The impact of short custodial sentences, community orders and suspended sentence orders on re-offending

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1. Summary

Background

Community orders and suspended sentence orders represent a substantial proportion of sentences given in England and Wales – about 13 per cent of all adult sentences imposed in 2013.[1] This study examined the impact on adult re-offending outcomes of these court orders and requirements imposed as part of those orders. It also looked at the effects over different follow-up periods to explore the impact over time. The study builds on previous analyses of community requirements, using more data, a more thorough matching process, and examining more combinations of requirements.

Approach

Offender data from 2008 to 2011 (inclusive) were used. A propensity score matching approach was followed, matching offenders given particular sentences with other, similar ones given other sentences. This method used data from Offender Assessment System (OASys) assessments, probation and re-offending, and tax and benefits systems. This is a well-tested approach to looking at impact, but one that cannot decisively discount the potential for an unmeasured factor to influence results.

Key findings

- **Short-term custody (less than 12 months in prison, without supervision on release) was consistently associated with higher rates of proven re-offending than community orders and suspended sentence orders ('court orders').** Over a 1 year follow-up period, a higher proportion of people re-offended having been sentenced to short term custody than other, similar people given a community order (around 3 percentage points higher) or a suspended sentence order (7 percentage points higher). In addition, short term custody was associated with up to 1 more re-offence per person on average than both community and suspended sentence orders.

- However, the impact appeared to vary over different follow-up periods. Over a three year period, while it was still the case that more people re-offended having been sentenced to short term custody rather than a 'court order', this difference

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[1] <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/311455/cjs-outcomes-by-offence-2009-2013.xls>

decreased. The benefits of the 'court orders' on reducing re-offending were felt predominately in the first year of follow-up.

- The benefit of 'court orders' over short term custody was seemingly increased when OASys variables were not used in the matching method, suggesting that these variables include influential factors associated with re-offending and/or the likelihood of being given a particular sentence. The analysis indicates that it is important to include OASys scores in the matching process, and that their omission leads to an upward bias in the estimate of impact. They should therefore be used routinely in similar analyses, even though that entails limiting the analysis to the subset of cases for which an OASys assessment is available.

- **There was evidence of particular requirements and groups of requirements having greater benefits in terms of reducing re-offending compared to short term custody.**

- Supervision requirements were generally associated with reduced proven re-offending where they were used.

- There were examples where activity requirements and accredited programme requirements were associated with reductions in re-offending, but overall the impact was uncertain. However, these requirements were examined collectively, and particular activities / programmes may have had a more positive impact on re-offending. In addition, using proven re-offending as a sole outcome measure may not pick up all potential benefits of these requirements.

- **The impact of using combinations of requirements together was difficult to predict. Sometimes, the impact of requirements changed when used with certain others.** For example, activity requirements had an uncertain impact when used with a curfew on community orders. When supervision was added to the activity as well, a significant reduction in re-offending was found. However, when a programme requirement was added to this, the impact returned to being uncertain.

- There may be differences in impacts associated with suspended sentence orders and community orders, with outcomes mostly non-significant for suspended

sentence orders. Some characteristic of either or both of these orders may make particular requirements more / less effective (the data used in this study do not allow a full explanation of what precisely is driving the effects).

Implications

These findings may be used to consider the potential rehabilitative effects of sentencing. The benefits of community and suspended sentence orders compared to short-term custody, when measured in terms of the proportion who re-offend rather than number of offences they commit, may diminish over time – but they are still present. Certain requirements and groups of requirements were more effective than others, implying that how requirements might work together should be carefully considered in relation to each other when sentencing.

The data used in this study are unable to completely explain the effects found, and there may be value in examining results in greater depth. In particular, the following may be focused on: re-offending for different index offences, how particular requirements are used together (in a qualitative sense), and differences between community orders and suspended sentence orders that may influence the effectiveness of requirements.

2. Introduction

2.1 Context

Community orders and suspended sentence orders are both sentences served in the community (Criminal Justice Act 2003; see Figure 2.1), and make up a substantial proportion of all sentences in England and Wales. In 2013, 99,013 adult offenders received a community order (9% of all adult offenders sentenced), and 48,628 adult offenders received a suspended sentence order (4%). Immediate custody was imposed on 90,459 adult offenders (8% of all adult offenders sentenced).[2] Given the widespread use of community and suspended sentences orders, there is clearly value in exploring their effectiveness.

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[2] <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/311455/cjs-outcomes-by-offence-2009-2013.xls>

Figure 2.1: Sentences examined in this report

Under 12 month prison sentences
Offenders sentenced to custody are usually released from prison at the halfway point of their sentence. Adults released from a short custodial sentence are not currently (at time of writing[3]) subject to supervision on release, but remain 'at risk' in the community until the end of their sentence (the sentence expiry date). If they commit a further offence during the 'at risk' period, they may have to serve the outstanding part of their sentence.

Community sentences
A community sentence combines punishment with activities carried out in the community. It can include one or more of 13 requirements on an offender (below), with the aim of changing offenders' behaviour so they don't commit crime in the future, making amends to the victim of the crime or the local community, and providing punishment for the offence.

Suspended sentences
When a court imposes a custodial sentence of between 14 days and two years (or six months in the magistrates' court), the court may choose to suspend the sentence for up to two years. This means that the offender does not go to prison immediately, but is given the chance to stay out of trouble and to comply with one or more of 13 requirements which the court may impose on an offender (below).

Requirements
The available 'menu' of requirements are:

1. Unpaid work for up to 300 hours

2. Activities, such as developing skills or making amends to their victim

3. Undertaking an accredited programme to help change offending behaviour

4. Prohibition from doing particular activities

5. Adherence to a curfew, so that the offender is required to be in a particular place at certain times

6. An exclusion requirement, so the offender is not allowed to go to particular places

7. A residence requirement so that the offender is obliged to live at a particular address

8. Mental health treatment with the offender's consent

9. A drug rehabilitation requirement with the offender's consent

10. An alcohol treatment requirement with the offender's consent

11. Supervision by the Probation Service

12. Where offenders are under 25, they may be required to go to a centre at specific times over the course of their sentence

13. (Since December 2012) A foreign travel prohibition requirement.

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[3]   October 2014

Research suggests that community and suspended sentence orders ('court orders') are associated with reductions in proven re-offending[4] compared to short term custody. A recent analysis suggests that offenders sentenced to less than 12 months in custody had a one year re-offending rate 6.8 percentage points higher than those given a 'court order' (Ministry of Justice, 2013). Previous work has also identified that there are statistically significant differences in outcome associated with particular combinations of sentence requirements. For example, following a review and consultation on community sentencing, the Crime and Courts Act 2013 placed a duty on courts to include at least one punitive requirement (or a fine) in an adult community sentence. The Ministry of Justice commissioned the National Institute of Economic and Social Research to examine the potential impact of this change (Bewley, 2012). The research looked at community sentences over one and two year follow-up periods, and found that including punitive elements may reduce the number of re-offences, with certain mixes of requirements being more effective than others.

- Adding a punitive requirement to a stand-alone supervision requirement was found to reduce the frequency of re-offending per person when re-offending occurred. However, it had no impact on the re-offending rate (i.e. the number of those re-offending).

- There was no impact from adding a punitive requirement to a supervision requirement plus a programme requirement, or from adding a punitive requirement to a supervision requirement plus an activity requirement.

- Adding a supervision requirement to a stand-alone punitive requirement reduced re-offending.

- Adding a programme requirement to a punitive requirement plus a supervision requirement reduced re-offending.

- Adding an activity requirement to a supervision requirement (with or without a punitive requirement) had no effect on re-offending.

However, there remain some gaps in our knowledge. Although benefits of using particular combinations of requirements were evidenced by Bewley (2012), the impact of 'court orders' over a longer period of time remains uncertain. Also, while the analysis completed by the Ministry of Justice (2013) emphasised short term custody was associated with higher re-offending than 'court orders', more information is needed in order to place greater confidence in this conclusion – the matching method used in that analysis did not include

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[4]   A proven re-offence is defined as any offence committed in a follow-up period that leads to a court conviction, caution, reprimand or warning. After the follow-up period, a further six month waiting period is allowed for the offence to be proven in court.

some key variables used by Bewley (e.g. those from offender assessments). As such, there is the potential that an important variable was excluded from the analysis that could have affected the results.

