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The impact of short custodial sentences, community orders and suspended sentence orders on reoffending

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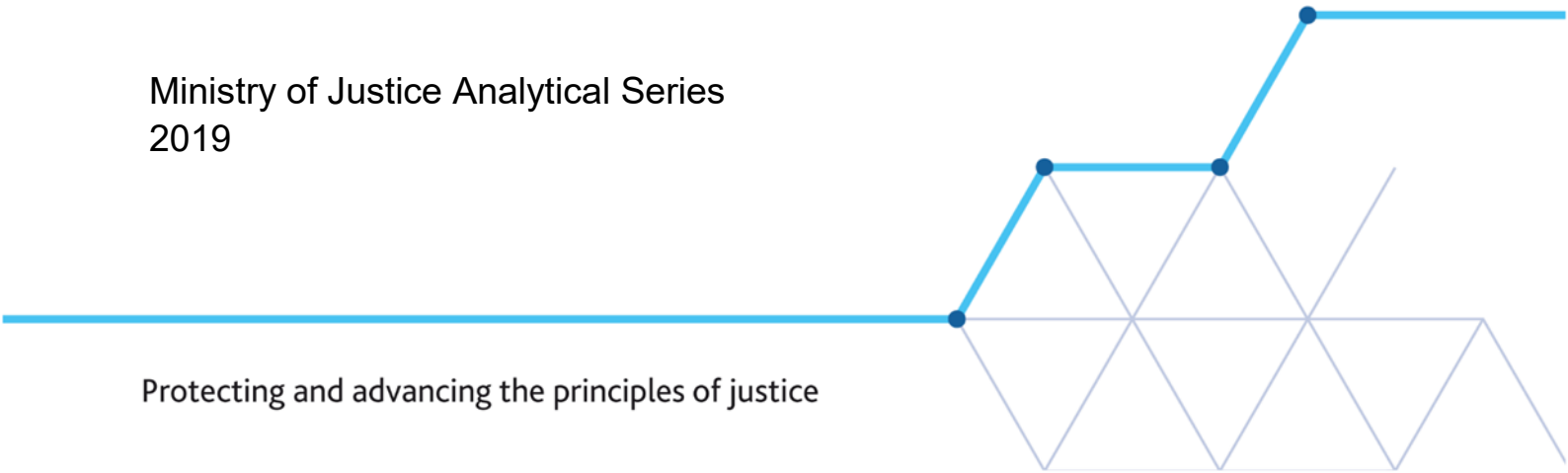

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1. Summary

Custodial sentences of under 12 months without supervision on release are associated with higher levels of reoffending than sentences served in the community via 'court orders' (community orders and suspended sentence orders) as shown by Mews et al. (2015). Following changes brought about by the Offender Rehabilitation Act (2014) which included extension of statutory rehabilitation (supervision) to short-sentenced offenders released from prison, this report examines the reoffending impact of short custodial sentences with supervision on release for the 2016 cohort of adult offenders in England and Wales. It also provides updated analysis on the reoffending impact of suspended sentence orders as compared with community orders.

Key findings

This study found that sentencing offenders to short term custody with supervision on release was associated with higher proven reoffending than if they had instead received community orders and/or suspended sentence orders. In particular:

- The one year reoffending rate following short term custodial sentences of less than 12 months was higher than if a court order had instead been given (by 4 percentage points), with this impact being similar regardless of whether the court order was a community order or a suspended sentence order.
- The one year average number of reoffences per sentencing occasion[1] was also higher following short term custodial sentences of less than 12 months than if a court order had instead been given (by around 65 reoffences more per 100 sentencing occasions).
- Additional analysis showed that the one year reoffending impact of short term custodial sentences compared to if community orders had instead been given was of similar magnitude (around 4 percentage points) regardless of whether the short term custodial sentence length was less than 3, 6 or 12 months.

These impacts were generally similar to those found by Mews et al. (2015) when comparing short term custody without supervision on release with matched court orders between 2008 and 2011. However, due to a change in data source used to compile the proven reoffending statistics in October 2015 there is potential variability between the latest results and previous results and caution should therefore be taken when making any comparisons between them.

[1] The average is per sentencing occasion rather than per offender as some offenders are sentenced more than once within the study period.

Due to the other changes taking place, this analysis doesn't enable the impact of extending statutory supervision to short custodial sentences to be isolated and therefore draws no conclusions about its effectiveness.

