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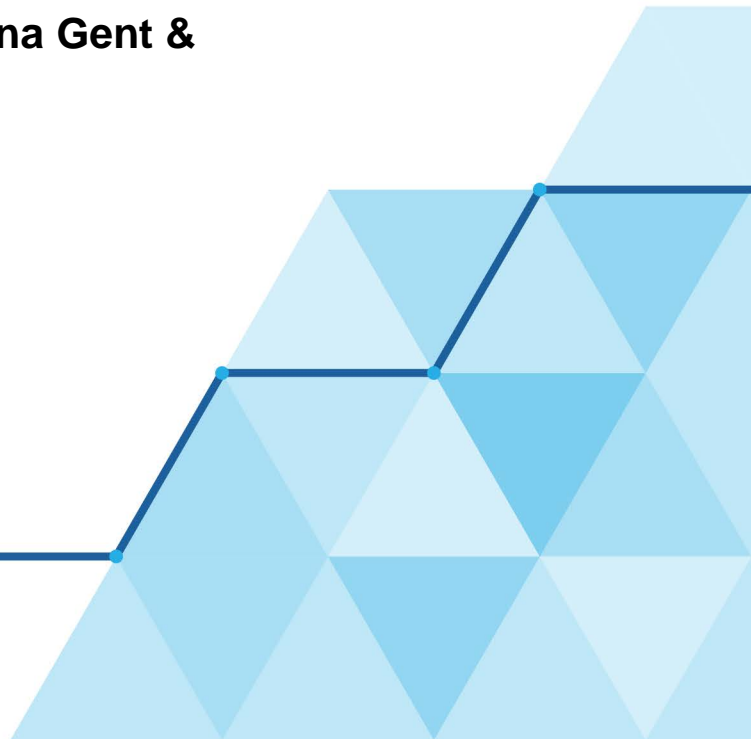
The impact of oral and fast delivery pre-sentence reports (PSRs) on the completion of court orders

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1. Summary

1.1 Background

A pre-sentence report is advice given to the court following the facts of the case, expert risks and needs assessments, including an independent sentencing proposal and additional relevant information. They must be as objective as possible and exist to assist the judiciary with sentencing.

The number of pre-sentence reports written in England and Wales has decreased in recent years – from 211,494 in 2010 to 103,004 in 2019.¹ This was an area of concern in the 2020 white paper, A Smarter Approach to Sentencing, which stated that “The purpose of a pre-sentence report (PSR) is to facilitate the administration of justice, and to reduce an offender’s likelihood of reoffending and to protect the public and/or victim(s) from further harm. A PSR does this by assisting the court to determine the most suitable method of sentencing an offender (Criminal Justice Act 2003, section 158)”.

The paper proposed that “further work is undertaken to build the evidence base on the impact that a PSR has [...] on offender outcomes, sentencing behaviour and the efficient administration of justice”. Following this, a PSR pilot began in March 2021.² Separately, this report examines the impact of a PSR oral or fast delivery report on the reason that a court order (or sentence) terminated. This analysis specifically looks at adults sentenced to a Community Order or Suspended Sentence Order (with requirements) in England and Wales in 2016.

¹ Offender Management Statistics Quarterly: October to December 2020, Ministry of Justice, April 2021

² [Pre-sentence report pilot in 15 magistrates' courts - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/pre-sentence-report-pilot-in-15-magistrates-courts)

1.2 Key findings

The overall results show statistically significant evidence that those who received a PSR oral or PSR fast delivery in 2016 were more likely to successfully complete their court order, compared with a group of similar offenders who did not receive a PSR.

In particular:

- 80% of those who received a PSR fast delivery in 2016 successfully completed their court order. This is higher than for similar offenders who did not receive any type of PSR (73%).
- 73% of those who received a PSR oral in 2016 successfully completed their court order. This is higher than for similar offenders who did not receive any type of PSR (68%).

These impacts on completion of court orders are based on estimates of what would happen if instead of receiving a PSR oral or fast delivery, the case had not received a PSR. This analysis includes PSRs prepared for both magistrate and crown courts.

The results of this analysis should not be directly compared to termination outcomes in other analyses or to figures such as national averages due to the use of a time-bounded sample, and the propensity score matching (PSM) technique used to ensure otherwise dissimilar groups were comparable. In addition, the results for PSR fast delivery and PSR orals should not be directly compared.

The results of this analysis should not be regarded as definitive; it is intended to provide initial evidence of the impact of PSRs and so only looks at the reason that a court order terminates as an outcome. The limitations of this study are discussed in section 5.1 alongside suggestions for areas that could be valuable to explore in greater depth.

However, these findings increase the evidence on the effectiveness of PSRs and therefore it can be recommended that oral and fast delivery reports are requested and delivered to increase successful termination of court orders.

2. Introduction

2.1 Aim

Before an offender is sentenced, the National Probation Service may be asked to prepare a pre-sentence report (PSR) in order to assist with sentencing. They include a full risk assessment considering risk of harm to others, the causes of offending, likelihood of reoffending and a recommendation for the most appropriate sentence. The aforementioned sentencing white paper determines that the pre-sentence report can contribute to targeting particular issues and break the cycle of offending.

As proposed by the sentencing white paper, this report seeks to build the evidence base on the impact that a PSR has by evaluating their impact on offender outcomes. Specifically, this research asks if offenders who have a PSR at sentence are more likely to successfully complete their court order or terminate early (for failure to comply with requirements/conviction of an offence)? This analysis specifically looks at adults sentenced to a Community Order or Suspended Sentence Order (with requirements) in England and Wales in 2016.

2.2 Definitions

There are different types of pre-sentence report:

- **Fast delivery oral** pre-sentence reports – An oral pre-sentence report (PSR) is usually completed within 24 hours of conviction due to a limited amount of information required by the sentencing court. Reports are completed by NPS staff to help the sentencing court determine the offender's suitability for sentence envisaged by court, helping to avoid delays.
- **Fast delivery** written pre-sentence reports – A 'fast-delivery' (expedited) PSR can be completed on the day of sentence by probation court officers. This type of report will only be suitable where the cases are of 'low seriousness' or even 'medium seriousness' and where the court indicates that a community sentence is being considered. This report may also be suitable where the

court is considering custody. These reports will be prepared by a probation officer and may include a full assessment of the offender using the Offender Assessment System (OASys), an electronic risk assessment system used by both the Prison and Probation Services.

- **Standard** written delivery reports – A standard delivery PSR is based on a full OASys assessment and is suitable for 'medium' and 'high' seriousness cases when the court has indicated that a possible community sentence or where a custodial sentence is being considered.³