2.2   Aims and objectives

This study examines the effects of custodial sentences of less than 12 months compared to community sentences and suspended sentence sentences ('court orders'), and explores the impact of particular sets of requirements. It extends previous studies by using further and more recent data, a more thorough matching process, and looks at the effects of different combinations of requirements and of different follow-up periods. This provides the most up-to-date and robust analysis currently available of the impact of 'court orders' on re-offending.

The research questions were as follows:
1. Are 'court orders' more / less effective at reducing re-offending than short term custody (prison sentences of less than 12 months)?
2. Are there any specific requirements that are particularly effective, in terms of reducing re-offending?
3. What is the impact of multiple requirements on re-offending?

3.   Method

3.1   Creating a counter-factual group

Exploring the impact of particular sentences on re-offending is challenging, due to the need to construct a comparison group (sometimes called a counter-factual) to enable measurement of effects. That is, what would have happened if a different sentence had been given. As it is not feasible to randomly allocate offenders to different sentences, we cannot follow a randomised controlled trial approach to isolate treatment effect. Instead, this study uses propensity score matching (PSM) to create a counter-factual group, an approach that has been widely applied in criminology (e.g. Apel & Sweeten, 2010), and was used in previous research examining court orders (e.g. Bewley, 2012). Such matching enables the outcomes of offenders receiving particular requirements to be compared to outcomes of similar (matched) offenders who did not receive them, and therefore the effect of the requirements to be estimated.

PSM aims to account for all sources of variation between the treatment and control group except for the intervention itself, meaning that any differences in their outcomes should be the result of the intervention. The probability of receiving the 'treatment' sentence in a comparison needs to be calculated (a propensity score between 0 and 1) using all important factors which are associated with both the likelihood of the offender being given the 'treatment' sentence and the probability that the offender will re-offend. Offenders given one type of sentence (the 'treatment' sentence) are then matched to offenders receiving the other sentence type (the 'control' sentence) on the basis of the propensity scores. The re-offending of the two groups can then be compared to estimate the effect of the treatment over the control.

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. Where cases are matched, the PSM approach assumes that the eventual choice is, in effect, random – i.e. all of the non-random variation is controlled for. However, although every effort has been made to control for all relevant variables, it is possible that some unmeasured factor may be responsible for the eventual decision.

Further details about PSM can be found, for example, in Ministry of Justice (2013), and Bewley (2012).

3.2   Matching criteria and process

This study made use of data linking between Offender Assessment System (OASys),[5] probation and re-offending, and tax and benefits data in order to construct a comprehensive set of variables for use in PSM. Some data were lost via attrition through the data linking process. In particular, if cases had no OASys report or an incomplete report (considering all variables important for matching purposes), they were discarded.

OASys reports completed up to thirty days before / after the conviction 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 conviction date.

Sentences for sexual offences were excluded from the dataset used in the analysis. As sexual offenders have very different re-offending characteristics to the overall offender population (e.g. Howard, 2011), it was felt that including them could skew the analysis. Further, the number of sex offenders on particular requirements was very small (often less than 5 in the treatment group where the index offence was sexual). The consequence was that the standard error associated with the estimated sex offence coefficient was sometimes very high. Merging these with another index offence category was not feasible because there was no other category that was similar, and so omitting them entirely was seen to be a sensible option. However, results showing the overall effects of court orders compared to short term custody including the sexual offender population have been included in the detailed results tables (Appendix B, Tables B4 and B7) for information.

To enable analysis to take suitable account of repeat offenders and prolific offenders, the data comprise offences 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 result in 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 of offences per offender, which should result in any bias being of a low magnitude.

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5   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.

In total between 2008 and 2011 there were 777,833 offences that led to short term custody (less than 12 months) or a court order where the offender was an adult (18 and over) and the type of index offence was known and not a sexual offence. DWP / HMRC records were included where available. Of these, 353,039 (45% of the total) were matched to a fully completed OASys record. The attrition rate varied according to the type of sentence; while 58 per cent of suspended sentences could be matched up to fully completed OASys assessments, this was so for only 46 per cent of community orders and 31 per cent of prison sentences under 12 months. See Table 3.1.

Table 3.1: Attrition through data matching process

Stage	Dataset	N
1. Probation and re-offending data	Community orders	459,585
	Prison (<12 months)	154,349
	Suspended sentence orders	163,899
	Total	777,833
2. Linked to fully completed OASys record	Community orders	210,389
	Prison (<12 months)	47,837
	Suspended sentence orders	94,813
	Total records used	**353,039**

These records were then matched following the propensity score approach, using variables considered to be correlated with re-offending or sentencing outcomes (e.g. Ministry of Justice, 2012, 2013). Evidence suggests that sentencing decisions may be influenced by several factors. The Sentencing Council creates guidelines to target sentences within legislative boundaries, and within these there is opportunity for variation. For example, the 2014 Crown Court Sentencing Survey Annual Report (presenting results from the 2013 survey) confirmed that where judges determined a higher level of harm or culpability, the defendant was more likely to receive a custodial sentence.[6] The range of variables used in this study, which was similar to that used by Bewley, accounts for such known correlates of sentencing outcome. One hundred and thirty such variables were used to create propensity scores, as listed in Appendix A.

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[6] <http://sentencingcouncil.judiciary.gov.uk/docs/CCSS_Annual_2013.pdf>

Numerous algorithms for generating a comparison group using propensity score matching are available; this study used Epanechnikov Kernel matching (mainly with bandwidth 0.03, but this was occasionally altered to improve the quality of matching). Epanechnikov Kernel matching was also the favoured method used by Bewley, who demonstrated that using other algorithms (radius matching and local linear regression matching) produced similar results for comparisons involving community sentences.

Such an approach cannot definitively control for all potential differences between the matched and control groups. However, the range and number of variables used supports the view that the matching was sufficiently comprehensive to enable the impact of particular sentences to be examined.

3.3   Matching quality

The impact estimates exclude treatment cases where there is no common support – that is, which don't have a similar propensity score to any comparison group cases. Most aggregate comparisons (see Tables B1–B7 in Appendix B) involve less than 1.5 per cent of the treatment group being lost in the matching. Most of the requirement-level comparisons involve fewer than 2 per cent of the treatment group being lost with the biggest loss being 4.5 per cent. The number of treatment cases on support and off support for these comparisons is shown by Tables B9–B13 in Appendix B.

Following the matching for each comparison, the closeness of the matched groups on characteristics selected for the model was tested using standardised (mean) differences. These can be interpreted as follows:

- Standardised differences <5% = groups are closely matched on that particular offender or offence characteristic.
- Standardised differences of 5–10% = a reasonable match quality.
- Standardised differences >10% = a poor quality of matching which could alter the interpretation of the final result.

In this analysis, matching quality across the approximately seven thousand matches was very high. The vast majority of standardised differences were less than 5 per cent, with only twenty-three between 5 and 10 per cent and none over 10 per cent. No comparison involved more than 4 of the 130 standardised differences being between 5 and 10 per cent. Together with the high common support, this suggests the propensity score matching succeeded in

creating well-balanced and representative groups, and therefore the calculated treatment effects are robust.

3.4   Outcome variables

This study used two outcome variables to measure re-offending:

- Whether any proven re-offending has occurred (a binary yes / no measure) – providing the proportion of those in a sentence group who committed at least one proven re-offence; and,

- The number of proven re-offences – the mean number of proven re-offences in the follow-up period per offender in the sentence group.

Re-offending was calculated in-line with Ministry of Justice statistics guidance (Ministry of Justice, 2012). In summary, proven re-offending is followed up for one to five years (in the analyses in this paper), with an additional 6 months allowed for cases to go through the courts. Cautions and convictions all constitute incidents of re-offending. The follow-up period commences either at the beginning of the community or suspended sentence (after the probation start date for the offence), or on release where a prison sentence has been served. Therefore, the analysis below takes account of the actual time available in the community for re-offending, and is not affected by the differing time spent in custody by particular offenders.[7]

Proven re-offending 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). Some requirements are not intended to directly reduce re-offending.[8] Second, proven re-offending is a subset of all re-offending 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 re-offences may be more serious than others. Fourth, while the measure is appropriate for looking at *re-offending*, care should be taken if attempting to

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[7] This approach is consistent with previous publications on re-offending. A different measure looking at re-offending from end of sentence was investigated in Ministry of Justice (2013), but ultimately the present measure of proven re-offending was recommended. The end of sentence measure had several disadvantages – for example, it excluded the most prolific offenders who are repeatedly re-sentenced and never actually end a sentence.