The above reoffending impacts are based on estimates of what would happen if instead of receiving short term custodial sentences, the offenders had received community orders and/or suspended sentence orders. Because offenders receiving short term custody have much greater criminal histories on average than those receiving court orders[2], the matched groups comprised community order and suspended sentence order offenders with a higher than average number of previous offences so that they were similar to those offenders receiving short term custody.

Estimates were also made of the reoffending impact of suspended sentence orders based on the suspended sentence order population, which showed a statistically significant 4 percentage point reduction in one year reoffending as compared to if community orders had instead been given. In this analysis, the matched group of offenders receiving community orders will have been different to that used when comparing to the short term custody population because the average criminal history of offenders receiving suspended sentence orders was lower than for those receiving short term custody. Additional analysis has also indicated that community orders are relatively more beneficial in reducing reoffending compared to short term custody and suspended sentence orders as the number of previous offences increases. Taken together this explains why a statistically significant difference in reoffending rates is observed between suspended sentence orders and community orders even though when both are compared against short term custody the differences appear similar.

Although this study used over 150 matching variables with the matching process creating well-balanced and representative groups, it is not possible to discount completely the influence of any unmeasured factors that may both impact on the likelihood of reoffending and have influenced Judges' sentencing decisions. The results of this analysis should not therefore be regarded as definitive.

[2] In the cohorts used for this study, the average offender receiving short term custody had around 65 previous offences, whereas the average offender receiving a community order had 33 previous offences and one receiving a suspended sentence order had 37 previous offences.

Care should also be taken in generalising these results. Linking to the fully completed Offender Assessment System[3] records led to discarding more than 80 per cent of the data, so the main findings are for small subsets of the total populations that seemed to have had more entrenched problems. In addition, for each comparison one type of sentence represents the 'treatment' group and another type of sentence the 'comparison' group. The analysis estimates what would have happened if the 'treatment' sentences had instead been 'comparison' sentences. As such, the reoffending impact estimates relate to the characteristics of the 'treatment' sentence population rather than the 'comparison' sentence population.

[3] OASys is a risk assessment and management system used by the prison and probation services of England and Wales. It includes information on the characteristics of offenders, such as motivations to change, drug and alcohol usage, and multiple needs.

2. Background

Matching adult offenders given 'short' custodial sentences (under 12 months) without supervision on release with those given court orders suggests that short-term custody is associated with higher levels of reoffending (Mews et al., 2015). Over a one year follow-up period, a higher proportion of offenders released between 2008 and 2011 reoffended having been sentenced to under 12 months custody than other, similar offenders given a community order (around 3 percentage points higher) or a suspended sentence order (around 7 percentage points higher). In addition, short term custody was associated with up to 1 more reoffence per sentencing occasion[4] on average than both community and suspended sentence orders.

This report examines the reoffending impact of short custodial sentences with supervision on release as compared to what would have happened if non-custodial sentences had instead been given for the 2016 cohort of adult offenders in England and Wales. It is particularly relevant to update this analysis because in 2015 various reforms were implemented regarding the management of offenders with the aim of reducing reoffending. This included the privatisation of the management of low and medium risk offenders, and extension of statutory rehabilitation (supervision) to short-sentenced offenders released from prison – for more details see Guide to proven reoffending statistics (Ministry of Justice, 2019). However, due to a change in data source used to compile the proven reoffending statistics in October 2015 there is potential variability between the latest results and previous results and caution should therefore be taken when making any comparisons between them. Due to the other changes taking place, this analysis doesn't enable the impact of extending statutory supervision to short custodial sentences to be isolated.

In this study the reoffending impact of short custodial sentences with supervision on release relative to community orders is also assessed separately for varying lengths of the short custodial sentence (from less than 3 months to less than 12 months).

This report also provides updated analysis on the reoffending impact of suspended sentence orders as compared to what would have happened if community orders had instead been given. Matching adult offenders given suspended sentence orders with those given community orders for the 2008 to 2011 cohorts suggested that suspended sentence orders were associated with a lower one year rate of reoffending of around 4 percentage points compared with similar cases where community orders were given (Hillier et al., 2018).

[4] The average number of reoffences per sentencing occasion for short term custody was 0.74 versus matched court orders, 0.65 versus matched community orders, and 0.96 versus matched suspended sentence orders.

