



# Parole release authority and re-offending

*Efty Stavrou, Suzanne Poynton and Don Weatherburn*

**Aim:** To determine whether recidivism was associated with parole release authority; and to determine whether re-offending was also related to being under supervision or not.

**Method:** Time to first proven re-offence was examined for 1,644 matched offenders who served between 18 and 36 months in custody using Cox proportional hazard regression. Being on-parole was included as a time-varying covariate in the overall model. Estimates of those who re-offended overall and on-parole or off-parole were calculated using Kaplan-Meier estimates as separate outcomes.

**Results:** One in four offenders re-offended whilst on-parole and 20 per cent re-offended after their parole period had expired. Parolees released by the court were significantly more likely to re-offend overall and when offenders were off-parole (when separately examined). Although the overall model showed that offenders were less likely to re-offend when on-parole, this was not statistically significant. No difference was seen in the type of re-offences committed between court-released and SPA parolees.

**Conclusion:** SPA released parolees appear to be less likely to re-offend, particularly once the parole order has expired. This may be due to the selective processes of the SPA in choosing who should be granted parole or because SPA parolees are more motivated to participate in rehabilitation programs whilst in custody.

**Keywords:** re-offending, parole, time-varying covariate

## INTRODUCTION

New South Wales (NSW), Queensland and South Australia have embraced a split system of sentencing in which both courts and the Parole Board play a role in releasing offenders on parole. In NSW, for example, when an offender is sentenced by a court to a term of imprisonment of three years or less, the sentencing court has the option of fixing a non-parole period and specifying the date and conditions of release on parole. At the end of the non-parole period (barring any further offence), the offender is automatically released. When a court imposes a term of imprisonment more than three years, it must also specify a non-parole period but in this case the actual date and conditions of release are determined by the NSW State Parole Authority (SPA). The SPA may release an offender at the end of his or her non-parole period but is not required to do so. In making its decision on the timing and conditions of release, the Board takes into account a range of factors, many of which are not known to the court that imposed the original sentence. One of these

factors is an offender's behaviour while in custody (participation in rehabilitation programs, disciplinary infractions etc.).

Even allowing for characteristic differences between parolees released by the court and Board, there remains two features of this split system of sentencing which suggest that offenders released by a Parole Board may be less likely to re-offend than court-ordered parolees. Within broad limits, offenders whose parole orders are set by a court have little control over the time they spend in custody. Participating in a rehabilitation program will not reduce their non-parole period and failing to participate will not increase it. In addition, quite often due to their comparatively shorter sentences, court-ordered parolees may not have enough time in prison to be considered for program participation. In contrast, Board-ordered parolees can, by showing an intention to rehabilitate themselves (e.g. by engaging in drug treatment or anger management programs while in custody), increase the likelihood of release at the end of their non-parole period. Board-ordered parolees therefore have

a greater opportunity and incentive (viz. avoidance of delayed release on parole) than court-ordered parolees to participate in programs designed to reduce the risk of re-offending. If these programs are effective and/or the inmate is motivated to change their behaviour, one might expect Board-ordered parolees to be less likely to re-offend than court-ordered parolees.

Kuziemko (2012) found evidence supporting this prediction. In 1997, the Georgia (USA) Department of Corrections announced that all inmates convicted after a certain date of specified offenses must serve at least 90 per cent of their sentence in custody. The reform, for those prisoners affected by it (viz. the treatment group), substantially reduced the discretion of the Georgia parole board and thus substantially reduced the incentive to participate in programs while in custody. Kuziemko (2012) observed significant increases in recidivism and disciplinary infractions, along with significant reductions in program participation in the group affected by the parole reforms, but no corresponding changes in a control group of prisoners not affected by the reforms. Summarizing her results she concluded: “inmates who know that they must lower their recidivism risk to gain early release [or avoid delayed release] may behave better (lowering incarceration costs) or take steps to prepare themselves for successful release (lowering recidivism costs)” (Kuziemko, 2012, p. 27).

There is another reason for expecting lower rates of re-offending among Board-ordered parolees. Because they are able to monitor an offender’s behaviour while in custody, often over a period of many years, Parole Boards are in possession of much more information about an offender than is available to the sentencing court. If the Board uses that information to grant earlier release to lower risk offenders, SPA parolees should be at lower risk of re-offending than court-ordered parolees. To test this Kuziemko (2012) took advantage of a mass release of prisoners in Georgia designed to deal with prison overcrowding. At the time of the release, many of those released already had recommended parole release dates. This made it possible for Kuziemko (2012) to examine the relationship between recommended date of release and risk of re-offending while controlling for actual time spent in prison. She found that a one month increase in the Board’s recommended time of release was associated with a 3.6 per cent increase in the three year risk of re-offending. In other words, as expected, offenders who the Parole Board intended to keep in custody longer were more likely to re-offend.

The relative rates of re-offending following court-ordered and Board-ordered parole is only one issue of importance in judging the merits of different parole regimes. There is good evidence that offenders subjected to parole supervision are less likely to re-offend than offenders released without any supervision (Ostermann, 2013; Ostermann & Hyatt, 2014). Little is known, however, about whether the suppression of re-offending is permanent or only lasts while the offender is under supervision. Ostermann (2013) noted that offenders in his study were less likely to re-offend than those released without supervision,

but the difference disappeared when supervision ceased. His study, however, did not address the question of whether there are differences in rates of re-offending between two groups on parole in circumstances where members of one group are automatically released to parole at the end of their non-parole period (on conditions set by the sentencing court) and the other group are released to parole at a point in time and on conditions determined by a Parole Board.

Consideration must also be given to the nature of parole supervision provided. Inmates released by the SPA may have more (stringent) conditions placed on them during their parole period than their court-released counterparts. This may contribute to lower recidivism for more serious offences, but could also result in SPA-released parolees breaching their parole orders more often for minor technical offences. However, in a review of the literature Shute (2004) did not find conclusive evidence that there was a “parole effect” working independently from a “selection effect” in parolees. That is, the parole board were able to make decisions in selecting inmates for release who had lower than expected risk of reconviction, rather than the supervision provided having an effect on recidivism reduction (Shute, 2004).