[8] For example, Education, Training & Employment is one of the 'needs' that can be identified in offenders given community orders or suspended sentence orders. Such activity requirements are therefore not designed to directly reduce re-offending but to address the factors which may influence an offender's likelihood of re-offending.

extrapolate out to wider crime impacts, as the approach may understate potential incarceration effects of custodial sentences.

3.5   Requirements

The choice of which requirements were examined was constrained by what was practically possible from the data, given the prevalence of the different requirements nationally and in the data. Table 3.2 shows how frequently different requirements were used in 2013 across England and Wales, showing that while supervision requirements are commonly used, requirements such as mental health programmes happen only in a small number of cases.

Table 3.2: Requirements commenced under community and suspended sentence orders

England & Wales, 2013

	Community Orders		Suspended Sentence Orders	
	Frequency	Proportion	Frequency	Proportion
Supervision	57,754	33%	28,316	35%
Unpaid Work	50,833	29%	20,966	26%
Activity	20,306	12%	8,329	10%
Accredited Programme	12,827	7%	7,495	9%
Curfew	12,599	7%	6,885	9%
Drug Treatment	9,122	5%	4,510	6%
Alcohol Treatment	5,886	3%	2,601	3%
Attendance Centre	1,163	1%	198	0%
Prohibited Activity	761	0%	558	1%
Exclusion	709	0%	439	1%
Mental Health	613	0%	241	0%
Residential	512	0%	371	0%
Total	**173,085**	**100%**	**80,909**	**100%**

Columns may not sum to 100% due to rounding.

Offender management statistics quarterly: January to March 2014 (Probation tables: Q1 2014),

https://www.gov.uk/government/statistics/offender-management-statistics-quarterly-january-to-march-2014

Sometimes these requirements are used in combination (as shown by Table 3.3), which further reduces the sample size of particular requirements. This meant that although data were available for a large number of different requirements, sample sizes were only sufficient to analyse impact for a few of them.

Table 3.3: Most frequently used combinations of requirements for starts of community orders and suspended sentence orders

England & Wales (2013)

Requirement	Frequency
Community Orders	
Unpaid Work	31,372
Supervision	11,720
Supervision & Activity	7,519
Supervision & Accredited Programme	7,001
Supervision & Drug Treatment	6,280
Curfew	5,939
Supervision & Unpaid Work	5,720
Supervision & Alcohol Treatment	3,845
Supervision, Unpaid Work & Activity	2,056
Suspended Sentence Order (with requirements attached)	
Unpaid Work	9,487
Supervision	4,216
Supervision & Unpaid Work	3,619
Supervision & Accredited Programme	3,652
Supervision & Drug Treatment	2,982
Supervision & Activity	2,682
Supervision & Alcohol Treatment	1,519
Curfew	1,458
Unpaid Work and Curfew	1,463
Supervision, Unpaid Work & Accredited Programme	1,316

Offender management statistics quarterly: January to March 2014 (Probation tables: Q1 2014),

https://www.gov.uk/government/statistics/offender-management-statistics-quarterly-january-to-march-2014

The choice of which requirements to look at was mostly based on the sample sizes available. Drug treatment was not examined, although it may technically have been feasible to do so, as it was felt that the complexity of this requirement made results difficult to interpret without further in-depth research focusing on the particular treatments available. Additionally, this study does not report the impact of individual activities or programmes, since sample sizes were too small to test all of them. (Details of what activities were in place can be found in the 2013/14 Probation Service Delivery Agreements.)[9]

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[9] The Offender Rehabilitation Act 2014 replaces the Activity and Supervision requirements in Community Orders and Suspended Sentence Orders. The 2013/14 Probation Service Delivery Agreements therefore provide the most up-to-date descriptions of the types of Activity requirement provided by what were the thirty-five probation trusts.

Accordingly, the requirements examined in this study are:

- Unpaid work;
- Curfew;
- Supervision;
- Accredited programme; and
- Activity.

3.6   Limitations of the study

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 re-offending) is a fairly blunt instrument.
3. There is a potential for geographical bias. For example, if an area with a relatively large offender population has substantially different outcomes than others, this could skew the overall results.
4. The matching process led to some 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.
5. The data do not record adherence to the requirements or "dosage"[10] of requirement, both of which may influence outcomes. Therefore, the results reported in this paper relate only to the requirement as imposed at court (intention to treat) rather than that actually received.[11]
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).
7. Pooling data from several years has the advantage of increasing sample sizes, but also means analysis is not able to take account of potential changes over time. For example, if requirements were less effective in one year compared to the rest, this would dampen the overall impact estimate.

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[10] I.e. the frequency and intensity of treatment.
[11] A rapid literature search was completed in order to frame results, but limited wider information was found on adherence to requirements. One study does suggest that curfew is reportedly widely adhered to and unpaid work less so (Cattell et al., 2014).

4.   Results

Many individual comparisons were completed in the course of the analysis, and it is not feasible to separately report them all here. Therefore, a summary of key results and commentary is provided in this section, with detailed results tables included in Appendix B.

Analysis focused first on establishing the representativeness of the final dataset, before examining re-offending outcomes for community and suspended sentence orders compared to short term custody, and then looking at particular requirements and groups of requirements.

4.1   Overall data – are findings generalisable?

A potential limitation of the approach followed is that having matched on OASys variables, the findings may not be representative of the wider offender population. As stated in Bewley (2012, pg. 44), "one difficulty with using OASys data to estimate the impact of different types of requirements is that it is only available for offenders who went through this assessment process. Offenders with less entrenched and complex problems are less likely to have a comprehensive assessment." To address this issue, analysis explored whether the final dataset generated after matching up to OASys data could be considered representative of the wider offender population.

Table 4.1 shows breakdowns of each of the samples (offences resulting in short term custody, community orders and suspended sentence orders) where an OASys assessment was fully completed and where there wasn't a fully completed OASys assessment. This indicates there were large differences between the two groups with regard to the proportion of community orders and suspended sentence orders that involved unpaid work, supervision and programme requirements. In addition, where a suspended sentence order or community order was imposed (though not short term custody), offenders with complete OASys assessments had more extensive criminal histories than those without a complete assessment.

Table 4.1: Characteristics of the sample with and without an OASys assessment

	STC exc. OASys		STC inc. OASys		SSO exc. OASys		SSO inc. OASys		COM exc. OASys		COM inc. OASys	
	N	%	N	%	N	%*	N	%*	N	%*	N	%*
Requirement												
Curfew	-	-	-	-	25,987	16%	13,617	14%	52,483	11%	22,649	11%
Unpaid work	-	-	-	-	78,962	48%	36,268	38%	245,334	53%	75,162	36%
Supervision	-	-	-	-	112,572	69%	79,878	84%	254,798	55%	170,836	81%
Activity	-	-	-	-	15,779	10%	10,355	11%	48,264	11%	28,372	13%
Programme	-	-	-	-	40,264	25%	30,761	32%	73,556	16%	52,966	25%
Age												
18–20	20,105	13%	7,785	16%	23,993	15%	13,755	15%	79,375	17%	31,440	15%
21–24	26,857	17%	9,240	19%	31,119	19%	18,567	20%	86,903	19%	38,337	18%
25–29	31,086	20%	9,606	20%	30,780	19%	18,526	20%	84,144	18%	40,545	19%
30–34	25,265	16%	7,426	16%	23,299	14%	13,954	15%	63,529	14%	31,992	15%
35–39	19,886	13%	5,791	12%	19,319	12%	11,367	12%	53,514	12%	26,656	13%
40–44	14,533	9%	3,990	8%	15,254	9%	8,583	9%	41,683	9%	19,888	9%
45+	16,617	11%	3,999	8%	20,135	12%	10,061	11%	50,437	11%	21,531	10%
Total	154,349	100%	47,837	100%	163,899	100%	94,813	100%	459,585	100%	210,389	100%
Median	29		28		29		28		28		29	
Mean	31.2		30.0		31.2		30.7		30.5		30.8	
Offending history (mean)												
Cautions	1.3		1.4		1.0		1.2		1.1		1.2	
Convictions	17.4		17.4		8.8		10.6		8.2		11.0	
No. of custodial sentences	5.8		5.4		2.2		2.7		1.9		2.7	
Offences	42.0		42.4		21.4		26.0		19.7		26.5	
Total N	**154,349**		**47,837**		**163,899**		**94,813**		**459,585**		**210,389**	

The age breakdowns may not sum to 100% due to rounding.