3. Methodology

As with Mews et al. (2015) and Hillier et al. (2018), Propensity Score Matching (PSM) was used as the method of creating matched sentencing occasion groups for each sentencing comparison. For each comparison, one type of sentence represents the 'treatment' group and another type of sentence the 'comparison' group. As the chosen propensity score matching process essentially involves each 'treatment' group observation being matched up to a weighted average of 'comparison' group observations that is sufficiently close (in terms of offender characteristics), the reoffending impact estimate represents what would have happened if the 'treatment' population had instead been given the 'comparison' sentence type rather than the other way around.

The PSM approach involves calculating the conditional probability of receiving the 'treatment' sentence (a propensity score between 0 and 1) using factors associated with both the likelihood of the offender being given this sentence and the probability that the offender will reoffend. Those given the 'treatment' sentence are matched to those receiving the 'comparison' sentence on the basis of these propensity scores. There are numerous algorithms for doing this matching with this analysis taking the Epanechnikov Kernel approach[5] that was used by for Mews et al. (2015) and Hillier et al. (2018). The difference between the mean reoffending rates of the matched 'treatment' and 'comparison' groups then represents the average 'treatment' effect for those who received the 'treatment' sentence.

The PSM approach assumes a level of variation in sentencing decisions. This assumption imposes its own limitations to how PSM should be used, since similar cases should be given different sentences only where sentencing decisions are marginal. In effect, for every case given a short custodial sentence, we need to find one or more similar cases where a non-custodial sentence was given. In practice, this was possible for almost all cases. Following cases being matched, the PSM approach assumes that the choice is, in effect, random – i.e. all non-random variation is controlled. However, as unmeasured factors may reflect some aspect of the Judge's view that also impacts on the likelihood of reoffending, the conclusions of such analyses cannot be regarded as definitive.

[5] This involved each treatment observation being matched to as many comparison observations as possible (within a bandwidth of 0.03) with the latter being weighted according to the proximity of their (logit of) propensity scores to those of the treatment observations (the closer the propensity scores the higher the weighting).

The datasets used in the analysis contain details of adult (18 and over) offenders either released from a custodial sentence of under 12 months in 2016 or commencing a court order in 2016, a sample size of around 173,000 records. Following linking of the police, prison and probation datasets to fully completed Offender Assessment System (OASys) records[6,7], around 31,000 sentencing occasion level records remained for analysis – see Table 3.1. The attrition rate varied from 80 per cent to 84 per cent depending on the type of sentence, and was much higher than the 55 per cent overall for the 2008 to 2011 data used by Mews et al. (2015). The greater attrition rate is at least partly the result of a change in policy that allowed staff to produce shorter versions of the OASys assessment for lower risk cases in custody that do not feature many of the OASys questions used for this analysis. These same shorter assessments have also been used in the Community Rehabilitation Companies for some cases subject to Community and Suspended Sentence Orders.

Table 3.1: Attrition through data linking process

Stage	Dataset	N
1. Reoffending data	Community orders	84,423
	Prison (<12 months)	35,147
	Suspended sentence orders	53,692
	Total	173,262
2. Linked to fully completed OASys record	Community orders	13,655
	Prison (<12 months)	7,114
	Suspended sentence orders	10,347
	Total records used	**31,116**

Mews et al. (2015) showed that the impact estimates differed according to whether OASys variables were used in the propensity score matching process. It also showed that those with complete OASys assessments seemed to have had more entrenched problems so the results when only using records with complete OASys assessments should not be considered representative of all sentencing occasions. To understand whether the impact estimates differ according to whether OASys variables are used in the propensity score matching process for the 2016 cohort, this report also shows the results when linking to

6 OASys is a risk assessment and management system used by the prison and probation services of England and Wales. It includes information on the characteristics of offenders, such as motivations to change, drug and alcohol usage, and multiple needs. OASys reports completed up to 30 days before / after the sentencing date were used. Where two or more complete OASys reports were available for a single case, preference was given to the one closest to the sentencing date.

7 Although there was no linkage to DWP and HMRC employment and benefit data, rerunning previous sentencing comparisons shown in Mews et al. (2015) suggested that these had little effect on the impact estimates.

complete OASys assessments but not including the OASys variables in the propensity score model. To get an idea of how the impact estimates change when narrowing the population to those records with complete OASys assessments, this report also shows the results when including all records regardless of whether they could be linked to a complete OASys assessment.