Two NSW studies to date have examined the issue of recidivism in parolees released by the court versus those released by the Board. Jones et al. (Jones, Hua, Donnelly, McHutchison, & Heggie, 2006) explored patterns of re-offending among 2,793 offenders released to parole in NSW in the 2001-2002 financial year. After controlling for a wide range of factors (including age, gender, Indigenous status, time in custody, offence type, prior convictions, prior custodial penalties and prior drug use), they found that offenders given court-ordered parole were more likely to re-offend than those granted parole by SPA. In a later study, Weatherburn and Ringland (2014) examined re-offending among 9,656 parolees released to parole in NSW in the calendar years 2010 and 2011. The control variables included in the Weatherburn and Ringland (2014) study were fairly similar to those employed by Jones et al. (2006). Even so, Weatherburn and Ringland (2014) found a higher risk of re-offending amongst those released by SPA than amongst those on court-ordered parole, at least whilst under supervision (Weatherburn & Ringland, 2014). It is unclear whether these different results reflect changes over time in patterns of reoffending or unmeasured differences between the two groups being compared.

The current study had three objectives. The first was to improve on past studies comparing Board-ordered and court-ordered parole by measuring relative rates of re-offending among carefully matched samples of offenders released to parole either by a court or by the SPA. The second objective was to see whether rates of re-offending increase following termination of the parole period for court-ordered parolees and/or SPA parolees. A third objective was to compare the types of further offences committed by court-ordered and SPA parolees. The general strategy adopted to explore the first two issues

was to create two matched groups of offenders, one of which was released to parole by a court and the other of which was released to parole by the SPA. We begin by comparing overall rates of re-offending for the two groups (regardless of whether they are under supervision or not) and then examine differences in re-offending between the groups both when they are under supervision and after supervision has ceased.

## METHOD

### DATA SOURCES

Data to conduct this study was obtained from the Offender Integrated Management System maintained by Corrective Services NSW (OIMS) and the NSW Bureau of Crime Statistics and Research Re-offending Database (ROD)(Hua & Fitzgerald, 2006).

Data in ROD contains records of a person's offences (since 1994) and custodial episodes (since 2000) with offence data up to 30 June 2015 included for this study. Date of death as sourced from the NSW Registry of Births, Deaths and Marriages is also available on ROD. OIMS data included details of offenders' custodial episodes, parole commencement and expiry dates and discharge status. OIMS data were linked to ROD records by a unique offender identifier and corresponding custodial commencement and discharge dates. The parole order commencement date was the discharge date for offenders released to parole and the parole order expiry date was the expiry date of the aggregate sentence to which the offender was subject when discharged.

### SAMPLE

The cohort used in this study was restricted to offenders (i) with a custodial release date between 1 January 2009 and 31 December 2012 (ii) who had served a minimum of 18 months and a maximum of three years in custody prior to release and (iii) with a maximum of two prison sentences in the two years prior to the index custodial episode. These inclusion criteria were chosen so as to select enough offenders who were released to parole by both the Court and the SPA, and who would be comparable to each other<sup>1</sup>. Offenders meeting the above criteria who were released to parole either by the court or SPA for a minimum of 30 days was our final cohort of interest (n=2,165). Thirty-seven parolees who were transferred interstate were excluded. The first custodial episode during the observation period was defined as the "index" custodial episode and only the first occurrence of the parole order was included - giving our final cohort of 2,128 offenders.

### OUTCOMES

The outcomes of interest were:

- i) The time to first re-offence occurring during follow-up<sup>2</sup>: this was defined as the time elapsed from the release date of the index custodial episode to the date of the first new

offence proven in court. For the offence to be counted as a new offence it must have occurred after the release date and prior to the earliest of the following dates, at which observations were censored:

- a. Start date of new custodial episode;
- b. The end of the observation period (30 Jun 2015);
- c. Date of death

As the cohort was offenders released to parole, breaches which were criminal offences dealt with by a court were included as a re-offence, as were breaches of justice orders, offences against justice procedures (including breach of parole, non-violence and restraining orders) and offences against government security<sup>3</sup>.

- ii) The type of re-offences committed during follow-up. Note that where more than one re-offence occurred on the same date, the principal re-offence was taken as the outcome event.

### EXPLANATORY VARIABLES

The following explanatory variables which may be related to release authority were examined for this study<sup>4</sup>:

- Gender (male vs female);
- Age (in years at release date);
- Indigenous status (Indigenous vs non-Indigenous);
- Year of release (whether the offender was released to parole in 2009, 2010, 2011 or 2012);
- LSI-R score (based on the assessment closest to release from prison and restricted to assessments between 18 months prior to release and three months post-release. The score was categorised as low, medium-low, medium, medium-high, high);
- Index offence (based on the most serious offence related to the index custodial episode; categorised by ANZSOC (Australian Bureau of Statistics, 2011) groupings as a violent/sexual offence [111-213, 311-329, 511-532 or 611-621], a property/deception offence [711-999], a drug offence [1011-1099], a driving offence [411-412 or 1411-1441] or 'other');
- Prior court appearances (the number of times in the two years prior to the index custodial episode, the offender had appeared in court on criminal charges which were proven);
- Prior prison sentences (the number of court appearances in two years prior to the index custodial episode at which the offender was given a prison sentence);
- Prior serious violent offence (whether the offender had a proven offence under ANZSOC group 111, 121, 131, 211, 212, 311, 312, 511, 521, 611 or 612 in the two years prior to the index custodial episode);
- Prior drug offence (whether the offender had a proven drug use and/or possession offence under ANZSOC group 1041 or 1042 in the two years prior to the index custodial episode);

- Prior breach (whether the offender had a proven breach of a court order under ANZSOC group 1511 or 1532 in the previous two years).