* The proportions for the requirements do not sum to 100%, as a sentence can involve more than one requirement (i.e. numbers overlap).

STC = short term custody (<12 months); SSO = suspended sentence orders; COM = community orders

These results are consistent with the conclusion that offenders with OASys records had more entrenched problems – i.e. a more extensive criminal history, requiring supervision and programmes. However, it is not clear whether this in itself affects the representativeness of findings using matching based on OASys variables. To explore this, several different comparison groups were also investigated: matches generated without using OASys at all, matches generated where associated OASys records could be used but were not, and matches generated using OASys data. The results are presented in Appendix B, Tables B1–B3.

Taking all these results into consideration, the additional information provided by the OASys records does seem to make a difference to re-offending outcomes. This would suggest that the OASys variables include important factors that are not taken account of in the non-OASys matched group. By not using the OASys variables, it is possible that those who have more complex problems were being matched to those with less, making community and

suspended sentence orders appear to have a higher impact than they really do. Broadly speaking, results are consistent between those cases where associated OASys records could be used but weren't and those where there was no linking to OASys records. This suggests that the 'treatment' impact is similar regardless of whether or not the offences involved OASys assessments.

Overall, the analysis reported above indicates that matching on OASys variables provides our best-matched comparison groups, and that the impacts estimated may be considered as reasonably representative of the respective offender populations. Therefore, all results reported below relate to this best-matched group.

4.2 Are community and suspended sentence orders more effective at reducing re-offending than short term custody?

Research has previously indicated that offenders who receive short term custody of under 12 months are more likely to re-offend than similar offenders who receive a community or suspended sentence order (e.g. Ministry of Justice, 2013). This finding was replicated in the present study, bringing it up-to-date and showing that it is a consistent effect. This study also looked at the effects of longer follow-up periods on the impact of court orders, building on earlier work to explore whether the effects were persistent.

This study found short term custody was associated with significantly higher proven re-offending compared to 'court orders' (community orders and suspended sentence orders combined).[12]

- For each year cohort examined, the one year re-offending rate was higher for those sentenced to short term custody than for those given 'court orders' overall (around 4 percentage points), community orders (around 3 percentage points) and suspended sentence orders (around 7 percentage points).[13]

- For each year cohort examined, the one year average frequency of re-offending per person was also higher for those sentenced to short term custody than those given court orders (by slightly under 1 re-offence on average).

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[12] With these overall comparisons, the treatment group was those sentenced to short term custody, which is consistent with the approach taken in previous analyses (e.g. Ministry of Justice, 2013).
[13] These findings exclude those whose index offence was a sexual offence. Results including this group are provided in Appendix B, Table B4

Additional analyses were undertaken to test the potential effect of different follow-up periods, examining cumulative proven re-offending over 1, 2 and 3 years follow-up. The increases in re-offending associated with short term custody compared with 'court orders' persisted over different follow-up periods, but did vary. The findings for the 2008 and 2009 cohorts are presented in Figure 4.1 (also see Appendix B, Tables B1–B3).

Figure 4.1: Impact of short term custody compared to 'court orders' (community and suspended sentence orders combined) on proven re-offending (2008 and 2009 cohorts)
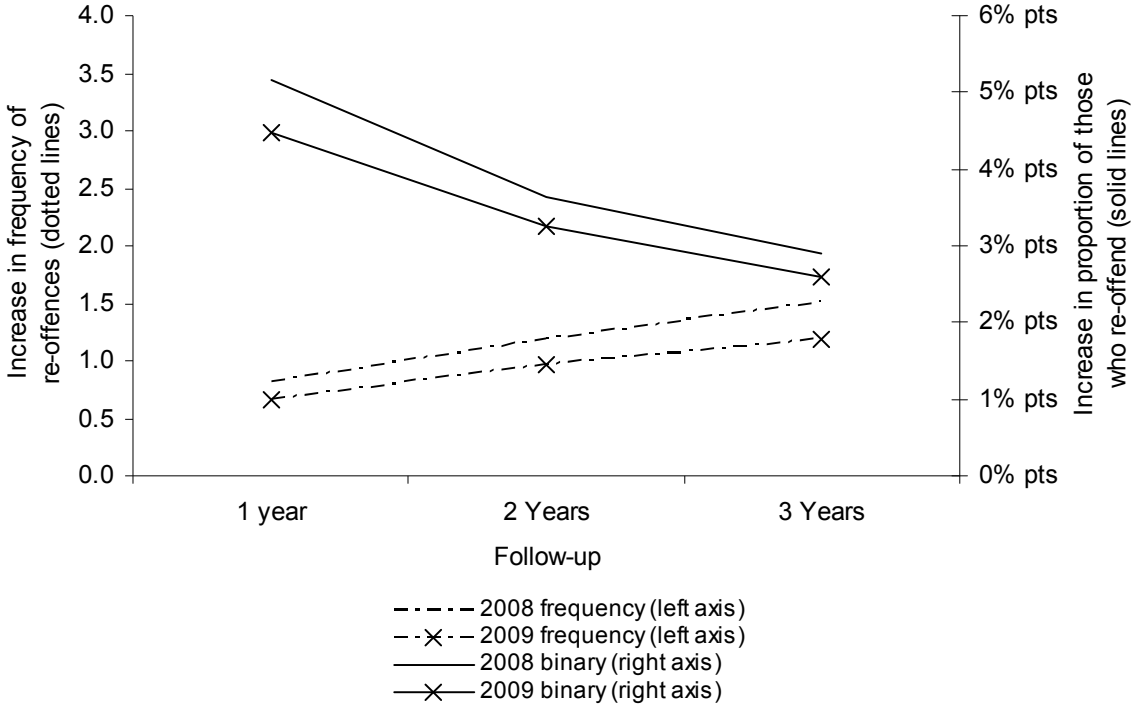
While the impact of short term custody compared with 'court orders' differed slightly according to which cohort was followed (2008 or 2009), the changes over time were proportionally very similar. In summary:

- Over different follow-up periods, the increases in numbers re-offending associated with short term custody compared with 'court orders' reduced, but were still significant after three years. The one year re-offending rate fell by around 2 percentage points over the second and third follow-up year (from around 5 percentage points after one year follow-up to around 3 percentage points after three years follow-up).

- The increases associated with short term custody on the number of re-offences committed per offender compared with 'court orders' appeared to get larger over different follow-up periods. On this measure, the impact increased by around 0.6 re-offences over the second and third follow-up years (from just over 0.5 re-offences to just over 1 re-offence). As detailed below, this is a cumulative total of re-offences

over follow-up years. On a non-cumulative basis, the impact associated with short term custody compared to 'court orders' reduced year on year.

To examine re-offending patterns within each of the follow-up years, the incidence of proven re-offending over a 5 year period for the 2008 cohort alone was calculated, presented in Figure 4.2 (also see Appendix B, Tables B5–B6). This shows that the impact of short term custody on frequency of re-offending reduced with each follow-up year. Overall re-offending patterns for both those given short term custody and those given 'court orders' were similar. Most of those who re-offended did so within 1 year, with re-offending much lower after this, although there was a steeper fall after the first year when looking at re-offending rates (i.e. the proportion of those who re-offend) than number of re-offences. Within the broad similarity between short term custody and 'court orders' there were some differences; short term custody was associated with increased re-offending compared to 'court orders' in the first year, while some of this increase was 'clawed back' over time.