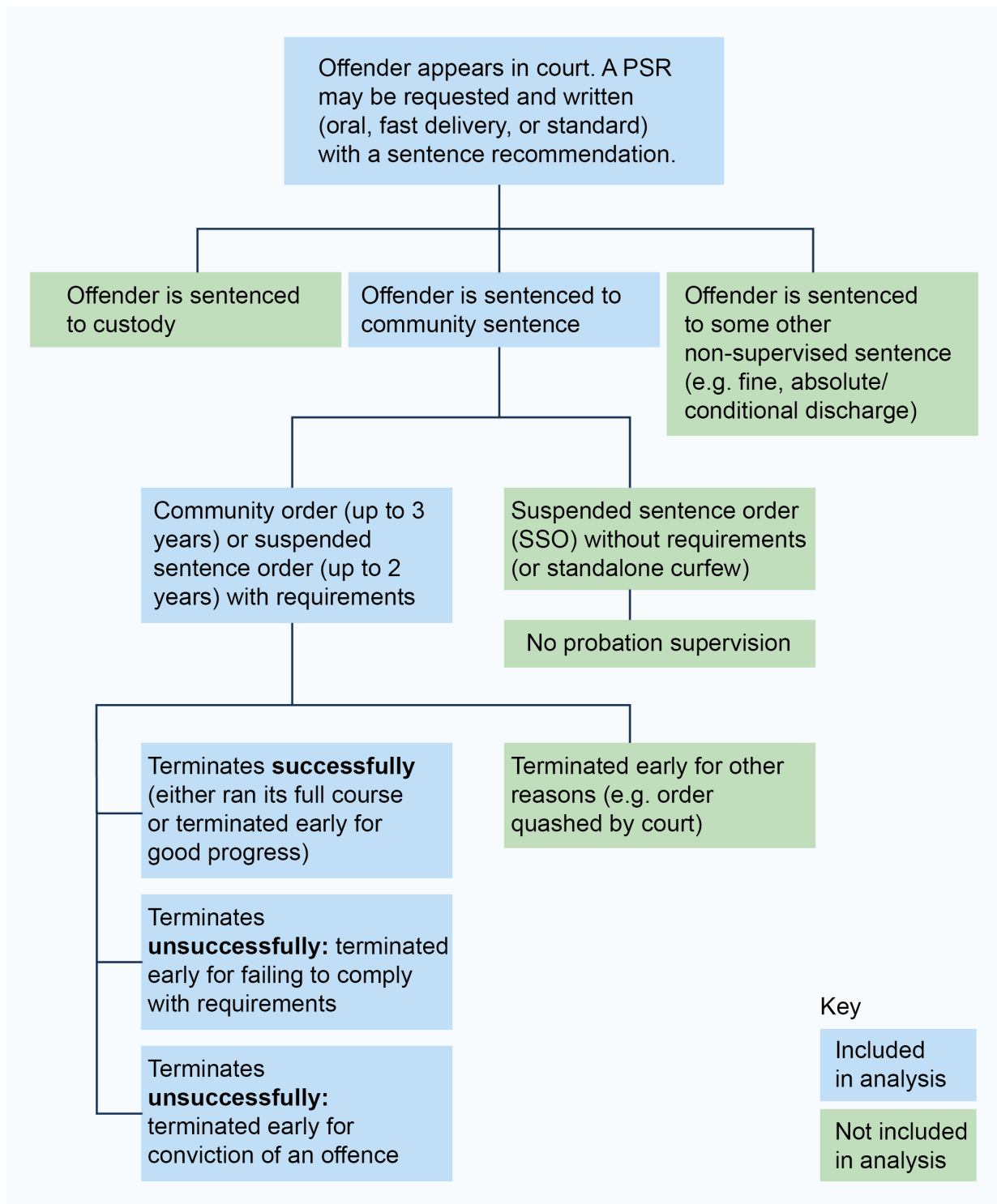
Only fast-delivery oral and fast-delivery written (henceforth will be referred to as PSR oral and PSR fast delivery) are considered within the scope of this report. PSR standard written delivery reports made up 7% of all pre-sentence reports written in 2016,⁴ due to this and the complexity of the cases that receive a PSR standard report, they will not be included in this analysis.

A **community order (CO)** under the Criminal Justice Act 2003 is a sentence served in the community that has one or more requirements attached to it, for example unpaid work, an accredited programme or alcohol treatment. A **suspended sentence order (SSO)** was introduced in the Criminal Justice Act 2003 and can be given to cases that pass the custody threshold but suspend the custody sentence for a period of 6 months to 2 years while the offender completes certain requirements in addition to the condition that no further offences are committed. Only cases supervised by the probation service are included in this analysis. Cases will not be supervised by the probation service if they have no requirements attached (i.e. SSO solely on condition that no further offences are committed) or if the requirement is a standalone curfew. Figure 1 highlights the cases that are considered in this analysis, and the process from being given a PSR in court to the court order terminating.

³ Definition taken from the 2021 version of 'Guide to the offender management statistics quarterly'. See references.

⁴ Offender Management Statistics Quarterly: Probation 2020, Ministry of Justice, April 2021.

Figure 1: Cases considered in this analysis



To measure the effect a PSR has on an offender’s sentence outcome, this report looks at the reason for ending the period of probation supervision (in this case the community order or suspended sentence order – with requirement). This is also known as the reason for **termination** of the court order.

“Successful” termination includes cases where the community order or suspended sentence order with requirements ran its full course or terminated early for good progress.

“Unsuccessful” termination includes cases which terminated early for failure to comply with requirements or conviction of an offence during their order.

Orders may also terminate for other reasons unrelated to offender conduct, such as the order being quashed by the court or because the offender has died. Having a PSR should have no impact on these terminations; these have been excluded from the study.

3. Methodology

3.1 Propensity Score Matching

Exploring the impact of receiving a PSR on sentence outcomes is challenging, due to the need to construct a comparison group (or counter-factual) to enable measurement of effects. That is, what would have happened if a PSR had not been given. As it is not feasible or ethical to randomly allocate offenders to receive (or not receive) PSRs, we cannot follow a randomised controlled trial approach to isolate the treatment effect. Instead, this study uses propensity score matching (PSM) to create a counter-factual group, an approach adopted by, among others, Mews and Eaton (2019) and Mews et al (2015).

Such matching seeks to reduce bias resulting from factors being predictive of receiving “treatment” (in this case, a PSR) rather than indicative of the effect of the treatment. In this case, PSM enables the outcomes of offenders receiving PSRs to be compared to outcomes of similar (matched) offenders who did not receive them, and therefore the effect of the PSRs to be estimated.

This PSM approach involves calculating the conditional probability (or propensity score; between 0 and 1) of receiving a PSR, using observable factors likely to be associated with both the likelihood of the offender being given the PSR (i.e. the treatment) and that the offender will complete their order successfully (i.e. the outcome possibly related to treatment). Those given the 'treatment' - a PSR - are matched to those receiving the 'comparison' - no PSR - based on these propensity scores. Effectively, for every case given a PSR, one or more similar cases that did not receive a PSR must be identified. In this analysis, only 1 “treatment” case did not achieve a match for the fast delivery analysis and 5 did not for the oral analysis. The difference in the rate of successful court order completion between the matched ‘treatment’ and ‘comparison’ groups then represents an estimate of the average (mean) ‘treatment’ effect for those who received a PSR fast delivery or oral relative to what would have happened if they had not received a PSR.

The same methodology was used both for the analysis of those that received a PSR oral and PSR fast delivery, although both analyses were ran independently, i.e. the PSM process was undertaken twice. This was necessary as the 2016 dataset showed cases that received a PSR were typically different to those without a PSR. It was also of interest to analyse the different report types separately as they have different formats and contain varying information. Additionally, the circumstances in which they are requested can be quite different, with PSR fast delivery potentially being more complex, or requiring an adjournment to complete, when compared to an Oral report. It is of interest to look at these separately, to ensure each achieves what it needs to.

3.2 Data Processing

Table 1: Number of cases in the overall sentenced population 2016 compared to the subset used in the analysis⁵

		1. Overall cases in 2016	2. Cases used in analysis
Community orders	No PSR	13,584	12,283
	PSR fast delivery	17,692	16,856
	PSR oral	31,461	29,862
	PSR Standard	1,959	-
	Total	64,696	59,001
Suspended Sentence Orders with requirements	No PSR	6,205	5,684
	PSR fast delivery	15,559	15,211
	PSR oral	11,448	11,183
	PSR Standard	1,826	-
	Total	35,038	32,078

The base dataset used in the analysis contained details of all cases (sentencing occasions) that started either a Community Order (CO) or Suspended Sentence Order

⁵ Though care has been taken to ensure the dataset represents and accurate representation of community sentences in 2016, different filters and validation rules were applied compared to those in Official Statistics and so figures may not match exactly. Refer to Table A4.1 *Offender Management Statistics Quarterly, October to December 2021* for the most up to date figures of offenders starting probation supervision.

(SSO) with requirements in 2016 and had terminated between 2016 and 2019.⁶ This was in order to represent cases that were supervised by the probation service⁷ and that had completed their court order before the impact of COVID-19 in 2020. The initial dataset consisted of 64,696 Community Orders and 35,038 Suspended Sentence Orders (with requirements).

This data was then linked to a dataset that contained details of all PSRs written in 2016 via a case identifier that was unique to the sentencing occasion. All cases that did not have a matching record within the PSR dataset were assumed not to have a PSR.

Both datasets were extracted from the Probation Service's case management system, nDelius.