## STATISTICAL ANALYSES

We matched offenders using Propensity Score Matching (PSM). PSM has been favoured over standard multivariate methods as a means of controlling for measurable differences between treatment and comparison groups (Apel & Sweeten, 2010; Rosenbaum & Rubin, 1985).

Initially, parolees released by the SPA were compared with court-based parolees in terms of demographics, index offence and prior offending history. The bivariate relationship between release authority and the key reoffending outcomes (i) any reoffending (ii) reoffending on parole and (iii) reoffending off parole was also examined. A logistic regression model was then used to calculate the propensity score (or probability) of an offender being released by the SPA based on all explanatory variables described above. Each offender had a propensity score calculated which was between zero and one. Pairs of offenders (with one each from those released by the court and those released by the SPA) with similar propensity scores within a calliper of 0.01 were then matched on a 1:1 basis without replacement.

Equivalence between the two matched groups was assessed using Standardised Bias estimates for each variable utilised in the logistic model both before and after matching (Rosenbaum & Rubin, 1985). In addition, t-tests of the average values of each variable for court-released and SPA parolees were conducted to test for statistical significance of the difference between the two groups.

The proportion of court and SPA parolees in the matched groups who re-offended were examined using Kaplan-Meier estimates. Time to re-offending was then examined using Cox Proportional Hazard regression with being on-parole (or not) included as a time-varying covariate. This analysis was undertaken to account for the differing length of parole supervision for the two offender cohorts. As being “on-parole” was a variable which changed as a function of time, the use of a time-varying covariate was thought to be appropriate. The proportional hazard assumption was confirmed through visual inspection of the negative log-log curve for all plots. A  $p$ -value of  $<.05$  was taken as being statistically significant for all models.

Kaplan-Meier estimates and time to re-offence during parole only and after parole expiry were also examined as individual outcome measures. For analyses investigating recidivism under parole supervision, observations were censored at the parole end date, date of death or start date of a new custodial sentence. For post-supervision analyses, this excluded those who re-offended or those who returned to custody without a proven offence during parole and incorporated an observation commencement date as the order expiry date, with the censor

dates being the end of the observation period, date of death or start date of a new custodial sentence.

Finally, the types of re-offences committed throughout the follow-up period were investigated. The top five most common offences and the top 10 most common principal offences were stratified by release authority.

## RESULTS

### DESCRIPTIVE AND BIVARIATE ANALYSES

Of the 2,128 parolees (Table 1), 43.3 per cent had a proven re-offence during follow-up, 12.5 per cent were returned to custody without a proven re-offence, whilst 44.3 per cent neither re-offended nor were re-imprisoned. Half of the cohort was released to parole by the court (49.8%) and by the SPA (50.2%). The majority of the cohort were male (91.8%), non-Indigenous (76.1%) and aged less than 35 years (54.2%). The most common index offences were violent (48.4%), drug possession (21.9%) and property/deception (19.4) and most offenders had between two to five prior court appearances (56.1%). Although the majority had no prior drug offence (66.0%) or a prior breach of a court order (89.3%), there was preponderance for having previously committed a serious violent offence (57.7%). The most common LSI-R risk levels were medium (35.4%), medium-low (22.3%) and medium-high (21.7%).

For court released parolees the median time of their parole was 366 days (IQR 273, 547 days) whilst for SPA parolees the median was 730 days (IQR 549, 792 days). Proportions of overall re-offending were significantly higher for court parolees (48.6%) compared with those released by the SPA (38.0%) (chi-sq  $p < .001$ ) and although the median time to re-offending was shorter for court-released parolees, this was not significant (court 678 days, IQR 220, 1,451; SPA 1,039 days, IQR 342, 1,532).

For release authority, there did not appear to be any difference between court (25.1%) and SPA (25.8%) parolees in reoffending on-parole, but there was a greater proportion of court-ordered parolees (23.5%) who re-offended off-parole compared with SPA parolees (12.2%).