To enable the analysis to take suitable account of repeat offenders[8], the data comprise sentencing occasions rather than offenders. The downside of this approach is that there is a cluster effect present in the data, which could lead to downwards bias in the standard errors calculated for the PSM and in significance testing of the impacts. This could in turn lead to results being found to be statistically significant which are actually not so. However, taking a more complex approach to adjust for this clustering was considered unnecessary due to the low number (1.2) of sentencing occasions per offender, which should result in any bias being of a low magnitude.

Over 150 variables were used by the PSM to generate datasets of similar offenders (sentencing occasions) given short-term custody, community orders and/or suspended sentence orders, as listed in Appendix A. The variables contained demographic information, offending history and OASys assessment knowledge and were similar to those used by Mews et al. (2015) and Hillier et al. (2018).

Once the PSM had been run, the quality of the matching was assessed. Only three (0.3 per cent) of the standardised (mean) differences[9] for the (with OASys) comparisons were above 5[10] with the highest of these being 5.8. Very low numbers of the treatment groups were lost in the matching (less than 1.2 per cent in all comparisons) as shown by Table B1. This suggests that the matching process created well-balanced and representative groups.

For each comparison, reoffending was examined over a one-year follow-up period, with a further six months allowed for cases to go through the courts (for further information see

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8 Many of whom are considered prolific offenders, with these accounting for 43% of all convictions in 2016 (see Ministry of Justice 2018)

9 The standardised (mean) difference is calculated by first obtaining the difference between the means of the treatment and comparison groups and then dividing this by the square root of the average variance in the treatment and comparison groups.

As the propensity score matching algorithm used for this analysis involved a treatment observation being matched to more than one comparison observation, the means and standard deviations were weighted.

10 A guide for interpreting standardised differences is as follows:
- those <=5% = groups are closely matched on that particular offender or offence characteristic.
- those of 5–10% = a reasonable match quality.
- those >10% = a poor quality of matching which could alter the interpretation of the final result.

Guide to proven reoffending statistics; Ministry of Justice, 2019). Cautions and convictions constituted reoffending. The follow-up period for reoffending starts from sentencing date for community and suspended sentences and from prison release date for the custodial sentences, thereby taking into account time spent in the community. The two outcome variables used to measure reoffending were the one year proven reoffending rate (a binary yes / no measure) and the (mean) number of proven reoffences per sentencing occasion[11].

Proven reoffending has limitations as an outcome measure. First, it is a narrow measure, meaning it does not necessarily reflect other outcomes that may be associated with successful sentencing (e.g. entry into employment or education, desistance from problem drug use, improved relationships with peers and family, acquiring permanent housing). Second, proven reoffending is a subset of all reoffending behaviour, which may not be detected, sanctioned and recorded. Third, the measure does not of itself reflect the scale of the offence or the damage caused to victims, so certain reoffences may be more serious than others. Fourth, while the measure is appropriate for looking at *reoffending*, care should be taken if attempting to extrapolate out to wider crime impacts, as the approach may understate potential incarceration effects of custodial sentences (see limitation 3 below).

Care has been taken to produce accurate and robust analyses. However, there are some known limitations with the approach followed that should be understood when considering findings.

1. As noted above, while closely matched comparison groups were formed using a large number of variables, it is not possible to discount completely the influence of an unmeasured factor that has not been controlled for.
2. As noted above, the impact measure (proven reoffending) is a fairly blunt instrument.
3. As noted above, the follow-up period for reoffending starts from sentencing for community and suspended sentences and from prison release for the custodial sentences. Comparisons of custodial sentences with community sentences are therefore ‘like for like’ in that the follow-up period for both is of the same length and takes place while the offenders are in the community. However, this obscures that for custodial sentences, the follow-up period begins after time spent in custody during which the offender has much reduced risk of reoffending.
4. There is a potential for geographical bias. Geographical information was not included in the matching process due to good quality data only being available for the

[11] The average is per sentencing occasion rather than per offender as some offenders are sentenced more than once within the study period.

offenders' most recent address on the conviction date. It is therefore possible that the results could be skewed if for example an area with a relatively large offender population has substantially different outcomes than others.

5. The data linking and propensity score matching process led to attrition, so the groups examined in the analyses are subsets of their total populations. Therefore, care should be taken in generalising results. This issue is investigated further in the results section below.
6. This study focused on adult offenders, and results should not be assumed to be consistent for juveniles (e.g. those on Youth Rehabilitation Orders). For the latest results for juveniles, see Impact of sentencing on proven reoffending for young offenders in England and Wales, 2012 to 2014 (Ministry of Justice, 2019).

