



Analytical Services exists to improve policy making, decision taking and practice by the Ministry of Justice. It does this by providing robust, timely and relevant data and advice drawn from research and analysis undertaken by the department's analysts and by the wider research community.

© Crown copyright 2014

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence.
To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence/> or email: psi@nationalarchives.gsi.gov.uk

Where we have identified any third party copyright material you will need to obtain permission from the copyright holders concerned.

First published March 2014

ISBN 978-1-84099-639-5
Contact info:
mojanalyticservices@justice.gsi.gov.uk

The views expressed in this Analytical Summary are those of the author, not necessarily those of the Ministry of Justice (nor do they reflect Government policy)

Updated analysis of the impact of the Intensive Alternatives to Custody pilots on re-offending rates

Aidan Mews and Cris Coxon
Analytical Services, Ministry of Justice

The Intensive Alternatives to Custody (IAC) pilot programme ran from April 2008 to March 2011 to test the use of intensive community orders in diverting offenders from short-term custodial sentences. The Ministry of Justice have undertaken updated analysis to compare re-offending rates for offenders receiving IAC orders in 2009 and 2010, with matched offenders receiving short custodial sentences and court orders. This paper summarises the key findings.

Key findings

The analysis assesses the effectiveness of Intensive Alternatives to Custody (IAC) orders in reducing re-offending compared with a) short-term custodial sentences and b) court orders. Offenders starting an Intensive Alternative to Custody (IAC) order in 2009 or 2010 were matched to similar offenders receiving these disposals and their re-offending was compared.

This report updates previous analysis published in July 2012 by including a larger sample (due to 2010 re-offending rates becoming available), using Propensity Score Matching (PSM) methodology as opposed to variable by variable matching, and by including additional offender information from Offender Assessment System (OASys), Her Majesty's Revenue and Customs (HMRC) and Department of Work and Pensions (DWP) data sources.

The key findings are:

- There is **no statistically significant difference** in the one year proven **re-offending rate** between IAC orders and short term custody, and between IAC orders and other court orders.
- There is a **statistically significant positive impact** of IAC on the one year **frequency of re-offending** relative to both short term custody (0.4 fewer offences – a 18.5% reduction) and court orders (0.3 fewer offences – a 12.4% reduction).

The one-year proven re-offending rate findings are similar to the previous analysis in that no statistically significant differences were found at the 5% significance level. However, unlike the previous analysis, this analysis found no evidence of a positive impact of IAC compared to short term custody at the 10% significance level. The previous analysis did not include one year frequency of re-offending findings.

- While a considerable amount of data have been utilised in this analysis, these were collected for administrative purposes and it is possible that there are underlying offender characteristics not captured by the data that may have had an influence on both the sentencing decision and on re-offending behaviour.

Background

The Intensive Alternatives to Custody (IAC) pilot programme ran from April 2008 to March 2011 to test the use of intensive community orders in diverting offenders from short-term custodial sentences.

The IAC pilots enabled courts to use existing community sentencing options in new ways by combining intensive probation supervision with a mix of demanding requirements and interventions delivered by partner agencies.

Probation services are currently provided by 35 Probation Trusts across England and Wales that are responsible for overseeing offenders released from prison on licence and those on community sentences made by judges and magistrates in the courts. Seven Probation Trust areas were chosen to pilot the orders: Derbyshire, West Yorkshire, South Wales, Dyfed-Powys, Manchester & Salford, Merseyside, and Humberside. Each pilot area had a degree of flexibility in terms of the approach they took, which meant there was considerable variation between the group of offenders targeted in each pilot area and the interventions delivered in each site.

The Ministry of Justice undertook initial analysis of the IAC pilots to compare proven re-offending in a group receiving IAC with a well-matched control group receiving short custodial sentences and a well-matched control group receiving court orders. That analysis was published in 2012¹ and is updated here to include an extra year of data (IAC orders commencing in 2010 as well as 2009). In addition:

- For the initial analysis, the variable by variable matching method was used. Other matching techniques, such as Propensity Score Matching (PSM), were considered, but they were considered more resource intensive and earlier analysis by the MoJ² had produced similar results when using these different techniques. As indicated in the initial analysis report of July 2012, we have now used Propensity Score Matching (PSM) to match offenders receiving IAC orders with those receiving short custodial sentences and those receiving court orders.

¹ See <https://www.gov.uk/government/publications/intensive-alternatives-to-custody-initial-analysis>

² <https://www.gov.uk/government/publications/compendium-of-reoffending-statistics-and-analysis-2011>

This represents a methodological improvement over the previous technique, enabling much more information to be considered in the matching process and a far higher number of IAC orders to be matched with both the short term custodial sentences and court orders.

- A wide range of additional information has been included in the matching process from the Offender Assessment System (OASys),³ which in particular includes measures of motivation to change, and from Her Majesty's Revenue and Customs (HMRC) and Department of Work and Pensions (DWP) data sources.⁴

Methodology

As with the initial analysis, a dataset of offenders receiving different types of sentence in England and Wales was constructed using the Police National Computer (PNC). This identifies the sentences that offenders were given and information about their re-offending. It was matched to an IAC dataset to identify offenders who have been on the IAC programme.