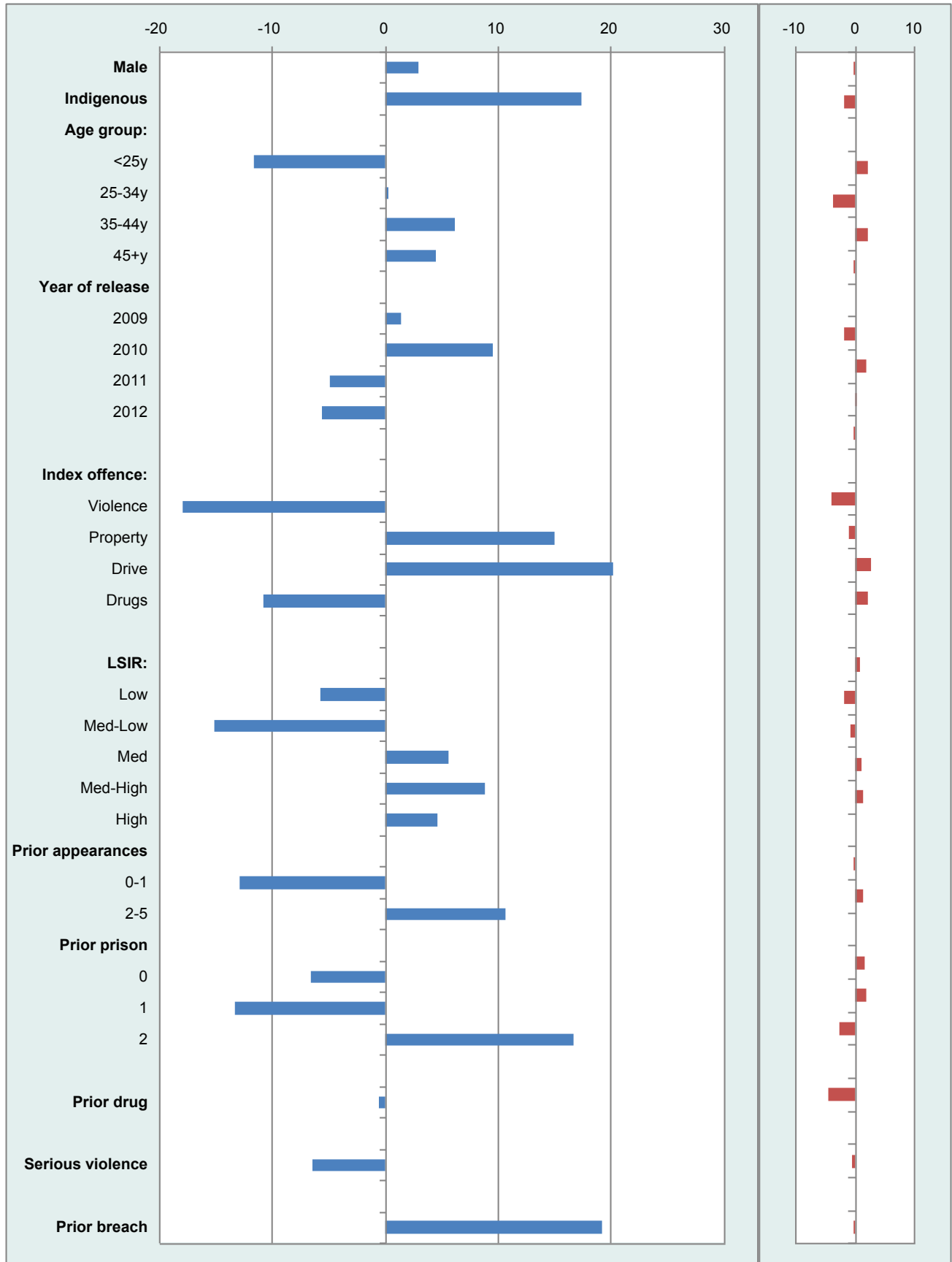
### PROPENSITY SCORE MATCHING

As there was adequate overlap in propensity scores of the court and SPA released parolees (see Appendix Figure A1) pairs from the two groups were matched on a 1:1 basis. Of the 1,060 offenders released by the SPA, 822 (77.0%) were able to be matched with a counterpart released by the court. Differences between SPA and court parolees prior to matching were seen with regard to LSI-R categories, prior offences, gender, Indigenous status, age and year of release (Figure 1). After matching, it could be seen that SB estimates and t-tests of the average difference of the variable values indicated that the matching process was successful and survival estimates between the two groups could be directly compared (see Appendix Table A1 for further details).

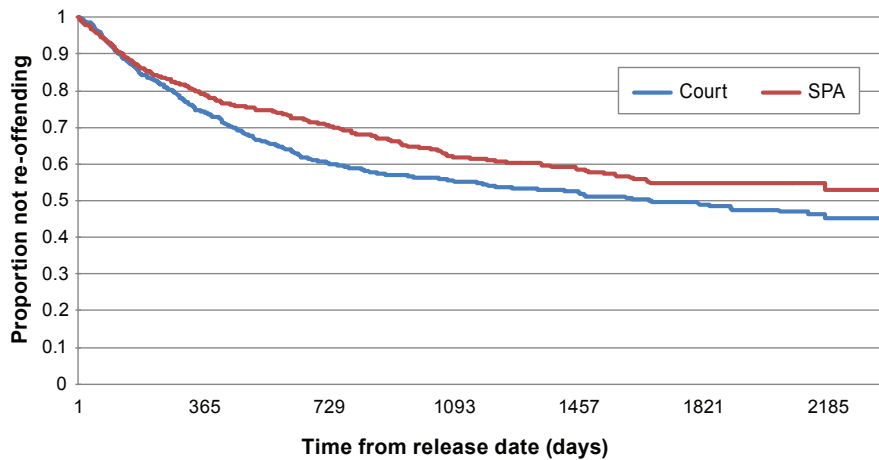
*Table 1. Characteristics of Court-based and SPA released offenders before matching*

Variable	Court N (%)	SPA N (%)	Total N (%)
Total	1,060	1,068	2,128
<b>Gender</b>			
Male	978 (92.3)	976 (91.4)	1,953 (91.8)
Female	82 (7.7)	92 (8.6)	174 (8.2)
<b>Indigenous status</b>			
Non-indigenous	758 (71.5)	862 (80.7)	1,620 (76.1)
Indigenous	302 (28.5)	206 (19.3)	508 (23.9)
<b>Age group (years)</b>			
<25	183 (17.3)	245 (22.9)	428 (20.1)
25-34	362 (34.2)	363 (34.0)	725 (34.1)
35-44	285 (26.9)	252 (23.6)	567 (26.6)
45 and above	230 (21.7)	208 (19.5)	438 (20.6)
<b>Year of release</b>			
2009	235 (22.2)	230 (21.5)	465 (21.8)
2010	289 (27.3)	237 (22.2)	526 (24.7)
2011	282 (26.6)	313 (29.3)	595 (28.0)
2012	254 (24.0)	288 (27.0)	542 (25.5)
<b>Index offence</b>			
Driving	64 (6.0)	10 (0.9)	74 (3.5)
Violence	455 (42.9)	574 (53.8)	1,029 (48.4)
Property	245 (23.1)	168 (15.7)	413 (19.4)
Drugs	203 (19.2)	263 (24.6)	466 (21.9)
Other	93 (8.8)	53 (5.0)	146 (6.9)
<b>LSIR</b>			
Low	76 (7.2)	97 (9.1)	173 (8.1)
Med-Low	196 (18.5)	278 (26.0)	474 (22.3)
Med	393 (37.1)	361 (33.8)	754 (35.4)
Med-High	254 (24.0)	208 (19.5)	462 (21.7)
High	45 (4.2)	33 (3.1)	78 (3.7)
Missing	96 (9.1)	91 (8.5)	187 (8.8)
<b>Prior court appearances</b>			
0,1	395 (37.3)	481 (45.0)	876 (41.2)
2-5	629 (59.3)	565 (52.9)	1,194 (56.1)
6+	36 (3.4)	22 (2.1)	58 (2.7)
<b>Prior prison sentence</b>			
0	37 (3.5)	54 (5.1)	91 (4.3)
1	663 (62.6)	751 (70.3)	1,414 (66.4)
2	360 (34.0)	263 (24.6)	623 (29.3)
<b>Prior drug offence</b>			
No	701 (66.1)	703 (65.8)	1,404 (66.0)
Yes	359 (33.9)	365 (34.2)	724 (34.0)
<b>Prior serious violent offence</b>			
No	470 (44.3)	431 (40.4)	901 (42.3)
Yes	590 (55.7)	637 (59.6)	1,227 (57.7)
<b>Prior breach</b>			
No	906 (85.5)	994 (93.1)	1,900 (89.3)
Yes	154 (14.5)	74 (6.9)	228 (10.7)
<b>Reoffended</b>	515 (48.6)	406 (38.0)	921 (43.3)
<b>Reoffend on-parole</b>	266 (25.1)	276 (25.8)	542 (25.5)
<b>Reoffend off-parole</b>	249 (23.5)	130 (12.2)	379 (17.8)