4. Results

This study found short term custody with supervision on release in 2016 was associated with a statistically significant[12] increase in proven reoffending compared to if community orders and/or suspended sentence orders had instead been given – see the main results in Table B1).

- The one year reoffending rate following short term custodial sentences of less than 12 months was higher than if a court order had instead been given (by 4 percentage points), with this impact being similar regardless of whether the court order was a community order or a suspended sentence order.
- The one year average number of reoffences per sentencing occasion[13] was also higher following short term custodial sentences of less than 12 months than if a court order had instead been given (by around 65 reoffences more per 100 sentencing occasions).

These impacts were generally similar to those found by Mews et al. (2015) when comparing short term custody without supervision on release with matched court orders between 2008 and 2011 (around 4 percentage points), matched community orders (around 3 percentage points), and matched suspended sentence orders (although higher at around 7 percentage points). However, as described in the background section of this report, various reforms were implemented regarding the management of offenders in 2015 with the aim of reducing reoffending. These included the extension of statutory rehabilitation (supervision) to short-sentenced offenders released from prison. In addition, there was a change in data source used to compile the proven reoffending statistics in October 2015. This analysis doesn't therefore enable the impact of extending statutory supervision to short custodial sentences to be isolated and therefore draws no conclusions about its effectiveness.

The one year reoffending comparisons of short term custodial sentences and matched community orders were similar regardless of whether the short term custodial sentence length was less than 3, 6 or 12 months. (The one year reoffending rate was around 4 percentage points higher and the one year average number of reoffences was around 65 reoffences higher per 100 sentencing occasions. All these changes were statistically significant[14].)

[12] At the 1% significance level.

[13] The average is per sentencing occasion rather than per offender as some offenders are sentenced more than once within the study period.

[14] At the 1% significance level.

The above reoffending impacts are based on estimates of what would happen if instead of receiving short term custodial sentences, the offenders had received community orders and/or suspended sentence orders. Because offenders receiving short term custody have much greater criminal histories on average than those receiving court orders[15], the matched groups comprised community order and suspended sentence order offenders with a higher than average number of previous offences so that they were similar to those offenders receiving short term custody.

Estimates were also made of the reoffending impact of suspended sentence orders as compared to community orders based on the suspended sentence order population. Previous research by Hillier et al. (2018) found that suspended sentence orders were associated with a statistically significant reduction[16] in reoffending compared to if community orders had instead been given. Similarly, in the current study, the proven reoffending rate was around 4 percentage points lower over a one-year follow-up period while the one year average number of reoffences was lower by around 25 reoffences per 100 sentencing occasions. For this comparison, the matched group of offenders receiving community orders will have been different to that used when comparing to the short term custody population because the average criminal history of offenders receiving suspended sentence orders was lower than for those receiving short term custody. Additional analysis has also indicated that community orders are relatively more beneficial in reducing reoffending compared to short term custody and suspended sentence orders as the number of previous offences increases[17]. Taken together this explains why a statistically significant difference in reoffending rates is observed between suspended sentence orders and community orders even though when both are compared against short term custody the differences appear similar.

The importance of using OASys variables in the matching process was emphasised by Mews et al. (2015) who suggested that these variables include influential factors associated with reoffending and/or the likelihood of being given a particular sentence. This conclusion is reiterated by the latest results excluding OASys variables in the matching process (see Table B2) showing an upward bias in the estimate of impact for all comparisons except suspended

[15] In the cohorts used for this study, the average offender receiving short term custody had around 65 previous offences, whereas the average offender receiving a community order had 33 previous offences and one receiving a suspended sentence order had 37 previous offences.

[16] At the 1% significance level.

[17] In particular, this additional regression analysis on the 2016 cohort indicated that while suspended sentence orders were overall associated with lower levels of reoffending than community orders, this was not so where offenders had more than 75 previous offences.

sentence orders versus matched community orders. Of course, even after using OASys variables in the matching process, it is not possible to discount completely the influence of unmeasured factors that may reflect some aspect of the Judge's view that also impacts on the likelihood of reoffending. The results of this analysis should not therefore be regarded as definitive.