After this linking, the following cases were removed from the combined dataset (i.e. removed from both those that received a PSR and those that did not). Note, the numbers have been rounded:

- 980 cases that occurred because of non-compliance (a breach) of the offender's previous sentence, as these cases are generally not considered for a PSR.
- 3,440 cases that had terminated early due to 'other' reasons. This included reasons such as death of the offender and offender transferring to another jurisdiction thus assumed this outcome would have not been influenced by the existence of a PSR.
- 450 cases that had missing information for key characteristics such as age not known, sentence length unknown and an offence type that could not be

⁶ The maximum sentence length of a community order is 3 years, the maximum operational length of a suspended sentence order is 2 years, hence all orders started in 2016 should have terminated by the end of 2019.

⁷ Cases sentenced to custody or a suspended sentence order without a requirement are not managed by the probation service and so would not have the reason for sentence completion recorded in the same way that community sentences (COs and SSOs) do.

grouped into the 12 main categories. This is because these cases would not be able to be matched appropriately.

After this data processing, the final dataset used for the analysis consisted of 59,001 Community Order cases and 32,078 Suspended Sentence Order cases. Data processing eliminated a greater proportion of cases with no PSR (both Community Orders and Suspended Sentence Orders, attrition rate of 10% and 8% respectively) compared to cases with a fast delivery or oral PSR (attrition rate of 5% for CO's and 2% for SSO's). Consequently, a smaller pool of possible matches was available for the 'comparison' group – though still large enough to complete the PSM process.

3.3 Assumptions

A main assumption made in the PSM process is the conditional independence assumption (also called unconfoundedness), which means the selection of treatment is solely based on observable characteristics and that all variables that influence treatment assignment and potential outcomes are simultaneously covered by the researcher. Hence for this assumption to be plausible, all characteristics impacting both an offender receiving a PSR and their sentence outcome need to be controlled for.

Following the PSM exercise, it is assumed that where two people - one in the treatment group and one in the comparison group - have the same propensity score, it's purely random chance which is in the treatment group and which isn't, i.e. all non-random variation is controlled. Following consultation with policy and subject experts, over 20⁸ matching variables were used for this purpose. Variables were related to either the likelihood of receiving a PSR or the outcome, which were tested for a 0.2 level of statistically significant contribution to the model. However, it is not possible to include any unmeasured factors influencing both the decision to request a PSR and the successful completion of a court order and consequently residual bias may remain. Thus, the conclusions of this analysis cannot be considered definitive.

⁸ These may not appear to match the reference table, as requirements are separate variables, however they have been grouped as requirements in the reference tables for readability.

To enable the analysis to take suitable account of repeat offenders, and accurately match the sentencing occasion with the PSR the data used looks at cases - sentencing occasions - rather than unique offenders. The downside of this approach is that there is a cluster effect present in the data since the same offender can have multiple sentences in the same year. This could lead to downwards bias in the standard errors calculated for the PSM and in significance testing of the impacts, and in turn cause results to be falsely found as statistically significant. However, the clustering in the dataset used was negligible (1.04 average sentencing occasions per offender for fast delivery, 1.07 for oral) so taking a more complex approach was considered unnecessary as any consequent bias should be of low magnitude.

3.4 Analysis

The following workflow was undertaken using R:

- 1) Logistic regression model
- 2) Propensity score calculation
- 3) Propensity score matching and evaluation
- 4) Weighted chi squared test (to evaluate statistical significance of the results)
- 5) Cohort analysis (to evaluate variation in the datasets before/after matching)

Firstly, a logistic regression model was built that predicted the likelihood of a case receiving the treatment (a PSR oral/ fast delivery) instead of the control (no PSR). This enabled the identification of variables that had a relationship with receiving the treatment, such as offender and offence characteristics. All variables included in the model had a probability (p) value of less than 0.2. The level of significance of 0.2 is consistent with the academic literature (e.g. See Appendix C for more detail on the logistic model used.)

The propensity score - the probability of each case receiving a PSR instead of the control for each case - was then calculated by applying the logistic regression model to the dataset.

Next, cases were matched based on the similarity of propensity scores so that as many cases in the treatment group could be matched to at least one case in the control group. There are various matching methods available, the method used in this analysis was the Epanechnikov Kernel⁹ approach. This involved each treatment observation being matched to as many comparison observations as possible (within a range of 0.1 caliper width) with the latter being weighted according to the proximity of their (logit of) propensity scores to those of the treatment observations. For consistency, it was also decided to use this matching method for both the PSR oral and fast delivery analysis, as a high match quality was achieved for both. The quality of the match was assessed by:

- a) comparing the distributions of the propensity scores
- b) comparing the proportion of treatment individuals matched for each method
- c) comparing standardised (mean) differences

As seen in Appendix D, the distributions of propensity scores after the matching were very similar. The standardised differences were all very small (the highest 3.5%) indicating a good match.¹⁰ This meant a slightly larger bandwidth of 0.1 could still be used effectively to allow more matches to be found (only 1 treatment case did not achieve a match for the fast delivery analysis and 5 did not for the oral analysis).

Finally, a weighted chi squared test was ran on the matched dataset to find out if the population conditional distributions were identical or sufficiently different to suggest a causal effect of one variable on another. A weighted test was chosen to account for the fact that multiple control cases were matched to a single treatment case. For both PSR fast delivery and PSR oral analysis, the conclusion that those with a PSR were more likely to successfully complete their court order rather than early for conviction of offence or failing to comply with requirements was statistically significant to a p-value

⁹ The Epanechnikov kernel weighs different comparison and treatment group members according to how closely their propensity scores match within the agreed matching range, with more similar propensity scores receiving a greater weighting than those less similar. See more detail on [methodology-investigations.pdf \(publishing.service.gov.uk\)](#)

¹⁰ A guide for interpreting standardised differences is as follows:

- those $\leq 5\%$ = 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

of 0.01. See appendix E for a summary of results. This means that the null hypothesis that there is no impact on the termination reason can be disregarded at a 1% level for both PSR types.

Table F2 (appendix F) shows that cases included in the analysis which received a PSR oral had different characteristics than those which received a PSR fast delivery. For example, a higher proportion of cases with a PSR fast delivery: received a suspended sentence order (compared to community order), had greater sentence lengths, and more requirements were attached when compared to oral PSRs.

Oral cases were more prevalent in certain regions like the North East and South East, compared to fast delivery cases. Therefore, the matched comparison group in the oral analysis differ from the matched comparison group in the fast delivery analysis and so the results cannot be regarded as a single analysis.

3.5 Limitations

Though care has been taken to ensure accurate and robust analysis, there are some known limitations that should be taken into consideration when interpreting the findings in this report:

As noted previously, the differences between the termination outcomes of the treatment and comparison groups could be due to unobserved factors not included in this analysis. It is still possible that the behaviour of the treatment and comparison groups will differ due to unobserved characteristics such as the impact of other interventions, motivation to change offending behaviour or the complexity of personal problems. Further research could look into linking variables from OASys.¹¹

Careful consideration was given to which variables were included, including those that occur in relation to sentencing. Although there is a potential limitation by matching on variables relating to the sentence, which could possibly cause the variation in successful completion rate between the no PSR/with PSR cohorts to be overstated. However, sensitivity testing matching on variables available pre-sentence alone, finds

¹¹ OASys is the Offender Assessment System, used in England and Wales to measure the risks and needs of criminal offenders under their supervision.

no significant variation in the estimated success rates (~80% vs. ~73% in PSR fast delivery vs no PSR and ~73% vs 68% in PSR oral vs no PSR), or in the statistical significance of this variation.

Furthermore, although over 20 matching variables were used with the matching process creating well-balanced and representative groups, it is not possible to completely discount the influence of any unmeasured characteristics – for example motivation to change offending behaviour or the complexity of personal problems - on both the likelihood that a court order terminated successfully and the Judges' decision to request a PSR.

The analysis does not account for cases where a PSR may have been used from a previous sentence (and the use of PSR is not recorded in the dataset as a new one was not requested). It was assumed that if no record of a PSR was found when matching to the sentence information, then the case did not receive a PSR at sentence. This means there could have been more cases sentenced with a recycled PSR than included in this analysis, though this is unusual. Out of the initial dataset of COs and SSOs sentenced in 2016, less than 2% of cases had 2 or more sentences where the most recent sentence did not receive a PSR. The relevant probation instruction ("Determining Pre-Sentence Reports", ref. PI 04/2016) recommends that where a PSR has been completed within the last 6 months, PSR authors should consider presenting this along with an oral update on any change in circumstances/offence analysis. PSRs completed within 1 year may be presented, but more detailed consideration as to whether the information/analysis remains current. Magistrates are advised (in the Adult Court Bench Book) to consider whether a recent PSR is available to the court rather than ordering a new report.