Both one-year proven re-offending rates⁵ and frequency of re-offending⁶ for IAC offenders were compared with matched groups of offenders in the 28 non-IAC Probation Trust areas receiving:

- Custodial sentences of less than 12 months, and
- Court Orders (Community Orders and Suspended Sentence Orders).

A 12 month follow up period was used to track re-offending (and frequency of reoffending), with a 6 month waiting period for conviction. The follow up period for re-offending starts from sentencing for community sentences and from prison release for the custodial sentences.

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

⁴ These include information on participation in the labour market and claims for benefits.

⁵ The proportion of offenders who commit an offence in a one year follow-up period which received a court conviction, caution, reprimand or warning during the one year follow-up or in a further six month waiting period.

⁶ The mean number of proven re-offences in the follow-up period per offender.

Data were combined from all seven pilot areas in order to increase numbers. Offenders who started IAC orders in 2008 were excluded because several pilot areas informed MoJ that it took time before the IAC programmes were running at an optimal level.

The reason for the control group consisting of matched offenders from non-IAC Probation Trust areas rather than from within the seven IAC Probation Trust areas was because the latter approach could result in increased selection bias, as an offender considered suitable for an IAC in this area would have received one. This was considered a higher risk than the potential area bias associated with the chosen approach.

Processing the data

There were 1,502 offenders who received IAC orders in 2009 and 2010. Where an offender received more than one IAC order, only the first was included to avoid biasing the results, since offenders could have benefited from lessons learnt in the first IAC order.



1,362 of the 1,502 offenders (91%) had identifiable IAC sentences and sentence start dates in the data set containing probation and re-offending records for the 2009 and 2010 cohorts. Of the 140 offenders that could not be linked, half could not be found in the probation and re-offending data set at all, with the appropriate sentence not being found for the other half.



1,321 of the 1,362 offenders (97%) could be linked to the data set holding tax and benefit records. Since this data share between MoJ, DWP and HMRC (which took place in 2010) achieved an 84% match rate, the likely reason for the 41 offenders not being linked is imperfect matching rather than because they have never worked or claimed benefits.



1,268 of the 1,321 offenders (96%) had an identifiable OASys assessment that was made within 30 days of the sentence date, either before or after.⁷



1,185 of the 1,268 offenders (93%) had non-missing values in all OASys variables considered to be important for analytical purposes.



The characteristics of the 136 offenders lost from the IAC group due to inability to identify an OASys assessment, or through OASys assessment variables being missing, appear similar to those of the 1,185 offenders making up the final pre-matching IAC group. More detailed information about these characteristics is shown in Annex A.

Propensity Score Matching (PSM) method

A key change for this analysis was the use of PSM to identify a well-matched control group for the purposes of comparing reoffending outcomes.

In summary, the aim of PSM is to produce a scenario where the only major difference between the treatment group (those receiving IAC orders) and control groups (offenders receiving short custodial sentences or court orders) is that the treatment group had the intervention and the control group did not. Where the effect of the treatment is isolated, confidence can be increased that a difference in re-offending rates is the result of the intervention rather than other factors. For more background on PSM and the advantages of it over

⁷ Relaxing the criteria to include identifiable OASys assessments that were completed either up to 30 days before the sentence date or up to 90 days after the sentence date would have only increased the number of offenders to 1,274.

the previously used variable by variable matching, please see Annex B and the MoJ Justice Data Lab Methodology Paper⁸ which provides a user friendly description of the technique.

For each comparison a logistic regression model was used to generate propensity scores for offenders in the unmatched treatment and control groups. Variables were included in the model provided they had a statistical relationship either with receiving an IAC or with re-offending that had a p-value of less than 0.2.⁹ This is consistent with academic literature (e.g. Apel & Sweeten, 2010) and previous Ministry of Justice research.

A list of the variables used for inclusion in the model to calculate propensity scores is provided at Annex B.

Two PSM methods were considered in matching offenders from the IAC group to each comparison group. These were:

- *one to one nearest neighbour matching with replacement.* This involves each offender in the IAC group being matched to the offender record in the comparison group with the closest propensity score, provided this closest score was within a pre-defined calliper.¹⁰
- *radius matching.* This involves each offender in the IAC group being matched to all offender records in the comparison group, provided the propensity scores are close enough; this being pre-defined by a calliper.

To identify which PSM method and size of calliper should be used, the *quality* of the matching was assessed to see if the treatment and control groups were well matched on the factors identified as being related, either to the likelihood of receiving an IAC, or to re-offending. This assessment was made using standardised (mean) differences, the lower these being, the better the quality of the matching.

As the standardised (mean) differences were lower using radius matching than one to one nearest neighbour matching, the results in this report are based on the radius matching approach. Given this approach makes use of a much greater number of

potential comparison group observations, it is also advantageous in that any difference found in re-offending rates after matching the treatment and control groups would be more likely to be statistically significant. The optimum size of calliper varied according to the comparison.¹¹

The tables in Annexes C and D show the standardised (mean) differences¹² for all important variables in each comparison. In each table all standardised differences were less than 5% while the vast majority were less than 1%, indicating excellent matches on those variables.