Figure 1. Percentage point difference of explanatory variables between court released and SPA parolees before (in blue) and after matching (in red)



**Figure 2. After matching: estimated proportion of offenders not reoffending following release, by release authority**



**Table 2. After matching: Estimated proportion of parolees released by the court and SPA who reoffended at 6, 12, 24 and 36 months following release**

	Court order (N=822)	SPA (N=822)
Total reoffending, n (%)	373 (46.4)	319 (38.9)
Estimated 6 month % reoffend (95% CI)	15.7 (13.7, 18.4)	13.9 (11.7, 16.5)
Estimated 12 month % reoffend (95% CI)	25.8 (22.9, 30.0)	21.0 (18.3, 24.0)
Estimated 24 month % reoffend (95% CI)	40.0 (36.5, 43.5)	29.6 (26.5, 33.0)
Estimated 36 month % reoffend (95% CI)	45.0 (41.5, 48.7)	38.1 (34.7, 41.7)

**Table 3. Cox proportional hazard regression for time to re-offending, using on- or off-parole as the time varying covariate**

Variable	Hazard Ratio	95% CI	p-value
Release authority			
Court vs SPA	1.19	1.02, 1.39	.03
On-Parole vs Off-Parole	0.83	0.64, 1.07	.17

**SURVIVAL ANALYSES**

Figure 2 shows the estimated proportion of the matched SPA and court ordered parole groups who did not reoffend during the follow-up period and, similarly, Table 2 displays the estimated proportion of each of these matched groups who did re-offend at various time points post-release. As seen here, 12 months after release the estimated reoffending rate for the court-ordered parole group was 26 per cent compared with 21 per cent for the SPA group. At 36 months after release, 45 per cent of the court group was estimated to have reoffended compared with just 38 per cent of the SPA group. The discrepancy in overall re-offence rates between the two groups after 12 months was significant and this significant difference was maintained throughout the post-release period.

Table 3 presents the results from the Cox Proportional Hazards model comparing the two matched groups after adjusting for whether one was on- or off-parole after release. This table shows that even after taking into account differences across the groups in time under supervision, court released offenders were still 19 per cent more likely to re-offend at any point in time compared with SPA released parolees (Table 3). In addition, although not statistically significant, re-offending when on-parole was less likely than off-parole.

Table 4 (and also Figure 3) compares re-offending during the parole period for court released parolees and their matched SPA counterparts. The hazard ratio for the matched groups was not statistically significant for this comparison, suggesting no difference between court and SPA offenders in the risk of re-offending during the parole period (HR 1.18, 95%CI 0.97, 1.44).

For re-offences committed once parole had ended, a slightly different picture emerged (Figure 4). Here SPA parolees were significantly less likely to re-offend than their court released contemporaries (Table 5) and this difference was seen throughout the post-parole period. After matching, parolees released by the court were over 50 per cent more likely to reoffend at any point once their parole had expired than parolees released by SPA (HR=1.53, 95%CI 1.20, 1.95, p<.001).

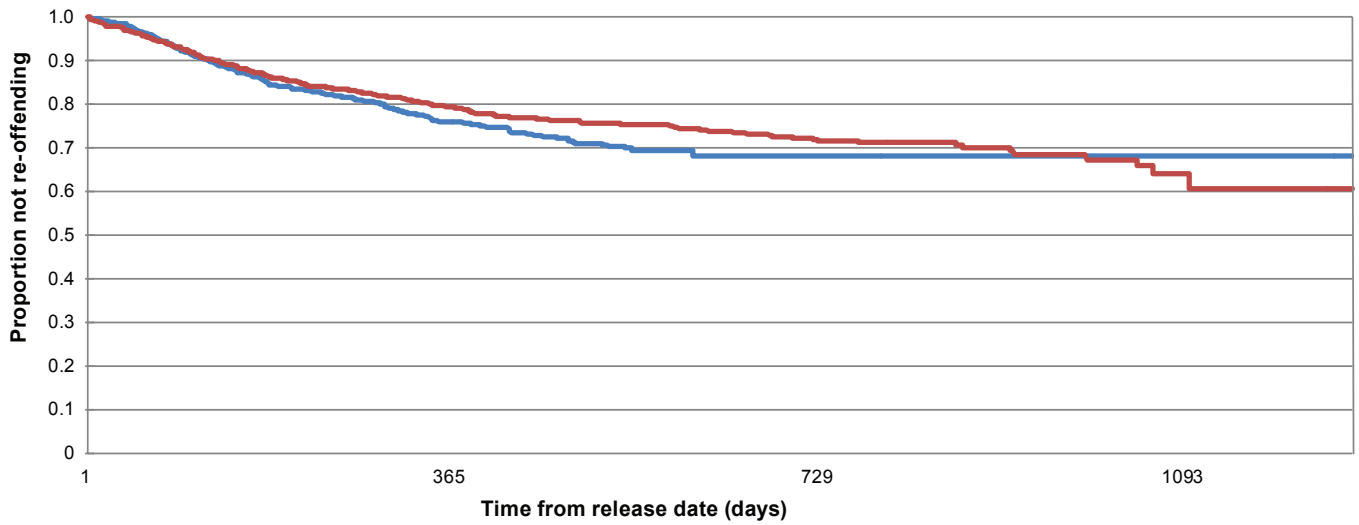
**TYPES OF REOFFENCES**

Table 6 shows the most common first re-offence occurring during the follow-up period for the matched cohort broken down by whether or not the release