This analysis only includes those sentenced in 2016, and consequently variables/phenomena specific to that year could make the results unrepresentative of other years. In particular, external factors may prevent these results being representative to other years, such as TR¹² (Transforming Rehabilitation) potentially impacting those from 2015/prior years, those from 2017/subsequent years may be

¹² From June 2014, the way that offenders were managed by the Probation Service changed in a reform programme known as Transforming Rehabilitation. [More information can be found here.](#)

impacted by COVID-19 (due to the 3 year period between sentencing and termination considered by this study).

The impact of a PSR only relates to the characteristics of those in the treatment group rather than the whole dataset of adults who received a CO or SSO with requirements in 2016 and so may be quite different on an entirely different group of offenders. For this reason, the behaviour measured in this analysis should not be directly compared to termination outcomes in other analysis or to figures such as national averages. However, the initial dataset used contained all COs and SSOs with requirements sentenced in 2016 and only a small number of cases were removed for the analysis (8,655 cases removed from the full dataset of 99,734 cases, see Table 1). The cases contained in the analysis should therefore sufficiently represent the population of COs and SSOs with requirements sentenced in 2016. Additionally, descriptive analysis of the base dataset and the dataset after matching were compared and it appears that the distribution of characteristics of the matched group of PSR fast delivery and orals, as well as those that did not receive a PSR were similar to that of the base dataset. This suggests that the sample used was representative of cases that received a CO or SSO (with requirements) with a PSR oral, fast delivery or no PSR in 2016.

The administrative dataset used only records where a PSR was requested and prepared and contains no information on the quality of each report. Therefore, this analysis cannot draw any conclusions about how the quality of oral and fast delivery reports impact completion of court orders.

4. Results

The analysis found statistically significant¹³ evidence that an offender sentenced in 2016 that received a PSR fast delivery or PSR oral was more likely to successfully complete their court order and less likely to terminate early for failure to comply with requirements or conviction between 2016-2019, compared with a group of similar offenders which did not receive a PSR – see the main results in Appendix E.

4.1 PSR Fast Delivery

- ~80% of those who received a PSR fast delivery in 2016 successfully completed their court order. This is significantly higher than the comparison group (**7 percentage points higher**) which comprised similar offenders to those who received a PSR fast delivery but did not receive a PSR.
- ~11% of those who received a PSR fast delivery in 2016 terminated their court order early for conviction of a further offence. This is significantly lower than the comparison group (**4 percentage points lower**) which comprised similar offenders to those who received a PSR fast delivery but did not receive a PSR.
- ~9% of those who received a PSR fast delivery in 2016 terminated their court order early for failure to comply with requirements. This is significantly lower than the comparison group (**3 percentage points lower**) which comprised similar offenders to those who received a PSR fast delivery but did not receive a PSR.

¹³ At the 1% significance level

4.2 PSR Oral

- ~73% of those who received an oral PSR in 2016 successfully completed their court order. This is significantly higher than the comparison group (**5 percentage points higher**) which comprised similar offenders who did not receive a PSR.
- ~15% of those who received an oral PSR in 2016 terminated their court order early for conviction of a further offence. This is significantly lower than the comparison group (**2 percentage points lower**) which comprised similar offenders to those who received a PSR oral but did not receive a PSR.
- ~13% of those who received an oral PSR in 2016 terminated their court order early for failure to comply with requirements. This is significantly lower than the comparison group (**2 percentage points lower**) which comprised similar offenders to those who received an oral PSR but did not receive a PSR.

Please note the analysis of PSR oral and PSR fast delivery should not be directly compared as the matched comparison groups contain different offenders with different characteristics. Therefore, it cannot be concluded that fast delivery reports were 7% more likely to terminate successfully than oral reports, although the relative efficacy of fast delivery and oral PSRs is of interest.

5. Discussion

These findings demonstrate that the requesting of a PSR oral or PSR fast delivery is related to the successful completion of a court order, and therefore it is recommended that these reports are requested and delivered.

Additionally, these findings support the wider work across the MoJ to increase the instances of advice being given to court in the form of a PSR.

This study does not consider the influence of a PSR report on the sentence handed down. As PSRs typically propose a sentence, the extent to which, if at all, the advice of the PSR is implemented and further work to explore whether these findings are impacted by the PSR advice being followed would be useful.

While in Section 3.3 Assumptions, it was considered that further data linking (e.g. to extracts from OASys and the PNC¹⁴) might reduce sample size and bias the dataset towards more complex cases, this assumption could be tested. Making further “pre-sentencing” variables available for review/matching would enable the goodness of match between the treatment and control groups to be verified or improved, and facilitate further analysis of the relationship between sentence completion and sentence characteristics, and the impact of a PSR on these characteristics.

Additionally, whilst the groups receiving PSR oral and PSR fast were different in some ways, in other characteristics, such as gender, they were similarly distributed. It would be useful to consider whether the PSR report has the same statistical significance across all different groups.

Research on the quality of a pre-sentence report was undertaken in 2020, which questioned whether PSRs provided sufficiently analytical and personalised (to the service user) advice, in order to aid with the court’s decision making (HM Inspectorate of Probation, 2020). The report considered “standard” (these can take up to 15 working days to complete, and are used for serious cases involving high complexity or

¹⁴ Police National Computer

serious sexual or violent crime), “short format” (fast delivery) and oral reports, and found that 97% of standard delivery reports, 82% of the short format, and 65% of the oral reports were sufficiently analytical and personalised to the service user (although it is noted that only 30 (4%) of the reports available were standard delivery reports; 535 (67%) were oral and 237 (30%) were short format). This report was broadly supportive of the HMPPS reforms promoting the use of PSRs, and indicated that fast delivery PSRs might offer a necessary increase in analytical depth relative to oral PSRs. However, as noted before, the dataset used in this study contains no information on the quality of each report, and the oral and fast delivery cohorts considered by this study are not directly comparable. This suggestion would therefore require further investigation, e.g. by matching cohorts between PSR types.

This study considers only the reason for court order termination. While the successful completion of a court order is desirable and indicates no reoffending during the period of the sentence, it is not a direct proxy for reoffending (arguably the most desirable outcome) or for other outcomes that might be considered markers of “success”. The evidence base for PSR reports would be augmented by investigation into the relationship between a case that receives a PSR in court and further outcomes related to the offender, for example whether they attended their initial meeting with a probation officer, reoffended (following the expiry of the court order), had suitable accommodation or employment post-sentence.

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Appendix B

Variables used in Propensity Score Matching

Table B1: Variables used in Propensity Score Matching

Variable	Data type	Description
Gender	Nominal	<ul style="list-style-type: none"> • Male • Female
Age at sentence	Continuous ¹⁵	Integer values (18+)
Ethnic group	Nominal	Ethnicities are grouped as: <ul style="list-style-type: none"> • White • Black or Black British • Asian or Asian British • Chinese or Other Ethnic Group • Missing/Not stated.
OGRS ¹⁶ score	Discrete / Ordinal	10 bins: <ul style="list-style-type: none"> • 0-9 • 10-19 • 20-29 • 30-39 • 40-49 • 50-59 • 60-69 • 70-79 • 80-89 • 90-100
Type of sentence	Nominal	Either Community Order (CO) or Suspended Sentence Order (SSO) with requirements
Offence type:	Nominal	12 broad categories: <ul style="list-style-type: none"> • Criminal damage and arson • Drug offences • Fraud offences • Misc. crimes against society • Possession of weapons • Public order offences • Robbery

¹⁵ Whilst age is a discrete variable in the data, for the purposes of the regression model it has been treated as a continuous variable rather than a categorical one, as this produced a slightly lower AIC score.

¹⁶ OGRS Score is the offender group reconviction score which is a predictor of re-offending based on static risks – age, gender, and criminal history.