While OASys variables should therefore be used in such analyses, this does entail limiting the analysis to the subset of cases (approximately 18 per cent) for which an OASys assessment is available. Care should therefore be taken in generalising these results. The results for this subset of cases when not including the OASys variables in the propensity score matching process (see Table B2) were different to those for all cases using a similar propensity score model (see Table B3).

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Appendix A
Variables used in propensity score matching

Offender Demographics

- Gender
- Ethnicity
- Age at start of court order, or at discharge from prison
- Cohort month

Index Offence (this is the offence that led to the sentence)

- Offence type (26 index offence categories e.g. robbery, drink driving etc., as in the Offender Group Reconviction Scale 4 but with 6 additional sub-categories)
- Severity of Index Offence (ranked 1 to 3 with 1 being the most severe)[18].

Offending History[19] (all prior to index offence)

- Number of previous offences*, both in total and also with breakdown by severity (ranked 1 to 3 with 1 being the most severe)
- Copas Rate[20]
- Number of previous custodial sentences
- Number of previous court orders
- Number of previous court convictions
- Number of previous cautions
- Age at first contact with the criminal justice system

OASys Assessment

- Mean number of OASys assessment sections (4 to 12) where attitudes linked to risk of serious harm
- Mean number of OASys assessment sections (4 to 12) where attitudes linked to offending
- Highest risk in the community (low, medium, high, very high)
- Unemployed at time of OASys assessment, or will be on release (yes, no)
- Employment history (no problems, some problems, significant problems)
- Attitude to employment (no problems, some problems, significant problems)
- School attendance (no problems, some problems, significant problems)
- Problems with literacy or numeracy (no problems, some problems, significant problems)
- Offender's financial situation (no problems, some problems, significant problems)
- Current relationship with close family (no problems, some problems, significant problems)
- Experience of childhood (no problems, some problems, significant problems)

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[18] The offences are classified into three categories of court outcome: indictable-only offences are the most serious and must be tried at a Crown Court, triable-either-way offences may be tried at a Crown Court or a magistrates' court, and summary offences are usually tried at a magistrates' court.

[19] All offending history variables exclude Penalty Notices for Disorder.

[20] The Copas Rate controls for the rate at which an offender has built up convictions. The formula is a natural log of the number of court appearance or cautions + 1/(length of criminal career in years + 10).

- Current relationship with partner or satisfaction with singleness (no problems, some problems, significant problems)
- Previous experience of close relationships (no problems, some problems, significant problems)
- Perpetrator of domestic violence (yes, no)
- Victim of domestic violence (yes, no)
- Leisure activities encourage offending (no problems, some problems, significant problems)
- Easily influenced by criminal associates (no problems, some problems, significant problems)
- Manipulative/predatory lifestyle (no problems, some problems, significant problems)
- Recklessness and risk-taking behaviour (no problems, some problems, significant problems)
- Drugs ever misused
- Recent (in last 6 months) drug (yes if heroin, methadone (not prescribed), another opiate, crack/cocaine, cocaine hydrochloride, or a misused prescribed drug, no if another or no recent drug).
- Motivation to tackle drug misuse (no problems, some problems, significant problems)
- Current alcohol use (no problems, some problems, significant problems)
- Past alcohol use (no problems, some problems, significant problems)
- Motivation to tackle alcohol misuse (no problems, some problems, significant problems)
- Current psychological problems/depression (no problems, some problems, significant problems)
- Current psychiatric problems (no problems, some problems, significant problems)
- Impulsivity (no problems, some problems, significant problems)
- Temper control (no problems, some problems, significant problems)
- Problem solving skills (no problems, some problems, significant problems)
- Awareness of consequences of action (no problems, some problems, significant problems)
- Understands other people's views (no problems, some problems, significant problems)
- Pro-criminal attitudes (no problems, some problems, significant problems)
- Attitude to community (no problems, some problems, significant problems)
- Knows why offending (no problems, some problems, significant problems)
- Motivated to address offending (no problems, some problems, significant problems)
- Physical or mental health conditions (yes, no)
- Number of factors thought to reduce suitability for unpaid work
- Number of factors thought to reduce suitability for electronic monitoring
- Number of factors thought to reduce suitability for programme requirement

In addition, squared terms[21] were also used for many of the continuous variables in the model.

[21] Squared terms are able to account for any non-linear relationships between variables and the likelihood of receiving treatment or of reoffending (Wermink et al., 2010).