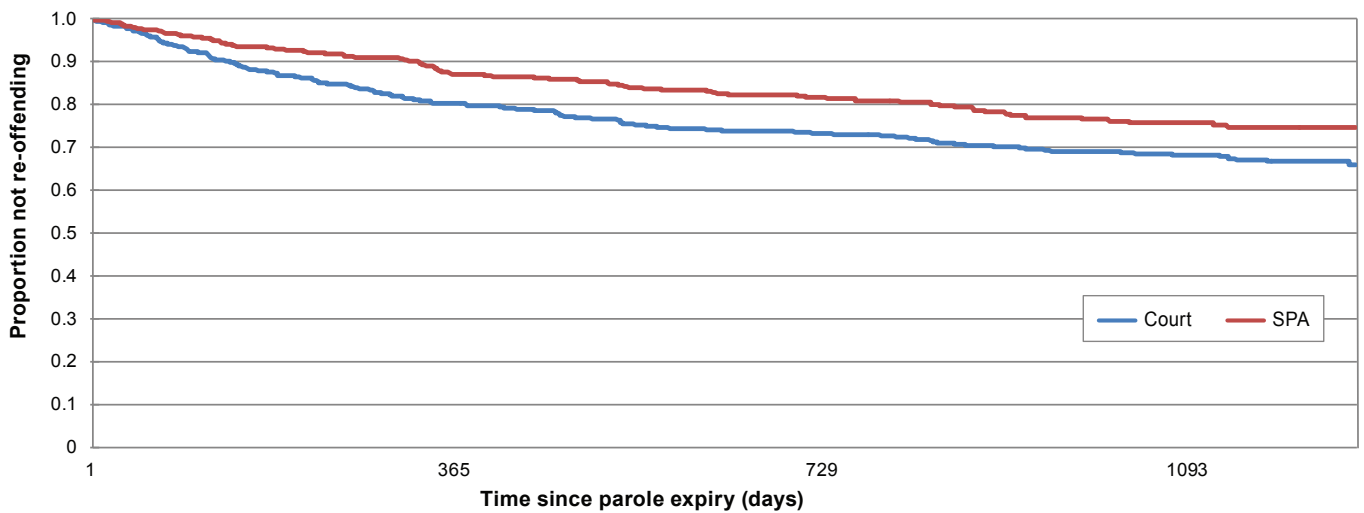
was authorised by the court or SPA. There was little difference between the two groups in type of reoffending, with over 10 per cent of each group having a first proven re-offence of possessing illicit drugs. Serious assault resulting in injury, exceeding the prescribed content of alcohol (drink-driving), driving whilst disqualified or suspended and common assault were the next most common offences for each group, but appeared in different orders.

When all re-offences were examined (Table 7), the most common offences became serious assault and receiving or handling the proceeds of crime for SPA offenders and possessing illicit drugs and common assault for offenders released by the court.

**Figure 3. After matching: estimated proportion of offenders who do not reoffend whilst on parole, by release authority**



**Figure 4. After matching: estimated proportion of offenders who do not reoffend whilst off-parole (since parole expiry), by release authority**



**Table 4. After matching: Estimated proportion of parolees released by the court and SPA who reoffended when on parole at 6, 12 and 24 months**

	Court order (N=822)		SPA (N=822)	
Total reoffending, n (%)	196	(23.8)	218	(26.5)
Estimated 6 month % reoffend (95% CI)	15.6	(13.2, 18.3)	13.9	(11.7, 16.5)
Estimated 12 month % reoffend (95% CI)	24.0	(21.1, 27.4)	20.9	(18.2, 24.0)
Estimated 24 month % reoffend (95% CI)	31.9	(27.4, 36.8)	28.7	(25.5, 32.2)
Hazard ratio	1.18 (0.97, 1.44)		1.00	
	p=.10			



**Table 5. After matching: Estimated proportion of parolees released by the court and SPA who reoffended when off parole at 6, 12, 24 and 36 months**

	Court order (N=822)		SPA (N=822)	
Total reoffending, n (%)	177	(32.1)	101	(19.9)
Estimated 6 month % reoffend (95% CI)	13.2	(10.7, 6.3)	6.8	(4.9, 9.4)
Estimated 12 month % reoffend (95% CI)	20.0	(16.9, 23.7)	12.9	(10.2, 16.2)
Estimated 24 month % reoffend (95% CI)	26.9	(23.3, 30.9)	18.4	(15.1, 22.4)
Estimated 36 month % reoffend (95% CI)	31.8	(27.9, 36.1)	24.7	(20.6, 29.6)
Hazard ratio	1.53 (1.20, 1.95) p<.001		1.00	

**Table 6. Top 10 most common first re-offence by release authority**

Court	%	SPA	%
Possess illicit drugs	10.7	Possess illicit drugs	10.3
Serious assault resulting in injury	8.8	Serious assault resulting in injury	7.5
Exceed the prescribed content of alcohol or other substance	7.8	Exceed the prescribed content of alcohol or other substance	7.5
Common assault	6.7	Drive while licence disqualified or suspended	6.3
Drive while licence disqualified or suspended	5.1	Common assault	5.2
Unlawful entry with intent/burglary, break & enter	4.6	Receive or handle proceeds of crime	4.4
Drive without a licence	4.3	Property damage	4.4
Receive or handle proceeds of crime	4.0	Drive without a licence	3.8
Theft, except motor vehicles, not else classified	3.2	Unlawful entry with intent/burglary, break & enter	3.1
Property damage	3.2	Breach of bond, probation	3.1