Variable	Data type	Description
		<ul style="list-style-type: none"> • Sexual offences • Summary motoring • Theft offences • Violence against the person
Sentence length	Discrete / Ordinal	<ul style="list-style-type: none"> • Less than 12 months • 12 months • 13-24 months • 25-36 months
Probation region where the case terminated	Categorical	Using the 7 pre-2020 probation regions: <ul style="list-style-type: none"> • North East • North West • Midlands • London • South East and Eastern • South West • Wales
Number of requirements attached to sentence	Discrete / Ordinal	1, 2, 3 or '4 or more'
Requirement type: <ul style="list-style-type: none"> • Accredited programme • Residential • Unpaid Work • Supervision • Drug treatment • Alcohol treatment • Curfew • Mental health • Specified activity • Prohibited activity • Exclusion • Rehabilitation • Electronic Monitoring • Attendance centre 	Categorical	Yes / No depending on whether the type of requirement was attached to the sentence

Appendix C

Logistic Regression Model

The following tables show the coefficient estimate, standard error, z and p values and significance of each of the variables used in the logistic regression model predicting the likelihood of a case receiving a PSR. This exercise was carried out for the Fast Delivery PSR and the Oral PSR separately.

Please note, squared terms were used for age in the model as it was a continuous variable.¹⁷

Table C1: Logistic regression model predicting the likelihood of a case receiving a PSR fast delivery

Parameter		Coefficient Estimate	Standard Error	z-value	p-value (Pr(> z))	Significance ¹⁸
intercept		1.450	0.119	12.159	<0.000	***
Termination Region	London	0.553	0.043	12.840	<0.000	***
	Midlands	-0.379	0.037	-10.280	<0.000	***
	North East	-0.223	0.037	-5.992	<0.000	***
	South East and Eastern	-0.747	0.039	-19.076	<0.000	***
	South West	-0.689	0.038	-18.036	<0.000	***
	Wales	-0.527	0.045	-11.634	<0.000	***
Gender	Female	0.017	0.031	0.551	0.582	

¹⁷ 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).

¹⁸ . = significant at 0.1 level, * = significant at 0.05 level, ** = significant at 0.01 level, *** = significant at 0.001 level

Parameter		Coefficient Estimate	Standard Error	z-value	p-value (Pr(> z))	Significance ¹⁸
Age		-0.002	0.006	-0.426	0.670	
Age squared		0.000	0.000	2.658	0.008	**
Ethnic Groups	Asian or Asian British	0.203	0.051	3.965	0.000	***
	Black or Black British	0.003	0.049	0.069	0.945	
	Chinese or other Ethnic Group	0.128	0.097	1.315	0.189	
	Missing	0.017	0.037	0.452	0.652	
	Mixed	-0.003	0.062	-0.044	0.965	
Type of Sentence	SSOs with requirements	0.315	0.026	12.259	<0.000	***
Offence Type	Criminal damage and arson	0.114	0.158	0.722	0.470	
	Drug offences	-0.017	0.045	-0.381	0.703	
	Fraud offences	-0.159	0.058	-2.728	0.006	**
	Miscellaneous crimes against society	0.214	0.047	4.556	<0.000	***
	Possession of weapons	-0.024	0.060	-0.401	0.689	
	Public order offences	0.102	0.053	1.928	0.054	
	Robbery	-0.080	0.179	-0.446	0.655	
	Sexual offences	0.167	0.094	1.784	0.075	.
	Summary motoring	-0.946	0.043	-21.770	<0.000	***
	Theft offences	-0.822	0.034	-24.385	<0.000	***
	Violence against the person	0.103	0.041	2.533	0.011	*

Parameter		Coefficient Estimate	Standard Error	z-value	p-value (Pr(> z))	Significance ¹⁸
OGRS Group	0-9	-1.080	0.043	-25.375	<0.000	***
	20-29	-0.089	0.046	-1.917	0.055	
	30-39	0.047	-6.446	0.000	<0.000	***
	40-49	-0.480	0.046	-10.368	<0.000	***
	50-59	-0.605	0.047	-12.949	<0.000	***
	60-69	-0.758	0.046	-16.343	<0.000	***
	70-79	-0.926	0.047	-19.697	<0.000	***
	80-89	-1.130	0.049	-23.017	<0.000	***
	90-100	-1.480	0.069	-21.456	<0.000	***
Number of requirements	2	-0.052	0.044	-1.180	0.238	
	3	-0.148	0.076	-1.951	0.051	
	4 or more	-0.273	0.115	-2.373	0.018	*
Sentence Length	Between 13 and 24 months	0.594	0.029	20.617	<0.000	***
	Between 25 and 26 months	0.757	0.106	7.126	<0.000	***
	Less than 12 months	-0.577	0.044	-13.071	<0.000	***
Requirements	Accredited Programme	0.467	0.055	8.431	<0.000	***
	Residential	-0.055	0.154	-0.355	0.723	
	Unpaid Work	0.419	0.049	8.541	<0.000	***
	Supervision	0.826	0.068	12.149	<0.000	***
	Drug Treatment	0.028	0.057	0.494	0.621	
	Alcohol Treatment	0.207	0.063	3.296	0.001	***

Parameter		Coefficient Estimate	Standard Error	z-value	p-value (Pr(> z))	Significance ¹⁸
	Curfew	0.175	0.050	3.476	0.001	***
	Mental Health	0.354	0.143	2.479	0.013	*
	Specified Activity	0.165	0.132	1.253	0.210	
	Prohibited Activity	0.281	0.155	1.813	0.070	.
	Exclusion	-0.258	0.113	-2.281	0.023	*
	Electric Monitoring	0.501	0.126	3.977	0.000	***
	Attendance Sentence	-0.053	0.122	-0.438	0.662	
Absence of requirement	Rehabilitation	-1.350	0.047	-28.806	<0.000	***

Table C2: Logistic regression model predicting the likelihood of a case receiving a PSR oral

Parameter	Detail	Coefficient Estimate	Standard Error	z-value	p-value (Pr(> z))	Significance ¹⁹
intercept		1.230	0.108	11.423	<0.000	***
Termination Region	London	0.055	0.040	1.361	0.174	
	Midlands	-0.240	0.032	-7.511	0.000	***
	North East	-0.444	0.034	-13.133	<0.000	***
	South East and Eastern	-0.116	0.032	-3.626	<0.000	***
	South West	-0.494	0.032	-15.227	<0.000	***
	Wales	-0.766	0.041	-18.809	<0.000	***

¹⁹ . = significant at 0.1 level, * = significant at 0.05 level, ** = significant at 0.01 level, *** = significant at 0.001 level

Parameter	Detail	Coefficient Estimate	Standard Error	z-value	p-value (Pr(> z))	Significance ¹⁹
Gender	Female	0.157	0.026	5.995	<0.000	***
Age		0.000	0.000	4.355	<0.000	***
Age squared		-0.013	0.005	-2.525	0.012	*
Ethnic Groups	Asian or Asian British	0.001	0.048	0.019	0.984	
	Black or Black British	-0.149	0.045	-3.316	0.001	***
	Chinese or other Ethnic Group	-0.107	0.091	-1.181	0.237	
	Missing	-0.095	0.033	-2.910	0.004	
	Mixed	-0.192	0.056	-3.421	0.001	
Type of Sentence	SSOs with requirements	-0.247	0.023	-10.576	<0.000	***
Offence Type	Criminal damage and arson	-0.277	0.159	-1.744	0.081	
	Drug offences	0.119	0.042	2.861	0.004	**
	Fraud offences	0.332	0.052	6.418	0.000	***
	Miscellaneous crimes against society	0.011	0.046	0.229	0.819	
	Possession of weapons	0.296	0.055	5.336	<0.000	***
	Public order offences	-0.462	0.055	-8.450	<0.000	***
	Robbery	-1.520	0.266	-5.719	<0.000	***
	Sexual offences	-1.130	0.128	-8.851	<0.000	***
	Summary motoring	0.471	0.032	14.860	<0.000	***
	Theft offences	-0.090	0.028	-3.279	0.001	**