Figure 4.2: Proven re-offending for short term custody (STC) and 'court orders' (community and suspended sentence orders combined) over time (2008 cohort)
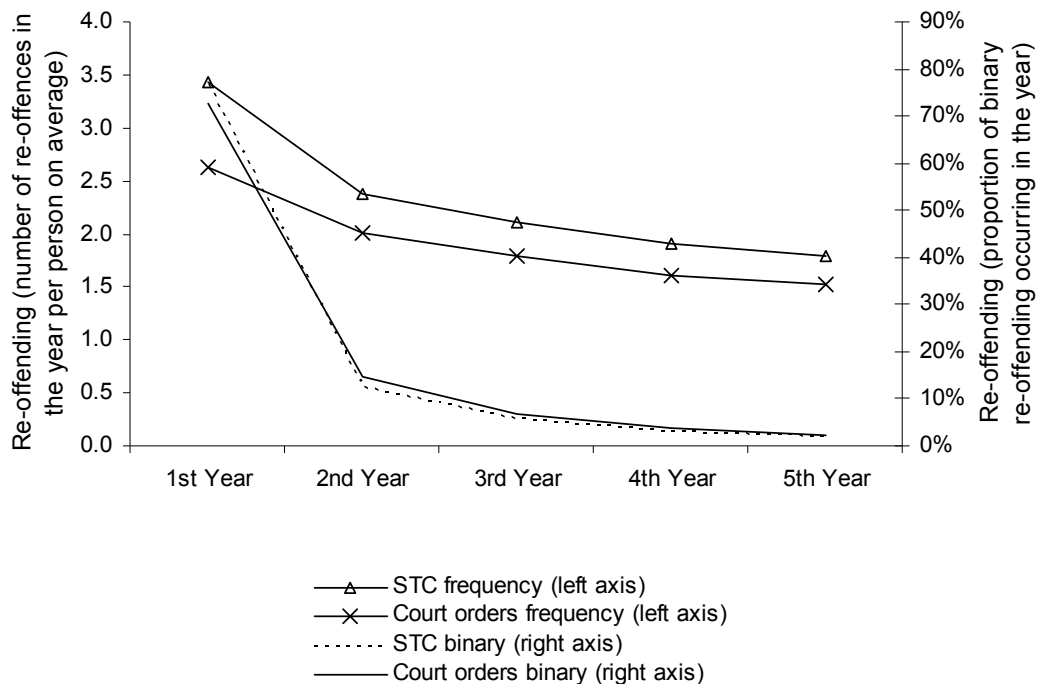
The persistence of effects over time raises the issue of whether, and how, benefits associated with 'court orders' may affect criminal careers and different offender histories. To explore this further, regression analysis was undertaken for those given short term custody or 'court orders' from the 2009 cohort, splitting the offenders into groups with differing levels of previous offending (prior to the index offence), with those with no offending

history as the reference group (see Appendix B, Table B8). Analysis shows that the groups with higher levels of previous offending (i.e. the more prolific offenders) had 'interaction with short term custody' coefficients that were generally larger than those with lower levels. Moreover, those for groups of more than 15 previous offences were statistically significant compared to the interaction for the reference group. This represents evidence that the 'court orders' may have had a greater benefit for more prolific offenders. Further work, guided by this initial analysis, would need to be undertaken to fully investigate these findings.

4.3 Are specific requirements particularly effective, in terms of reducing re-offending?

There was evidence of particular groups of requirements having greater benefits in terms of reducing proven re-offending compared to short term custody, over a 1 year follow-up period. Particular requirements were also associated with greater reductions in proven re-offending when added to other requirements accompanying community orders.

With suspended sentence orders, most of the impacts associated with adding a particular requirement were in the same direction as for those for community orders but only two of these impacts were statistically significant – so we cannot be sure that the results were not due to chance. This suggests that the impact of requirements is affected by whether they are used with community orders or suspended sentence orders.[14]

For community orders:

- Supervision requirements were associated with reduced proven re-offending (both in terms of whether there is re-offending and the number of re-offences overall) when added to punitive elements (curfews and unpaid work).

- Activity requirements were associated with either a non-statistically significant impact on re-offending or increased re-offending (when used with unpaid work).

- Programme requirements were associated with reduced re-offending when added to unpaid work and supervision requirements, and when added to curfew and supervision on the frequency measure only, but otherwise the impacts were not statistically significant.

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[14] Differences between the impact of requirements when used with community orders or suspended sentence orders were further examined by comparing differences in re-offending outcomes between the two when the same requirements were used. Although many comparisons were not possible either due to poor quality match groups and/or low sample size, a statistically significant difference was found when unpaid work, supervision and activity requirements were used together (see Appendix B, Table B13).

Given the diversity of programmes and activities, further work may be needed to fully understand the impact of adding such requirements (e.g. full evaluations looking at programmes / activities in-depth), which was outside the scope of this study. These results should therefore be regarded with particular caution. Moreover, it can be difficult to differentiate between programmes and activities,[15] while the diverse selection criteria associated with programme and activity requirements increases the risk that the propensity score matching may not totally control for all important factors (such as severity of need).

4.4   What is the impact of multiple requirements on re-offending?

Special care should be taken when interpreting impacts associated with multiple requirements. Information was not available to this study on the intentions of sentencers in imposing multiple requirements, so the use of proven re-offending as the sole outcome measure may arguably be particularly limiting. Nevertheless, there were interesting findings in terms of impacts on re-offending.

Compared to short term custody

All combinations of requirements tested (see Appendix B, Tables B9–B10) were associated with a reduction in the number of re-offences compared with short term custody, and most also with a reduction in the re-offending rate. While the precise results are not directly comparable between requirements (as the treatment groups are different), analysis suggested that there were particularly effective combinations of requirements.

- For community orders, two combinations were particularly effective in comparison with short term custody
    - Curfew + Supervision + Activity (associated with reductions in those re-offending of 5.2 percentage points, or 0.5 re-offences per offender).
    - Unpaid work + Curfew + Supervision + Activity + Programme (associated with reductions in those re-offending of 11.3 percentage points, or 1 re-offence per offender).

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[15]   Sections 201 and 202 of the Criminal Justice Act 2003 define activities and programmes. An Activity requires the offender to attend a community rehabilitation centre or an approved alternative location at specified times to undertake a specified activity. There can be no more than 60 days on which an offender must do this. A programme requirement is a requirement that the offender must participate in an accredited programme (and at a place / time / duration) specified in the order.

- For suspended sentence orders, two combinations were particularly effective:
  - Unpaid work + Supervision + Activity (associated with reductions in those re-offending of 6.6 percentage points, or 0.6 re-offences per offender).
  - Unpaid work + Supervision + Activity + Programme (associated with reductions in those re-offending of 6.1 percentage points, or 0.8 re-offences per offender)

Compared to other requirements

Requirements were also tested in relation to other requirements – i.e. what effect was associated with adding the requirement / group of requirements. Analysis indicated overall that it is difficult to predict the effects of using multiple requirements: the impacts vary according to what combination is used in what circumstance. In order to present this as clearly as possible, a visual summary of the impact of particular requirements when used alongside punitive requirements (curfews or unpaid work), which every community and suspended sentence order should include, is presented in Figure 4.3 (a detailed breakdown is available as Appendix B, Tables B11–B12). Looking at the impacts of requirements within particular contexts of community / suspended sentence order and punitive requirements, the Figure indicates that adding requirements may not affect re-offending outcomes in a cumulative way.

Figure 4.3: Impact on proven re-offending of particular requirements added to punitive requirements

		Additional requirement				
	Punitive requirement	+ Supervision	+ Activity	+ Programme	+ Supervision, Activity	+ Supervision, Activity, Programme
COM	**Curfew**	Y-Y	?-?	*	Y-Y	?-?
	Unpaid	Y-Y	N-?	?-?	?-?	N-?
SSO	**Curfew**	?-?	*	*	*	*
	Unpaid	?-?	?-?	*	?-Y	?-?

First letter = binary re-offending measure; Second letter = frequency re-offending measure

Y = Significant, positive impact; N = Significant, negative impact; ? = No significant impact

COM = Community order; SSO = Suspended sentence order

* Sample size too small to analyse

While low sample sizes (even using several years of data) limit the analyses, there are interesting effects associated with multiple requirements. For example:

- Alone, activity requirements had an uncertain impact when used with a curfew on community orders. When supervision was added to the activity as well, a significant reduction in re-offending was found. However, when a programme activity was added to this, the impact returned to being uncertain.

- Supervision was associated with reduced re-offending when added to an unpaid work requirement on a community order. However, when used in combination with both activity and programme requirements, this clear benefit is lost (i.e. it loses statistical significance).

- Although the impacts associated with adding the various suspended sentence order requirements were mostly not statistically significant, there was a significant reduction in the frequency of re-offending when adding both supervision and activity requirements to unpaid work.

- Combining supervision, activity and programme requirements was associated with impacts that were either not statistically significant or that were negative.

While the data alone do not enable us to explain these findings, results suggest a need for careful targeting of multiple requirements.