**Table 7. Top 5 most common re-offences by release authority**

Court	%	SPA	%
Possess illicit drug	11.5	Serious assault resulting in injury	12.8
Common assault	11.4	Receiving or handling proceeds of crime	6.3
Exceed the prescribed content of alcohol or other substance limit	7.9	Exceed the prescribed content of alcohol or other substance limit	6.1
Breach of bond – probation	7.9	Common assault	5.8
Serious assault resulting in injury	5.9	Drive while licence disqualified or suspended	5.4

## DISCUSSION

The current study had three objectives. The first was to compare the relative rates of re-offending for matched samples of offenders released to parole by a court and by the State Parole Authority (SPA). The second objective was to see whether rates of re-offending increase following termination of the parole period for court-ordered parolees and/or SPA parolees. The third was to compare the types of further offences committed by court-ordered and SPA parolees.

In relation to the first objective, our results clearly indicate that, overall, SPA parolees who served between 18 months and three years in custody are less likely to re-offend than matched court-ordered parolees. Importantly, this effect holds up after

adjusting for differences between the two groups in time spent on-parole. At the 36-month mark, for example, 38.1 per cent of the SPA parolees had re-offended compared with 45.0 per cent of the court-based parolees. The results obtained when examining rates of re-offending on- and off-parole were rather more surprising. When both groups were on-parole (i.e. under supervision) there was no significant difference between them in terms of re-offending. Once parole supervision ceased, however, SPA parolees were found to have significantly lower rates of re-offending. At the 36-month mark, 24.7 per cent of the SPA parolees had re-offended compared with 31.8 per cent of court parolees. There was little difference between the two groups in types of re-offending.

Our findings concerning relative rates of re-offending among SPA parolees and court-ordered parolees are consistent with those of Jones et al. (2006) and Kuziemko (2012) but not with Weatherburn and Ringland (2014). The explanation for the difference may lie in the fact that our cohort was selected to maximise the possibility of obtaining matched pairs of offenders one of whom was released to parole by a court and one of whom was released to parole by SPA. To achieve this we focussed on offenders who served a custodial period of 18 to 36 months. In Weatherburn and Ringland's (2014) study, nearly 70 per cent of the cohort examined had custodial episodes of a year or less and 80 per cent were released to parole by the court. It is also worth noting that the current study controlled for time under supervision (by treating the variable indicating whether an offender was on-parole as a time-varying covariate) whereas Weatherburn and Ringland's (2014) did not.

Our findings concerning supervision are also consistent with past research (Ellis & Marshall, 2000; Kuziemko, 2012; Ostermann, 2013, 2015; Ostermann & Hyatt, 2014; Wan, Poynton, van Doorn, & Weatherburn, 2014). Unfortunately, we cannot say whether the differences in re-offending rates between SPA and court-ordered parolees arise because SPA is better equipped to gauge risk of re-offending than a sentencing court, that SPA-released parolees are subject to more stringent parole conditions or because offenders whose release date is determined by SPA make more of an effort to engage in rehabilitation programs (or is a combination of all factors). The level of supervision required to be administered under parole is determined by the LSI-R risk score calculated as close as possible to the parole release date. Given the LSI-R was appropriately balanced between court- and SPA-released parolees after matching, it therefore may be interpreted that the supervision intensity between the two groups was similar. However, SPA-released parolees have stricter conditions placed upon them whilst under parole, which may impact on their recidivism rate differently to court-based parolees. The fact that there is no difference in rates of re-offending between those on court-ordered parole and those on SPA parole when both are under parole supervision suggests that parole conditions do not affect recidivism but it does not help resolve the other two issues. It may be that the in-prison experiences of SPA parolees may have contributed to a permanent change in their risk of re-offending but that this fact is obscured when both groups are under supervision. But it may equally be that SPA's ability to pick "winners" (i.e. lower risk offenders) does not become apparent until supervision ceases.

Our study was limited to offenders who served a minimum of 18 months and a maximum of 36 months in prison and had a maximum of two prior prison sentences, in order to allow for a carefully matched direct comparison of court- and Board-ordered parolees. Because of these restrictions, the conclusions drawn from this analysis may not necessarily generalise to all offenders released to parole in the timeframe of interest. Nevertheless, future research should aim to pin down the mechanism that accounts for lower rates of re-offending among SPA parolees than among court-ordered parolees. This is not likely to prove

easy because, absent experiment, it is difficult to tell whether (a) the Parole Board is better at gauging risk than a sentencing court or (b) the prospect of parole refusal (by a Parole Board) motivates offenders to participate in rehabilitation programs, which then have the effect of lowering their risk of re-offending. Kuziemko's (2012) research suggests that (b) plays some role in the process, at least in the United States. It would be interesting to see, therefore, whether rates of participation in rehabilitation programs are higher among offenders falling under the jurisdiction of the Parole Board than among offenders whose release date and conditions have been determined by a court. It would also be interesting to compare judicial and Parole Board views about risk of re-offending among a sample of cases where the outcome is already known.

