 35A(1), 545AB, 562AB, 91H, 578B, 578C(2A), 60, 93B of the Crimes Act 1900 (NSW); any offence under Division 10 or Division 15 of the Crimes Act 1900 (NSW); any offence under section 10, 11, 11A, 11B, 11C, 12, 15, 16, 17, 18, 18A, 19, 20, 23(1)(b), 23(2)(b), 25, 25A of the Drug Misuse and Trafficking Act 1985 (NSW); any offence under 11B, 11C of the Summary Offences Act 1988 (NSW); any offence under section 25A(1) 25A(2), 25A(3), 25A(3A) of the Road Transport (Driver Licensing) Act 1998 (NSW); any offence under section 21A of the Road Transport (Vehicle Registration) Act 1997 (NSW); any offence under section 9(3), 9(2), 9(1), 9(1A), 15, 16 of the Road Transport (Safety and Traffic Management) Act 1999 (NSW); an offence under section 13 of the Crimes (Domestic and Personal Violence) Act 2007 (NSW); any offence under the Crimes (Domestic and Personal Violence) Act 2007 (NSW) which is domestic violence related (see for example Lawpart 69120, 65020, 70754, 70753); any other domestic violence related offences; any offence under the Firearms Act 1996 (NSW) or any other offence involving a firearm (e.g. robbery with a firearm, discharging a firearm, firing at a dwelling etc.).
- Persons who appeared before the court only for offences with a Lawpart code which does not attract an imprisonment penalty were also excluded from the control group.
- Prior convictions which result in the participant being ineligible for referral include: any prior adult conviction for murder or manslaughter; any prior adult conviction for any of the following offences: Section 26, 27, 28, 29, 30, 31, 33, 61J, 61JA, 61K, 66A, 66B, 86, 96 or 98 of the Crimes Act 1900 (NSW); two or more prior adult convictions for an offence under section 33A, 35(1), 35(3), 37, 38, 39(1), 46, 47, 48, 61I, 61M, 66C, 66EA, 66F, 73, 80A, 87, 110, 195(1)(b), 195(1A)(b), 195(2)(b), 196(1)(b), 196(2)(b), 198, 109, 111, 112, 113 or 249K of the Crimes Act 1900 (NSW); any prior adult convictions for an offence under section 23(1), 24(1), 25(1), 25(1A), 23(1A), 23(2), 24(1A), 24(2), 24(2A), 25(2), 25(2A), 25(2C) 25(2D) or 25A of the Drug Misuse and Trafficking Act 1985 (NSW) (including an offence of conspiring and aiding/abetting of the foresaid offences); any prior adult conviction for an offence under section 93G, 93GA, 93H(2), 93I(2) or 154D of the Crimes Act 1900 (NSW); any prior adult conviction for an offence under section 7, 36, 50, 50A(2), 51(1A), 51(2A), 51A, 51D(2), 51B or 51BB of the Firearms Act 1996 (NSW); any prior juvenile conviction for homicide; any prior juvenile conviction for an offence under section 61J, 61K, 66A, 66B, 80A, 78I of the Crimes Act 1900 (NSW); any prior juvenile conviction for an offence under section 50A(2), 51(1A), 51B(1), 51BB(1), 51D(2) of the Firearms Act 1996 (NSW).
- It should be noted here that, in NSW Court data, the offence date for certain types of breaches (e.g. breach of CSO, breach of bond and breach of suspended sentence) corresponds to the date of the original offence; not the date when the breach occurred. In the current analysis, an offence is only counted as a 'new' offence if the offence date occurs after finalisation of the index court appearance. Breach of justice order offences arising from the index offence would therefore not be counted as a new offending episode. Having said this, exclusion of these breaches was considered appropriate in this instance because these offences are closely related to the penalty imposed for the index offence and significantly more offenders in the treatment group received a bond or suspended sentence for their index offence than offenders in the control group (75.7% v 37.6%).



9. The term 'good behaviour bond' as used here refers to bonds imposed under s9 of the Crimes (Sentencing Procedure) Act 1999 (NSW). Bonds imposed under s12 of the Crimes (Sentencing Procedure) Act 1999 (NSW) are referred to in this bulletin as suspended sentences with or without supervision. Bonds imposed under s10 of the Crimes (Sentencing Procedure) Act 1999 (NSW) are referred to as bonds without a conviction.
10. The following variables were included as controls in the final Cox regression model; age, gender, missing postcode, court appearances in 5 years prior, prior proven property offence, prior proven drug offence, plea and concurrent offences.

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