Appendix B
Results

Table B1: Overall comparisons; linking to OASys and including OASys variables within the PSM model

Treatment vrs Comparison[22]	Treatment Size, Matched & Off Support[23]	Matched Comparison Size[24]	Binary & Frequency (Treatment)[25]	Binary & Frequency (Comparison)[25]	**Impact Estimate[26]**
STC(<12m) vrs COM	7,032	13,626	75.5%	71.8%	**3.7pp*** **
	76		5.05	4.46	**0.59*** **
STC(<6m) vrs COM	5,345	13,120	78.3%	73.9%	**4.4pp*** **
	46		5.46	4.73	**0.73*** **
STC(<3m) vrs COM	2,492	12,790	78.6%	75.5%	**3.1pp** **
	29		5.67	5.02	**0.65*** **
STC(<12m) vrs SSO	7,084	10,209	75.6%	71.5%	**4.1pp*** **
	24		5.07	4.34	**0.73*** **
STC(<12m) vrs CO	7,094	23,835	75.6%	71.6%	**4.0pp*** **
	14		5.07	4.42	**0.65*** **
SSO vrs COM	10,301	13,643	47.4%	51.6%	**-4.2pp*** **
	40		2.22	2.46	**-0.23*** **

[22] STC = Short-term custody, CO = Court orders, SSO = Suspended sentence orders, COM = Community orders

[23] Treatment Size Matched = the number of treatment offenders (sentencing occasions) that could be matched to one or more comparison offenders. Treatment Off Support = the number of treatment offenders (sentencing occasions) that could not be matched to any comparison offenders.

[24] Matched comparison size = the number of comparison offenders (sentencing occasions) that could be matched to one or more treatment offenders.

[25] Binary = the proportion of offenders (sentencing occasions) who reoffend. Frequency = the number of reoffences per offender (sentencing occasion).

[26] * = significant at 0.1 level, ** = significant at 0.05 level, *** = significant at 0.01 level.

Table B2: Overall comparisons; linking to OASys but excluding OASys variables from the PSM model

Treatment vrs Comparison[22]	Treatment Size, Matched & Off Support[23]	Matched Comparison Size[24]	Binary & Frequency (Treatment)[25]	Binary & Frequency (Comparison)[25]	**Impact Estimate[26]**
STC(<12m) vrs COM	7,046	13,626	75.5%	68.1%	**7.3pp*** **
	62		5.03	4.13	**0.90*** **
STC(<6m) vrs COM	5,354	13,120	78.3%	70.5%	**7.8pp*** **
	37		5.44	4.40	**1.04*** **
STC(<3m) vrs COM	2,498	12,790	78.7%	72.5%	**6.1pp*** **
	23		5.64	4.63	**1.01*** **
STC(<12m) vrs SSO	7,098	10,209	75.6%	68.6%	**7.0pp*** **
	10		5.07	4.10	**0.97*** **
STC(<12m) vrs CO	7,086	23,835	75.6%	68.2%	**7.4pp*** **
	22		5.06	4.10	**0.96*** **
SSO vrs COM	10,314	13,643	47.4%	50.5%	**-3.1pp*** **
	27		2.22	2.37	**-0.15** **

Table B3: Overall comparisons; not linking to OASys

Treatment vrs Comparison[22]	Treatment Size, Matched & Off Support[23]	Matched Comparison Size[24]	Binary & Frequency (Treatment)[25]	Binary & Frequency (Comparison)[25]	**Impact Estimate[26]**
STC(<12m) vrs COM	35,048	83,178	65.3%	59.8%	**5.5pp*** **
	86		4.07	3.30	**0.77*** **
STC(<6m) vrs COM	24,565	81,582	69.3%	62.6%	**6.6pp*** **
	36		4.50	3.55	**0.94*** **
STC(<3m) vrs COM	8,660	81,582	73.0%	66.1%	**6.9pp*** **
	25		4.92	3.91	**1.01*** **
STC(<12m) vrs SSO	35,113	53,050	65.3%	59.1%	**6.3pp*** **
	21		4.08	3.21	**0.87*** **
STC(<12m) vrs CO	35,112	136,228	65.3%	59.2%	**6.1pp*** **
	22		4.08	3.22	**0.85*** **
SSO vrs COM	53,666	84,423	34.7%	37.6%	**-3.0pp*** **
	26		1.49	1.62	**-0.13*** **