5.   Discussion

This study provides further information on the use of community requirements, using an approach that measures re-offending outcomes of particular sentences by controlling as far as possible for other differences between offenders. In particular, it updates and increases understanding of the impact of community and suspended sentence orders, emphasising:

- There were benefits in reducing re-offending associated with using 'court orders' (community and suspended sentence orders) over short term custody;
- These benefits appear to change over time depending on what measure of re-offending is used (decreasing over time in terms of the proportion of those who re-offend, but increasing over time in terms of the number of re-offences committed per offender); and
- Certain requirements are associated with better proven re-offending outcomes than others, as are certain groups of requirements.

A key issue for this study is whether the OASys-matched analysis can be seen to be representative of the total offender population. Having considered the characteristics of those with OASys assessments and without (where those with OASys assessments seem to have had more entrenched problems), and analysis involving matching using OASys variables and not, this report argues that future research examining the impact of sentencing using propensity score matching should use OASys records in the matching process.

There were three findings in particular that would be valuable to explore in greater depth. First, there were different impacts of 'court orders' (compared to short term custody) over time. A reduction of impact of particular interventions might be expected as time passes since the intervention, and fits with previous analyses of re-offending patterns (e.g. Howard, 2011). From the analysis, there is evidence that 'court orders' could be particularly beneficial for more prolific offenders, and understanding the reasons behind this might support efforts to reduce re-offending. There may be value in looking at patterns of impacts of 'court orders' on proven re-offending over time for different offence types, although low sample sizes may make this difficult for some offences.

Second, the somewhat unpredictable effects associated with multiple requirements are difficult to explain from the data alone. Particular combinations seem to be more effective than others in reducing re-offending, meaning adding requirements does not always improve outcomes in an incremental way – requirements sometimes seem to 'interfere' with each

other. Understanding exactly why this occurs (potentially related to commitment / adherence to particular requirements) may enable more effective targeting and tailoring of requirements.

Third, there may be differences in impacts associated with suspended sentence orders and community orders. This implies that there is some aspect of these orders that makes the requirements more / less effective. For example, the threat of imprisonment that comes with suspended sentences may influence adherence and / or the legitimacy of particular interventions in the eyes of offenders. Results reported in this study suggest that such phenomena do not simply make suspended sentences more / less effective across the board, but interact with particular requirements to influence future proven re-offending. Qualitative work with offenders who have experienced the requirements may shed some light on this area.

Results of this study can be used to see what re-offending outcomes may be expected given the imposition of particular sentences. However, as stated in previous sections, there are limitations with the analysis that mean they should be interpreted with caution. The data do not allow us to take into account compliance with the requirements or dosage, both of which may influence re-offending. In addition, the propensity score matching approach does not allow us to definitively discount the potential of an unmeasured factor influencing results, although care has been taken to match on key factors.[16] Finally, while activities and programmes were generally associated with either unclear or negative impacts on proven re-offending, this may not be the whole story. Particular activities or programmes may be associated with better results (i.e. effects that are different to the overall, pooled data), but it was not possible to separately analyse all activities / programmes due to low sample sizes.

This study focuses on analysis of administrative data and does not look in detail at what causal pathways may be producing the effects found (although it may direct research examining this). Nevertheless, this study represents the most up-to-date and detailed analysis of the impact of community and suspended sentence orders currently available.

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[16] For example, in some cases when a court makes a requirement, an electronic monitoring requirement will also be imposed (see Criminal Justice Act 2003). For some requirements (e.g. curfew and exclusion requirements), electronic monitoring will be imposed in most cases. It was not possible to match for whether electronic monitoring was used or not. However, across the total sample, a potential effect of electronic monitoring should fall out (i.e. we would expect an 'average' effect to be found).

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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 Year (either 2008, 2009, 2010 or 2011)
- Cohort month

Index Offence (this is the offence that led to the sentence)
- OGRS offence Code (condensed 20 categories for the index offence, e.g. robbery, violence etc., as in the Offender Group Reconviction Scale 3)
- Severity of Index Offence (ranked 1 to 3 with 1 being the most severe).

Offending History[17] (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[18]
- 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

Labour Market
- Any P45 employment[19] in year before sentence
- Any P45 employment in month before sentence
- Any out of work benefit in year before sentence
- Any Jobseeker's Allowance in year before sentence
- Any Incapacity Benefit or Income Support in year before sentence

OASys Assessment
- OASys3 2 year re-offending predictor
- Mean number of OASys assessment sections (3 to 12) where attitudes linked to risk of serious harm
- Mean number of OASys assessment sections (3 to 12) where attitudes linked to offending
- Highest risk in the community (low, medium, high, very high)
- Recognises impact of offending (yes, no)
- Offender accepts responsibility for the current offence (yes, no)
- Currently of no fixed abode or in transient accommodation (yes, no)
- Suitability of accommodation (no problems, some problems, significant problems)
- Permanence of accommodation (no problems, some problems, significant problems)

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[17] All offending history variables exclude Penalty Notices for Disorder.
[18] 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/lengthof criminal career in years + 10).
[19] P45 employment excludes self employment, cash-in-hand work and some lower paid jobs.

- Suitability of location of accommodation (no problems, some problems, significant problems)
- 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)
- 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).
- Not a recent drug user in last 6 months (yes, no)
- Current drug (yes if heroin, methadone (not prescribed), another opiate, crack/cocaine, cocaine hydrochloride, or a misused prescribed drug, no if another or no current 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)
- Current psychiatric treatment or treatment pending
- 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 or electronic monitoring
- Number of factors thought to reduce suitability for programme requirement

In addition, squared terms[20] were also used for many of the continuous variables in the model.

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

Appendix B
Results

Note: Tables B1–B5 and B7 show impact scores in terms of proven re-offending (either the binary or frequency measure, as indicated in the Tables).

Table B1: Prison sentences of less than 12 months compared to community orders and suspended sentence orders

Matching to OASys and including OASys vars

	Matched treatment (STC) group size	Binary 1Yr	Freq 1Yr	Binary 2Yr	Freq 2Yr	Binary 3Yr	Freq 3Yr
2008	10,111	5.2 % pts	0.81	3.6 % pts	1.18	2.9 % pts	1.51
2009	15,675	4.5 % pts	0.67	3.3 % pts	0.96	2.6 % pts	1.19
2010	11,574	3.7 % pts	0.69	2.4 % pts	0.98	-	-
2011	10,068	4.6 % pts	0.79	-	-	-	-

Matching to OASys but excluding OASys vars

	Matched treatment (STC) group size	Binary 1Yr	Freq 1Yr	Binary 2Yr	Freq 2Yr	Binary 3Yr	Freq 3Yr
2008	10,124	7.4 % pts	1.02	5.4 % pts	1.52	4.3 % pts	1.93
2009	15,686	6.7 % pts	0.85	4.9 % pts	1.28	3.8 % pts	1.60
2010	11,655	5.9 % pts	0.91	3.9 % pts	1.34	-	-
2011	10,087	6.9 % pts	1.03	-	-	-	-

Not matching to OASys

	Matched treatment (STC) group size	Binary 1Yr	Freq 1Yr	Binary 2Yr	Freq 2Yr	Binary 3Yr	Freq 3Yr
2008	44,687	8.0 % pts	1.04	6.1 % pts	1.55	4.8 % pts	1.96
2009	42,374	7.4 % pts	0.93	5.0 % pts	1.43	3.7 % pts	1.73
2010	36,369	6.9 % pts	0.95	4.5 % pts	1.38	-	-
2011	34,979	6.3 % pts	0.97	-	-	-	-

Note: The 1yr figures for 2009 and 2010 are slightly different to those previously published in the re-offending compendium in 2013 (Ministry of Justice, 2013) due to the use of nearest neighbour matching for these estimates.
STC = Short term custody (<12 months)

Table B2: Prison sentences of less than 12 months compared to community orders

Matching to OASys and including OASys vars

	Matched treatment (STC) group size	Binary 1Yr	Freq 1Yr	Binary 2Yr	Freq 2Yr	Binary 3Yr	Freq 3Yr
2008	10,108	4.0 % pts	0.73	3.1 % pts	1.11	2.5 % pts	1.43
2009	15,661	3.4 % pts	0.55	2.4 % pts	0.83	1.9 % pts	1.03
2010	11,566	2.8 % pts	0.61	1.7 % pts	0.87	-	-
2011	10,057	3.8 % pts	0.69	-	-	-	-