Parameter	Detail	Coefficient Estimate	Standard Error	z-value	p-value (Pr(> z))	Significance ¹⁹
	Violence against the person	-0.275	0.041	-6.665	<0.000	***
OGRS Group	0-9	0.743	0.039	19.264	<0.000	***
	20-29	0.755	0.041	18.239	<0.000	***
	30-39	0.645	0.042	15.210	<0.000	***
	40-49	0.518	0.041	12.616	<0.000	***
	50-59	0.470	0.041	11.526	<0.000	***
	60-69	0.375	0.040	9.418	<0.000	***
	70-79	0.260	0.040	6.586	<0.000	
	80-89	0.208	0.040	5.238	<0.000	
	90-100	0.090	0.051	1.771	0.077	
Number of requirements	2	0.087	0.037	2.360	0.018	
	3	0.054	0.066	0.827	0.408	
	4 or more	0.046	0.103	0.442	0.658	
Sentence Length	Between 13 and 24 months	-0.046	0.028	-1.641	0.101	
	Between 25 and 26 months	-1.060	0.138	-7.696	<0.000	
	Less than 12 months	-0.244	0.034	-7.183	<0.000	
Requirements	Accredited Programme	0.283	0.051	5.609	<0.000	
	Residential	-0.142	0.151	-0.942	0.346	
	Unpaid Work	-0.295	0.043	-6.796	<0.000	
	Supervision	-0.542	0.074	-7.347	<0.000	

Parameter	Detail	Coefficient Estimate	Standard Error	z-value	p-value (Pr(> z))	Significance ¹⁹
	Drug Treatment	0.105	0.047	2.224	0.026	
	Alcohol Treatment	0.177	0.056	3.175	0.001	
	Curfew	-0.043	0.044	-0.968	0.333	
	Mental Health	-0.431	0.153	-2.811	0.005	
	Specified Activity	-0.527	0.162	-3.246	0.001	
	Prohibited Activity	0.017	0.149	0.112	0.911	
	Exclusion	-0.329	0.090	-3.648	<0.000	
	Electric Monitoring	-0.010	0.111	-0.086	0.932	***
	Attendance Sentence	0.094	0.094	0.995	0.320	
Absence of requirement	Rehabilitation	-0.715	0.040	-17.925	<0.000	

Appendix D

Propensity Score Matching Errors

The following tables show the % composition of the treatment/matched control groups on each variable used for propensity score matching and the weighted standard difference between the groups. This exercise was carried out for the Fast Delivery PSR and the Oral PSR separately. The weighted standard differences are low – up to a maximum of 3.45% variation (for the Accredited Programme requirement in the Fast Delivery PSR matching exercise.)

Please note, squared terms were used for age in the model as it was a continuous variable.²⁰

Table D1: Characteristics after matching for PSR fast delivery analysis; weighted means for treatment and control group and weighted standard difference percentage

	PSR fast delivery (Treatment group)	No PSR (Control group)	Weighted standard difference
Age	34.80318718	34.82814554	-0.22%
Age, squared	1338.529626	1343.041809	-0.50%
ethnicgroups == "Asian or Asian British"	5.94%	5.64%	1.32%
ethnicgroups == "Black or Black British"	6.39%	6.29%	0.38%
ethnicgroups == "Chinese or Other Ethnic Group"	1.41%	1.29%	1.04%
ethnicgroups == "Missing"	10.74%	10.45%	0.94%
ethnicgroups == "Mixed"	3.12%	3.09%	0.18%

²⁰ 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).

	PSR fast delivery (Treatment group)	No PSR (Control group)	Weighted standard difference
ethnicgroups == "White"	72.39%	73.23%	-1.90%
Gender == "Female"	14.43%	15.39%	-2.68%
Gender == "Male"	85.57%	84.61%	2.68%
numberofreqscateg == "1"	41.30%	40.81%	0.99%
numberofreqscateg == "2"	42.57%	43.23%	-1.34%
numberofreqscateg == "3"	13.03%	13.00%	0.09%
numberofreqscateg == "4 or more"	3.10%	2.96%	0.84%
Offence.type == "Criminal damage and arson"	0.55%	0.57%	-0.23%
Offence.type == "Drug offences"	8.12%	8.44%	-1.16%
Offence.type == "Fraud offences"	3.75%	3.76%	-0.08%
Offence.type == "Miscellaneous crimes against society"	8.93%	9.09%	-0.56%
Offence.type == "Possession of weapons"	3.75%	3.61%	0.74%
Offence.type == "Public order offences"	5.25%	5.70%	-1.99%
Offence.type == "Robbery"	0.52%	0.63%	-1.36%
Offence.type == "Sexual offences"	2.35%	2.39%	-0.25%
Offence.type == "Summary motoring"	4.13%	4.04%	0.47%
Offence.type == "Summary non-motoring"	41.08%	40.03%	2.14%
Offence.type == "Theft offences"	9.87%	9.63%	0.81%
Offence.type == "Violence against the person"	11.70%	12.12%	-1.28%
ogrs.groups == "0-9"	12.08%	11.95%	0.42%
ogrs.groups == "10-19"	17.20%	16.39%	2.17%

	PSR fast delivery (Treatment group)	No PSR (Control group)	Weighted standard difference
ogrs.groups == "20-29"	12.31%	11.84%	1.43%
ogrs.groups == "30-39"	10.83%	10.59%	0.77%
ogrs.groups == "40-49"	10.82%	10.84%	-0.09%
ogrs.groups == "50-59"	10.05%	10.45%	-1.30%
ogrs.groups == "60-69"	9.85%	10.20%	-1.18%
ogrs.groups == "70-79"	8.64%	9.36%	-2.51%
ogrs.groups == "80-89"	6.47%	6.78%	-1.25%
ogrs.groups == "90-100"	1.75%	1.60%	1.20%
req_accredited_programme == "No"	83.69%	84.95%	-3.45%
req_accredited_programme == "Yes"	16.31%	15.05%	3.45%
req_alcohol_treatment == "No"	94.59%	94.20%	1.67%
req_alcohol_treatment == "Yes"	5.41%	5.80%	-1.67%
req_attendance_centre == "No"	99.48%	99.60%	-1.84%
req_attendance_centre == "Yes"	0.52%	0.40%	1.84%
req_curfew == "No"	87.94%	87.78%	0.50%
req_curfew == "Yes"	12.06%	12.22%	-0.50%
req_drug_treatment == "No"	93.79%	93.23%	2.27%
req_drug_treatment == "Yes"	6.21%	6.77%	-2.27%
req_electronic_monitoring == "No"	99.06%	99.01%	0.45%
req_electronic_monitoring == "Yes"	0.94%	0.99%	-0.45%
req_exclusion == "No"	99.29%	99.33%	-0.51%

	PSR fast delivery (Treatment group)	No PSR (Control group)	Weighted standard difference
req_exclusion == "Yes"	0.71%	0.67%	0.51%
req_mental_health == "No"	99.17%	99.02%	1.50%
req_mental_health == "Yes"	0.83%	0.98%	-1.50%
req_prohibited_activity == "No"	99.41%	99.40%	0.16%
req_prohibited_activity == "Yes"	0.59%	0.60%	-0.16%
req_rehabilitation == "No"	29.26%	28.65%	1.33%
req_rehabilitation == "Yes"	70.74%	71.35%	-1.33%
req_residential == "No"	99.49%	99.41%	1.13%
req_residential == "Yes"	0.51%	0.59%	-1.13%
req_specified_activity == "No"	99.29%	99.28%	0.15%
req_specified_activity == "Yes"	0.71%	0.72%	-0.15%
req_supervision == "No"	94.65%	94.45%	0.88%
req_supervision == "Yes"	5.35%	5.55%	-0.88%
req_unpaidwork == "No"	51.43%	52.05%	-1.24%
req_unpaidwork == "Yes"	48.57%	47.95%	1.24%
sentencelength == "12 months"	52.29%	52.53%	-0.49%
sentencelength == "Between 13 and 24 months"	41.59%	41.79%	-0.41%
sentencelength == "Between 25 and 36 months"	2.09%	2.05%	0.28%
sentencelength == "Less than 12 months"	4.04%	3.63%	2.13%
termination.region == "London"	18.14%	16.80%	3.53%
termination.region == "Midlands"	17.23%	17.22%	0.02%