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## NOTES

- 1 By limiting the cohort to the above restrictions so that adequate matching between court- and Board-ordered parolees could be undertaken, we acknowledge that the groups may not have been a true reflection of all offenders sentenced by the court and the Board in that timeframe. This may have been especially relevant to court-ordered offenders who typically receive shorter sentences, are younger and have lower LSI-R scores compared with Board-ordered parolees.
- 2 Sensitivity analysis was undertaken with time to re-imprisonment for more than one day included in the outcome of interest and where the start date of the new custodial episode occurred prior to a new proven offence (ie essentially re-imprisonment for an offender breaching parole orders). The earliest date of either proven re-offence or re-imprisonment was taken as the first new offence. No difference in the results was seen with the inclusion of return to custody in the outcome; with court-released parolees significantly more likely to reoffend than SPA offenders (HR 2.06, 95%CI 1.79, 2.37). As 95% of the returns to custody without a previous offence occurred during parole, the on-parole time-varying covariate was also significant in this model. The hazard ratios from the separate analyses of on- and off-parole were similar to those presented in the paper: On-parole re-offence risk Court vs SPA 1.18 (95%CI 0.99, 1.39); Off-parole re-offence risk Court vs SPA 1.51 (95%CI 1.20, 1.90).
- 3 Sensitivity analyses were also undertaken with time to first offence proven in court - excluding breaches of justice orders, procedures and government security as the dependent variable. No significant changes were noted in the parameter estimates for all statistical models.

4 Other variables which were of interest but were unavailable to us were socio-economic disadvantage and remoteness of residence.

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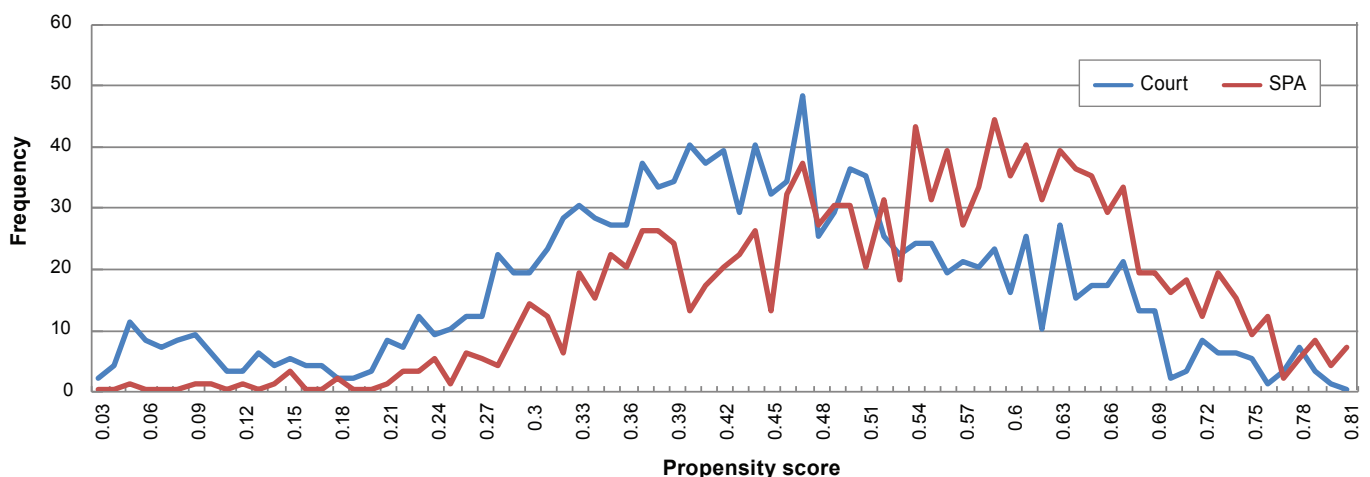
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APPENDIX

Figure A1. Propensity score distribution prior to matching, by release authority



**Table A1. Standardised bias and t-test comparisons of variables in court-released and SPA parolees before and after matching**

Variable	Before Matching				After Matching			
	Court mean	SPA mean	t-test <0.05	SB	Court mean	SPA mean	t-test <0.05	SB
<b>Male</b>	0.923	0.913	NS	3	0.92	0.921	NS	0
<b>Indigenous</b>	0.285	0.193	*	17	0.221	0.23	NS	-2
<b>Age group (years)</b>								
<25y	0.173	0.229	*	-12	0.186	0.176	NS	2
25-34y	0.342	0.34	NS	0	0.321	0.342	NS	-4
35-44y	0.269	0.236	NS	6	0.266	0.254	NS	2
45+y	0.217	0.195	NS	4	0.226	0.228	NS	0
<b>Year of release</b>								
2009	0.222	0.215	NS	1	0.221	0.231	NS	-2
2010	0.273	0.222	*	10	0.27	0.26	NS	2
2011	0.266	0.293	NS	-5	0.268	0.266	NS	0
2012	0.24	0.27	NS	-6	0.241	0.242	NS	0
<b>Index offence</b>								
Violence	0.429	0.538	*	-18	0.483	0.507	NS	-4
Property	0.231	0.157	*	15	0.193	0.198	NS	-1
Drive	0.06	0.01	NS	20	0.016	0.012	NS	3
Drugs	0.192	0.246	*	-11	0.229	0.218	NS	2
<b>LSIR</b>								
Low	0.072	0.091	NS	-6	0.085	0.082	NS	1
Med-Low	0.185	0.26	*	-15	0.214	0.224	NS	-2
Med	0.371	0.338	NS	6	0.345	0.35	NS	-1
Med-High	0.24	0.195	*	9	0.225	0.219	NS	1
High	0.042	0.031	NS	5	0.039	0.036	NS	1
<b>Prior court</b>								
0-1	0.373	0.45	*	-13	0.426	0.428	NS	0
2-5	0.593	0.529	*	11	0.554	0.546	NS	1
<b>Prior prison</b>								
0	0.035	0.051	NS	-7	0.039	0.035	NS	2
1	0.626	0.703	*	-13	0.489	0.478	NS	2
2	0.34	0.246	*	17	0.272	0.287	NS	-3
<b>Prior drug</b>	0.339	0.342	NS	-1	0.324	0.35	NS	-5
<b>Serious violent</b>	0.557	0.596	NS	-6	0.575	0.578	NS	0
<b>Prior breach</b>	0.145	0.069	*	19	0.088	0.089	NS	0