Matching to OASys but excluding OASys vars

	Matched treatment (STC) group size	Binary 1Yr	Freq 1Yr	Binary 2Yr	Freq 2Yr	Binary 3Yr	Freq 3Yr
2008	10,121	6.1 % pts	0.93	4.7 % pts	1.43	3.8 % pts	1.83
2009	15,685	5.6 % pts	0.74	4.1 % pts	1.16	3.2 % pts	1.49
2010	11,653	4.9 % pts	0.78	3.2 % pts	1.17	-	-
2011	10,091	5.6 % pts	0.91	-	-	-	-

STC = Short term custody (<12 months)

Table B3: Prison sentences of less than 12 months compared to suspended sentence orders

Matching to OASys and including OASys vars

	Matched treatment (STC) group size	Binary 1Yr	Freq 1Yr	Binary 2Yr	Freq 2Yr	Binary 3Yr	Freq 3Yr
2008	10,089	7.9 % pts	1.00	5.3 % pts	1.38	4.3 % pts	1.70
2009	15,652	6.3 % pts	0.87	4.6 % pts	1.18	3.7 % pts	1.37
2010	11,503	5.7 % pts	0.94	3.9 % pts	1.23	-	-
2011	10,005	6.5 % pts	1.02	-	-	-	-

Matching to OASys but excluding OASys vars

	Matched treatment (STC) group size	Binary 1Yr	Freq 1Yr	Binary 2Yr	Freq 2Yr	Binary 3Yr	Freq 3Yr
2008	10,116	10.7 % pts	1.23	7.5 % pts	1.75	6.0 % pts	2.20
2009	15,679	8.6 % pts	1.07	6.5 % pts	1.51	5.0 % pts	1.79
2010	11,639	7.7 % pts	1.12	5.3 % pts	1.56	-	-
2011	10,073	8.9 % pts	1.25	-	-	-	-

STC = Short term custody (<12 months)

Table B4: One year follow-up results including sex offenders

Prison sentences of less than 12 months compared to community orders and suspended sentence orders

	Matched treatment (STC) size	Binary			Frequency (per offender)			Frequency (per re-offender)		
		STC	COs	Impact	STC	COs	Impact	STC	COs	Impact
2008	10,278	65.7%	60.4%	5.2 % pts	3.41	2.62	0.78	5.18	4.34	0.85
2009	15,995	63.7%	59.3%	4.4 % pts	3.15	2.49	0.67	4.95	4.19	0.76
2010	11,879	64.2%	60.4%	3.8 % pts	3.42	2.73	0.69	5.32	4.52	0.80
2011	10,357	66.7%	62.0%	4.7 % pts	3.67	2.88	0.79	5.50	4.65	0.85

STC = Short term custody (<12 months); COs = 'Court orders' (community and suspended sentence orders combined)

Prison sentences of less than 12 months compared to community orders

	Matched treatment (STC) size	Binary			Frequency (per offender)			Frequency (per re-offender)		
		STC	COM	Impact	STC	COM	Impact	STC	COM	Impact
2008	10,281	65.7%	61.6%	4.1 % pts	3.41	2.68	0.73	5.19	4.35	0.84
2009	15,984	63.7%	60.3%	3.5 % pts	3.15	2.60	0.56	4.95	4.31	0.64
2010	11,825	64.2%	61.4%	2.8 % pts	3.42	2.81	0.61	5.32	4.58	0.74
2011	10,336	66.7%	62.9%	3.8 % pts	3.67	3.00	0.67	5.50	4.76	0.74

STC = Short term custody (<12 months); COM = Community orders

Prison sentences of less than 12 months compared to suspended sentence orders

	Matched treatment (STC) size	Binary			Frequency (per offender)			Frequency (per re-offender)		
		STC	SSO	Impact	STC	SSO	Impact	STC	SSO	Impact
2008	10,263	65.6%	58.0%	7.7 % pts	3.39	2.39	1.00	5.16	4.12	1.04
2009	15,978	63.7%	57.4%	6.3 % pts	3.15	2.29	0.86	4.94	3.99	0.96
2010	11,784	64.1%	58.3%	5.8 % pts	3.41	2.47	0.94	5.31	4.23	1.09
2011	10,298	66.6%	60.0%	6.6 % pts	3.64	2.64	1.00	5.47	4.40	1.06

STC = Short term custody (<12 months); SSO = Suspended sentence orders

Table B5: Proven re-offending over 5 years (2008 cohort)

Follow-up	Binary			Frequency (per offender)			Frequency (per re-offender)		
	STC	COs	Impact	STC	COs	Impact	STC	COs	Impact
1 Year	66.1%	60.9%	5.2 % pts	3.44	2.63	0.81	5.20	4.32	0.88
2 Years	76.8%	73.2%	3.6 % pts	5.82	4.64	1.18	7.58	6.34	1.24
3 Years	81.8%	78.9%	2.9 % pts	7.94	6.43	1.51	9.71	8.15	1.56
4 Years	84.3%	82.0%	2.2 % pts	9.85	8.03	1.82	11.68	9.79	1.90
5 Years	86.1%	83.9%	2.2 % pts	11.64	9.55	2.09	13.53	11.39	2.14

STC = Short term custody (<12 months); COs = 'Court orders' (community and suspended sentence orders combined)

Table B6: Breakdown of re-offending over a 5 year follow-up period (2008 cohort)

Follow-up	Binary								Frequency (per offender)		
	Proportional breakdown				Rate for those who did not re-offend in previous year(s)						
	STC	COs	Difference		STC	COs	Difference		STC	COs	Difference
1 Year	76.8%	72.6%	4.1	% pts	66.1%	60.9%	5.2	% pts	3.44	2.63	0.81
2 Years	12.4%	14.6%	-2.1	% pts	36.7%	37.3%	-0.6	% pts	2.38	2.01	0.38
3 Years	5.8%	6.8%	-1.0	% pts	25.0%	25.4%	-0.4	% pts	2.12	1.79	0.33
4 Years	2.9%	3.8%	-0.9	% pts	16.0%	17.8%	-1.9	% pts	1.91	1.60	0.31
5 Years	2.1%	2.2%	-0.1	% pts	13.1%	12.1%	1.0	% pts	1.80	1.52	0.27
All	**100.0%**	**100.0%**							**11.64**	**9.55**	**2.09**

STC = Short term custody (<12 months); COs = 'Court orders' (community and suspended sentence orders combined)

Table B7: Proven re-offending over 5 years (2008 cohort) including sex offenders

Follow-up	Binary			Frequency (per offender)			Frequency (per re-offender)		
	STC	COs	Impact	STC	COs	Impact	STC	COs	Impact
1 Year	65.7%	60.4%	5.2 % pts	3.41	2.62	0.78	5.18	4.34	0.85
2 Years	76.4%	72.7%	3.7 % pts	5.77	4.61	1.16	7.55	6.34	1.21
3 Years	81.3%	78.4%	2.9 % pts	7.86	6.38	1.48	9.66	8.13	1.53
4 Years	83.9%	81.6%	2.3 % pts	9.75	7.96	1.79	11.62	9.76	1.86
5 Years	85.7%	83.4%	2.2 % pts	11.53	9.47	2.06	13.46	11.35	2.11

STC = Short term custody (<12 months); COs = 'Court orders' (community and suspended sentence orders combined)

Table B8: Regression analysis of impact of previous offending on re-offending outcomes

Re-offending group (2009 cohort)	Coefficient	Robust std. err	z	p>lzl	95% conf interval	
STC	-0.20	0.21	-0.94	0.35	-0.60	0.21
Prev 1–2	0.87	0.07	12.92	0.00	0.74	1.00
Prev 3–5	1.47	0.06	23.17	0.00	1.35	1.60
Prev 6–10	1.91	0.06	30.89	0.00	1.79	2.03
Prev 11–15	2.23	0.06	35.08	0.00	2.11	2.36
Prev 16–25	2.55	0.06	41.00	0.00	2.43	2.67
Prev 26–50	2.98	0.06	48.50	0.00	2.86	3.10
Prev 51+	3.53	0.06	56.61	0.00	3.41	3.65
Prev 1–2 *STC	0.37	0.24	1.55	0.12	-0.10	0.83
Pre 3–5 * STC	0.17	0.22	0.76	0.45	-0.27	0.61
Prev 6–10 * STC	0.25	0.22	1.18	0.24	-0.17	0.68
Prev 11–15 * STC	0.31	0.22	1.42	0.15	-0.12	0.73
Prev 16–25 * STC	0.53	0.21	2.49	0.01	0.11	0.95
Prev 26–50 * STC	0.44	0.21	2.07	0.04	0.02	0.86
Prev 51+ * STC	0.48	0.21	2.23	0.03	0.06	0.90

STC = Short term custody (<12 months); Prev = previous offending

Note: in all tables below * = significant at 0.1 level, ** = significant at 0.05 level, *** = significant at 0.01 level. Impact estimates are based on pre-rounded scores, and as such may not precisely match the rounded re-offending levels provided in the tables. Where the group of those given particular combinations of requirements consisted of less than 100 cases, it was judged that a comparison would not be robust, and therefore analysis was not undertaken. This accounts for some omissions in the results tables provided.