	PSR fast delivery (Treatment group)	No PSR (Control group)	Weighted standard difference
termination.region == "North East"	15.93%	17.22%	-3.48%
termination.region == "North West"	18.98%	19.25%	-0.68%
termination.region == "South East and Eastern"	11.06%	10.34%	2.33%
termination.region == "South West"	11.49%	11.22%	0.84%
termination.region == "Wales"	7.17%	7.94%	-2.92%
typeofsentence == "Community orders"	52.57%	51.00%	3.13%
typeofsentence == "SSOs with requirements"	47.43%	49.00%	-3.13%

Table D2: Characteristics after matching for PSR oral analysis; weighted means for treatment and control group and weighted standard difference percentage

	PSR oral (Treatment group)	No PSR (Control group)	Weighted standard difference
Age	34.11503411	34.32462153	-1.92%
Age, squared	1281.922052	1299.378841	-2.04%
ethnicgroups == "Asian or Asian British"	4.41%	4.61%	-0.97%
ethnicgroups == "Black or Black British"	4.72%	4.76%	-0.22%
ethnicgroups == "Chinese or Other Ethnic Group"	1.03%	1.09%	-0.59%
ethnicgroups == "Missing"	10.12%	10.52%	-1.29%
ethnicgroups == "Mixed"	2.52%	2.56%	-0.28%
ethnicgroups == "White"	77.20%	76.45%	1.77%
Gender == "Female"	18.21%	18.32%	-0.29%

	PSR oral (Treatment group)	No PSR (Control group)	Weighted standard difference
Gender == "Male"	81.79%	81.68%	0.29%
numberofreqscateg == "1"	51.00%	51.28%	-0.56%
numberofreqscateg == "2"	37.70%	37.63%	0.14%
numberofreqscateg == "3"	9.42%	9.24%	0.59%
numberofreqscateg == "4 or more"	1.89%	1.84%	0.30%
Offence.type == "Criminal damage and arson"	0.29%	0.30%	-0.06%
Offence.type == "Drug offences"	6.05%	6.24%	-0.80%
Offence.type == "Fraud offences"	4.43%	4.68%	-1.20%
Offence.type == "Miscellaneous crimes against society"	4.28%	4.47%	-0.91%
Offence.type == "Possession of weapons"	3.66%	3.71%	-0.29%
Offence.type == "Public order offences"	2.36%	2.53%	-1.11%
Offence.type == "Robbery"	0.06%	0.05%	0.30%
Offence.type == "Sexual offences"	0.29%	0.28%	0.15%
Offence.type == "Summary motoring"	17.15%	16.76%	1.05%
Offence.type == "Summary non-motoring"	34.83%	34.11%	1.53%
Offence.type == "Theft offences"	21.51%	21.57%	-0.14%
Offence.type == "Violence against the person"	5.10%	5.32%	-0.99%
ogrs.groups == "0-9"	11.97%	11.39%	1.81%
ogrs.groups == "10-19"	13.84%	14.15%	-0.91%
ogrs.groups == "20-29"	10.51%	10.58%	-0.25%
ogrs.groups == "30-39"	9.33%	9.28%	0.14%

	PSR oral (Treatment group)	No PSR (Control group)	Weighted standard difference
ogrs.groups == "40-49"	9.70%	9.65%	0.18%
ogrs.groups == "50-59"	9.66%	9.62%	0.15%
ogrs.groups == "60-69"	10.23%	10.34%	-0.38%
ogrs.groups == "70-79"	10.20%	10.13%	0.22%
ogrs.groups == "80-89"	10.17%	10.28%	-0.36%
ogrs.groups == "90-100"	4.40%	4.57%	-0.82%
req_accredited_programme == "No"	91.20%	91.53%	-1.18%
req_accredited_programme == "Yes"	8.80%	8.47%	1.18%
req_alcohol_treatment == "No"	94.42%	94.35%	0.29%
req_alcohol_treatment == "Yes"	5.58%	5.65%	-0.29%
req_attendance_centre == "No"	99.10%	99.13%	-0.34%
req_attendance_centre == "Yes"	0.90%	0.87%	0.34%
req_curfew == "No"	90.09%	90.83%	-2.52%
req_curfew == "Yes"	9.91%	9.17%	2.52%
req_drug_treatment == "No"	90.52%	90.02%	1.67%
req_drug_treatment == "Yes"	9.48%	9.98%	-1.67%
req_electronic_monitoring == "No"	99.22%	99.27%	-0.64%
req_electronic_monitoring == "Yes"	0.78%	0.73%	0.64%
req_exclusion == "No"	99.09%	99.17%	-0.85%
req_exclusion == "Yes"	0.91%	0.83%	0.85%
req_mental_health == "No"	99.72%	99.72%	0.04%

	PSR oral (Treatment group)	No PSR (Control group)	Weighted standard difference
req_mental_health == "Yes"	0.28%	0.28%	-0.04%
req_prohibited_activity == "No"	99.65%	99.64%	0.30%
req_prohibited_activity == "Yes"	0.35%	0.36%	-0.30%
req_rehabilitation == "No"	38.04%	38.85%	-1.66%
req_rehabilitation == "Yes"	61.96%	61.15%	1.66%
req_residential == "No"	99.69%	99.70%	-0.15%
req_residential == "Yes"	0.31%	0.30%	0.15%
req_specified_activity == "No"	99.82%	99.82%	-0.01%
req_specified_activity == "Yes"	0.18%	0.18%	0.01%
req_supervision == "No"	98.72%	98.78%	-0.51%
req_supervision == "Yes"	1.28%	1.22%	0.51%
req_unpaidwork == "No"	47.64%	46.65%	1.99%
req_unpaidwork == "Yes"	52.36%	53.35%	-1.99%
sentencelength == "12 months"	72.27%	72.06%	0.46%
sentencelength == "Between 13 and 24 months"	19.28%	20.00%	-1.83%
sentencelength == "Between 25 and 36 months"	0.28%	0.28%	-0.13%
sentencelength == "Less than 12 months"	8.18%	7.65%	1.96%
termination.region == "London"	10.40%	10.65%	-0.80%
termination.region == "Midlands"	17.80%	18.16%	-0.93%
termination.region == "North East"	21.00%	20.97%	0.08%
termination.region == "North West"	11.83%	11.68%	0.44%

	PSR oral (Treatment group)	No PSR (Control group)	Weighted standard difference
termination.region == "South East and Eastern"	19.49%	18.82%	1.70%
termination.region == "South West"	13.68%	13.75%	-0.21%
termination.region == "Wales"	5.80%	5.97%	-0.69%
typeofsentence == "Community orders"	72.75%	71.78%	2.17%
typeofsentence == "SSOs with requirements"	27.25%	28.22%	-2.17%

Appendix E

Results

Table E1: Overall comparisons of the results of PSM analysis on PSR fast delivery

	Treatment Group (Fast Delivery PSR)	Control group (no PSR)
Size of group (before matching)	32,067	17,967
Size of group (after matching)	32,066	17,949
Successful completion of court order	80.2%	72.6%
Unsuccessful completion – reoffence	10.8%	15.1%
Unsuccessful completion – breach of requirements	9.0%	12.3%
Impact estimate ²¹	<0.000***	<0.000***

Table E2: Overall comparisons of the results of PSM analysis on oral PSRs

	Treatment Group (Oral PSR)	Control group (no PSR)
Size of group (before matching)	41,045	17,967
Size of group (after matching)	41,040	17,960
Successful completion of court order	72.6%	67.8%
Unsuccessful completion - reoffence	14.5%	17.1%
Unsuccessful completion – breach of requirements	13.0%	15.1%
Impact estimate ²²	<0.000***	<0.000***

²¹ * = significant at 0.1 level, ** = significant at 0.05 level, *** = significant at 0.01 level.

²² * = significant at 0.1 level, ** = significant at 0.05 level, *** = significant at 0.01 level.

Appendix F

Distributions of variables for total cases, before matching and after matching

Table F1: Variable distribution for the full dataset (no filters on missing information or terminated for 'other' reasons)

	No PSR full dataset	PSR fast delivery full dataset	PSR oral full dataset	PSR standard full dataset
Total cases (N)	19,789	33,251	42,909	3,785
Gender				
Female	16%	14%	18%	7%
Male	84%	86%	82%	93%
Age				
18-20	8%	6%	7%	4%
21-24	16%	14%	15%	14%
25-29	20%	19%	19%	17%
30-39	31%	30%	31%	26%
40-49	16%	18%	18%	18%
50-59	6%	9%	8%	13%
60 and over	2%	3%	2%	8%
Missing	0%	0%	0%	1%
Ethnicity				
Asian or Asian British	4%	6%	4%	4%
Black or Black British	5%	6%	5%	4%
Chinese or Other Ethnic Group	1%	1%	1%	1%
Missing	10%	11%	10%	6%
Mixed	3%	3%	3%	2%
Other		0%		
White	77%	72%	77%	83%

	No PSR full dataset	PSR fast delivery full dataset	PSR oral full dataset	PSR standard full dataset
Type of sentence				
Community orders	69%	53%	73%	52%
SSOs with requirements	31%	47%	27%	48%
Region				
London	10%	18%	11%	13%
Midlands	17%	17%	18%	6%
North East	17%	16%	21%	20%
North West	15%	19%	12%	18%
South East and Eastern	16%	11%	19%	19%
South West	17%	12%	14%	18%
Wales	9%	7%	6%	7%
Offence type				
Criminal damage and arson	0%	1%	0%	1%
Drug offences	6%	8%	6%	2%
Fraud offences	4%	4%	4%	1%
Miscellaneous crimes against society	5%	9%	4%	27%
Other offences	0%	0%	0%	0%
Possession of weapons	3%	4%	4%	2%
Public order offences	4%	5%	2%	5%
Robbery	0%	1%	0%	1%
Sexual offences	1%	2%	0%	17%
Summary motoring	11%	4%	17%	1%
Summary non-motoring	33%	41%	35%	29%
Theft offences	27%	10%	22%	3%
Violence against the person	7%	12%	5%	12%

	No PSR full dataset	PSR fast delivery full dataset	PSR oral full dataset	PSR standard full dataset
OGRS scores²³				
Low	37%	46%	40%	62%
Medium	29%	34%	32%	26%
High	21%	16%	19%	10%
Very High	12%	5%	9%	2%
Sentence length				
Less than 12 months	11%	4%	8%	2%
12 months	68%	53%	73%	28%
Between 13 and 24 months	20%	41%	19%	53%
Between 25 and 36 months	1%	2%	0%	16%
Length unknown	0%	0%	0%	0%
Number of requirements				
1	59%	41%	51%	37%
2	32%	43%	38%	43%
3	8%	13%	9%	15%
4 or more	2%	3%	2%	4%

²³ 0-33% (**Low**), 34-66% (**Medium**), 67-84% (**High**), 85-99% (**Very High**).

Table F2: Variable distribution for the dataset before matching (with filters)

	PSR fast delivery	PSR Oral	Comparison group (No PSR)
Total cases (N)	32,067	41,045	17,967
Gender			
Female	14%	18%	16%
Male	86%	82%	85%
Age			
18-20	6%	7%	8%
21-24	14%	15%	16%
25-29	19%	20%	20%
30-39	31%	31%	31%
40-49	19%	18%	17%
50-59	9%	8%	6%
60 and over	3%	2%	2%
Missing	0%	0%	0%
Ethnicity			
Asian or Asian British	6%	4%	4%
Black or Black British	6%	5%	5%
Chinese or Other Ethnic Group	1%	1%	1%
Missing	11%	10%	10%
Mixed	3%	3%	3%
Other			
White	72%	77%	77%
Type of sentence			
Community orders	68%	53%	73%
SSOs with requirements	32%	47%	27%

	PSR fast delivery	PSR Oral	Comparison group (No PSR)
Region			
London	18%	10%	10%
Midlands	17%	18%	17%
North East	16%	21%	16%
North West	19%	12%	15%
South East and Eastern	11%	20%	16%
South West	12%	14%	17%
Wales	7%	6%	9%
Offence type			
Criminal damage and arson	1%	0%	0%
Drug offences	8%	6%	6%
Fraud offences	4%	4%	4%
Miscellaneous crimes against society	9%	4%	5%
Other offences	0%	0%	0%
Possession of weapons	4%	4%	3%
Public order offences	5%	2%	4%
Robbery	1%	0%	0%
Sexual offences	2%	0%	1%
Summary motoring	4%	17%	11%
Summary non-motoring	41%	35%	33%
Theft offences	10%	22%	27%
Violence against the person	12%	5%	7%
OGRS scores			
High	15%	19%	21%
Low	46%	40%	38%
Medium	34%	32%	29%
Very High	4%	9%	12%

	PSR fast delivery	PSR Oral	Comparison group (No PSR)
Sentence length			
Less than 12 months	4%	8%	11%
12 months	52%	72%	68%
Between 13 and 24 months	42%	19%	20%
Between 25 and 36 months	2%	0%	1%
Length unknown	0%	0%	0%
Number of requirements			
1	41%	51%	59%
2	43%	38%	32%
3	13%	9%	8%
4 or more	3%	2%	2%

Table F3: Variable distribution for the dataset after matching with/without weights

	Comparison group (No PSR) WEIGHTED	PSR fast delivery treatment group	Comparison group (No PSR) WEIGHTED	PSR oral treatment group
Total cases (N)	17,949	32,066	17,960	41,040
Gender				
Female	15%	14%	18%	18%
Male	85%	86%	82%	82%
Age				
18-20	6%	6%	7%	7%
21-24	14%	14%	14%	15%
25-29	19%	19%	19%	20%
30-39	29%	31%	31%	31%
40-49	20%	19%	19%	18%
50-59	9%	9%	8%	8%
60 and over	3%	3%	2%	2%
Missing	0%	0%	0%	0%
Ethnicity				
Asian or Asian British	6%	6%	5%	4%
Black or Black British	6%	6%	5%	5%
Chinese or Other Ethnic Group	1%	1%	1%	1%
Missing	10%	11%	11%	10%
Mixed	3%	3%	3%	3%
Other	0%	0%	0%	0%
White	73%	72%	76%	77%
Type of sentence				
Community orders	51%	53%	72%	73%
SSOs with requirements	49%	47%	28%	27%

	Comparison group (No PSR) WEIGHTED	PSR fast delivery treatment group	Comparison group (No PSR) WEIGHTED	PSR oral treatment group
Region				
London	17%	18%	11%	10%
Midlands	17%	17%	18%	18%
North East	17%	16%	21%	21%
North West	19%	19%	12%	12%
South East and Eastern	10%	11%	19%	20%
South West	11%	12%	14%	14%
Wales	8%	7%	6%	6%
Offence type				
Criminal damage and arson	1%	1%	0%	0%
Drug offences	8%	8%	6%	6%
Fraud offences	4%	4%	5%	4%
Miscellaneous crimes against society	9%	9%	4%	4%
Other offences	0%	0%	0%	0%
Possession of weapons	4%	4%	4%	4%
Public order offences	6%	5%	3%	2%
Robbery	1%	1%	0%	0%
Sexual offences	2%	2%	0%	0%
Summary motoring	4%	4%	17%	17%
Summary non-motoring	40%	41%	34%	35%
Theft offences	10%	10%	22%	22%
Violence against the person	12%	12%	5%	5%
OGRS scores				
High	16%	15%	19%	19%
Low	44%	46%	40%	40%
Medium	35%	34%	32%	32%
Very High	5%	4%	9%	9%

	Comparison group (No PSR) WEIGHTED	PSR fast delivery treatment group	Comparison group (No PSR) WEIGHTED	PSR oral treatment group
Sentence length				
Less than 12 months	4%	4%	8%	8%
12 months	53%	52%	72%	72%
Between 13 and 24 months	42%	42%	20%	19%
Between 25 and 36 months	2%	2%	0%	0%
Length unknown	0%	0%	0%	0%
Number of requirements				
1	41%	41%	51%	51%
2	43%	43%	38%	38%
3	13%	13%	9%	9%
4 or more	3%	3%	2%	2%