Table B9: Comparisons of community orders and prison sentences of less than 12 months

Treatment	Control	Treatment Size, Matched & Off support	Matched Control Size	1-Yr Binary & 1-Yr Frequency (Treatment)	1-Yr Binary & 1-Yr Frequency (Control)	Impact estimate
Curfew + Supervision + Activity	STC	1,103 3	47,598	48.5% 1.70	53.7% 2.21	**-5.2%pts*** ** -0.50*****
Curfew + Supervision + Activity + Programme	STC	359 2	47,598	60.4% 2.15	61.5% 2.60	**-1.1%pts** **-0.45*****
Unpaid + Supervision + Activity	STC	4,203 21	47,598	43.7% 1.39	45.7% 1.70	**-2.0%pts**** -0.31*****
Unpaid + Supervision + Activity + Programme	STC	983 5	47,598	56.4% 1.92	55.3% 2.19	**1.1%pts** **-0.28*****
Unpaid + Curfew + Supervision + Activity	STC	508 2	47,598	48.8% 1.59	52.1% 2.02	**-3.3%pts** **-0.43*****
Unpaid + Curfew + Supervision + Activity + Programme	STC	122 2	46,953	51.6% 1.61	62.9% 2.57	**-11.3%pts**** -0.97*****

STC = Short term custody (<12 months)

Table B10: Comparisons of suspended sentence orders and prison sentences of less than 12 months

Treatment	Control	Treatment Size, Matched & Off support	Matched Control Size	1-Yr Binary & 1-Yr Frequency (Treatment)	1-Yr Binary & 1-Yr Frequency (Control)	Impact estimate
Curfew + Supervision + Activity	STC	506 6	47,598	47.0% 1.48	50.4% 2.09	**-3.3%pts** **-0.61*****
Curfew + Supervision + Activity + Programme	STC	174 0	47,598	56.9% 1.74	59.9% 2.43	**-3.0%pts** **-0.70*****
Unpaid + Supervision + Activity	STC	1,628 4	47,598	34.4% 0.90	41.0% 1.49	**-6.6%pts*** ** -0.59*****
Unpaid + Supervision + Activity + Programme	STC	401 1	47,598	47.6% 1.35	53.7% 2.10	**-6.1%pts**** -0.75*****
Unpaid + Curfew + Supervision + Activity	STC	185 5	47,598	45.4% 1.20	46.5% 1.66	**-1.1%pts** **-0.46*****

STC = Short term custody (<12 months)

Table B11: Impact of adding requirements (community orders)

Additive Treatment	Control	Treatment Size, Matched & Off support	Matched Control Size	1-Yr Binary & 1-Yr Frequency (Treatment)	1-Yr Binary & 1-Yr Frequency (Control)	Impact estimate
Supervision	Curfew	4,885	4,227	46.0%	49.6%	-3.5%pts***
		51		1.61	1.80	-0.19**
Supervision	Unpaid + Activity	4,212	1,159	43.6%	46.4%	-2.8%pts%
		12		1.38	1.45	-0.07
Supervision	Unpaid	20,860	27,462	35.3%	37.2%	-1.9%pts***
		12		1.06	1.12	-0.06**
Activity	Curfew	159	4,227	46.5%	45.1%	1.4%pts
		7		1.48	1.61	-0.13
Activity	Curfew + Supervision	1,098	4,936	48.5%	49.2%	-0.7%pts
		8		1.70	1.74	-0.04
Activity	Curfew + Supervision + Programme	357	2,483	60.8%	56.9%	3.9%pts
		4		2.13	1.96	0.18
Activity	Unpaid + Supervision	4,220	20,872	43.7%	42.2%	1.5%pts *
		4		1.38	1.35	0.04
Activity	Unpaid	1,159	27,462	41.0%	37.5%	3.5%pts **
		0		1.24	1.15	0.08
Activity	Unpaid + Supervision + Programme	987	9,886	56.0%	49.9%	6.1%pts ***
		1		1.90	1.56	0.34***
Programme	Unpaid + Supervision	9,881	20,872	41.5%	43.4%	-1.9%pts ***
		5		1.23	1.37	-0.14***
Programme	Curfew + Supervision	2,447	4,936	47.8%	48.9%	-1.1%pts
		36		1.50	1.67	-0.17**
Programme	Unpaid	145	24,835	29.0%	31.9%	-2.9%pts
		0			0.94	-0.12
Programme	Unpaid + Activity + Supervision	983	4,224	56.2%	53.7%	2.4%pts
		5		1.91	1.83	0.09
Programme	Curfew + Activity + Supervision	348	1,106	56.2%	56.6%	0.4%pts
		13		2.07	2.06	0.02
Activity + Supervision	Curfew	1,079	4,227	48.9%	54.4%	-5.5%pts ***
		27		1.71	1.95	-0.24*
Activity + Supervision	Unpaid	4,219	27,462	43.7%	43.0%	0.6%pts
		5		1.38	1.37	0.02
Activity + Supervision + Programme	Curfew	359	4,227	60.7%	61.4%	-0.7%pts
		2		2.15	2.40	-0.25
Activity + Supervision + Programme	Unpaid	978	27,462	56.2%	52.5%	3.8%pts **
		10		1.90	1.79	0.12

Table B12: Impact of adding requirements (suspended sentence orders)

Additive Treatment	Control	Treatment Size, Matched & Off support	Matched Control Size	1-Yr Binary & 1-Yr Frequency (Treatment)	1-Yr Binary & 1-Yr Frequency (Control)	Impact estimate
Supervision	Unpaid	11,064 22	9,235	28.9% 0.79	29.4% 0.80	**-0.5%pts -0.02**
Supervision	Curfew	2,751 117	1,246	42.5% 1.41	45.4% 1.52	**-2.9%pts -0.11**
Activity	Curfew + Supervision	501 11	2,868	47.1% 1.47	42.9% 1.44	**4.2%pts 0.03**
Activity	Curfew + Supervision + Programme	171 3	1,951	57.3% 1.75	49.2% 1.62	**8.1%pts** 0.13
Activity	Unpaid + Supervision	1,627 5	11,086	34.2% 0.90	34.7% 1.00	**-0.4%pts -0.10****
Activity	Unpaid + Supervision + Programme	401 1	6,336	47.4% 1.34	45.3% 1.41	**2.1%pts -0.07**
Activity	Unpaid	406 1	9,235	28.1% 0.77	26.0% 0.70	**2.1%pts 0.07**
Programme	Unpaid + Supervision	6,331 5	11,086	38.7% 1.10	38.9% 1.15	**-0.2%pts -0.04**
Programme	Curfew + Supervision	1,938 13	2,868	44.4% 1.35	46.9% 1.49	**-2.5%pts -0.14**
Programme	Unpaid + Activity + Supervision	384 18	1,632	46.6% 1.30	44.2% 1.28	**2.5%pts 0.02**
Activity + Supervision	Unpaid	1,617 15	9,235	34.1% 0.89	34.4% 1.00	**-0.3%pts -0.11****
Activity + Supervision + Programme	Unpaid	392 10	9,235	46.9% 1.34	46.0% 1.38	**0.9%pts -0.04**

Table B13: Suspended sentence order requirements compared to community order requirements

Treatment (suspended sentence orders)	Control (community orders)	Treatment Size, Matched & Off support	Matched Control Size	1-Yr Binary & 1-Yr Frequency (Treatment)	1-Yr Binary & 1-Yr Frequency (Control)	Impact estimate
Curfew + Supervision + Activity	Curfew + Supervision + Activity	510 2	1,106	46.7% 1.48	47.0% 1.64	**-0.3%pts -0.16**
Unpaid + Supervision + Activity	Unpaid + Supervision + Activity	1,607 25	4,224	34.6% 0.90	41.0% 1.33	**-6.4%pts***** **-0.42*****