The validity of the results is dependent on the Conditional Independence Assumption, which assumes assignment to an IAC order is solely based on observable characteristics and that all variables that influence assignment to IAC and re-offending simultaneously are observable. A wide range of data has been utilised in this analysis, and which at least partially covers factors drawn from process evaluations¹³ that could have made offenders perceived to be suitable for an IAC order, for instance chaotic lifestyles, multiple needs and motivation to change. However, it is acknowledged that there may still be variables omitted from the matching procedure that influence both assignment to IAC and re-offending.

Results

Using PSM to identify a suitable control group, all but two of the 1,185 offenders were matched to a short custodial sentence control group, and all but one to a court order control group.

The above match rates are a substantial improvement over variable by variable matching. When applied to the 1,361 offenders who had identifiable IAC sentences and sentence start dates in the data set containing probation and re-offending records, this returned 393 exact matches (29%) for short custodial sentences and 703 exact matches (52%) for court orders.

⁸ See <http://www.justice.gov.uk/downloads/justice-data-lab/justice-data-lab-methodology.pdf>

⁹ If there is truly no relationship, then there is less than 20% chance that the relationship found is by chance alone.

¹⁰ The calliper was measured in terms of the number of standard deviations of the logit of the propensity score.

¹¹ For the comparison with short term custody a calliper of 0.1 was used, meaning a match needed to be within 0.1 standard deviations of the logit of the IAC offender's propensity score. For the comparison with court orders a calliper of 0.015 was used.

¹² The standardised (mean) differences have been weighted to take account of the one to many matching methodology.

¹³ See <https://www.gov.uk/government/publications/process-evaluations-on-intensive-alternatives-to-custody>

Table 1: One year proven re-offending rates and frequency of re-offending for 2009 and 2010 matched groups:

Group	Number of matched offenders	1 year proven re-offending rate (%)	Frequency of re-offending ¹⁴
IAC	1,183	52.9	1.8
Short custody	13,384	54.1	2.2
IAC	1,184	52.8	1.8
Court Orders	61,255	54.2	2.1

Table 1 shows that re-offending in the IAC group was 1.2 percentage points lower than in the short custodial group¹⁵ and 1.4 percentage points less than in the court orders group¹⁶ over the 12 month follow up period. However neither result was statistically significant.¹⁷

There was a statistically significant¹⁸ reduction in the frequency of re-offending. This was lower by 0.4 in the IAC group compared with the short custodial group,¹⁹ and by 0.3 compared with the court orders group.²⁰

Comparison with earlier results

The one-year proven re-offending rate findings are similar to the previous analysis in that no statistically significant differences were found at the 5% significance level. However, unlike the previous analysis, this analysis found no evidence of a positive impact of IAC compared to short term custody at the 10% significance level.

Conclusions

This analysis represents an improvement over the initial analysis published in July 2012 in that it was possible to:

- consider a larger sample of IAC orders, those for 2010 as well as those relating to 2009;
- use PSM to retain a much higher proportion of offenders receiving IAC orders for comparison

purposes and identify a larger control group matched on a much greater number of variables;

- include re-offending frequencies in addition to binary rates.

The results show there was no statistically significant difference in the one year proven re-offending rate both between IAC orders and short term custody and between IAC orders and court orders. There was, however, a statistically significant decrease in the frequency of re-offending of the IAC order group, by 0.4 compared to the short custodial group and 0.3 compared to the court orders group over the 12 month follow up period.

While a wide range of data has been utilised in this analysis, it is acknowledged that there may still be variables not taken account of in this analysis that could impact either on the sentencing decision or on re-offending.

¹⁴ The average number of re-offences per re-offender over the follow-up year.

¹⁵ With 95% confidence interval [-4.2% pts, 1.7% pts].

¹⁶ With 95% confidence interval [-4.3% pts, 1.4% pts].

¹⁷ Using a weighted t-test gave a p value of 0.43 for the comparison with short custodial sentences and 0.33 for the comparison with court orders.

¹⁸ Using a weighted t-test gave a p value of 0.001 or lower for both comparisons.

¹⁹ With 95% confidence interval [-0.58, -0.25].

²⁰ With 95% confidence interval [-0.41, -0.1].

Annex A: Representativeness of the 1,185 offenders for whom an OASys assessment could be identified within 30 days of the sentence date

136 of the 1,321 offenders were lost from the IAC group due to not being able to identify an OASys assessment within 30 days of the sentence date or through OASys assessment variables being missing. The characteristics of these 136 offenders are compared to those of the remaining 1,185 offenders in the table below.

	Without OASys assessment	With OASys assessment	Absolute Difference
Number in group	136	1,185	
Ethnicity			
White	90.4%	88.4%	2.1% pts
Black	2.2%	5.9%	-3.7% pts
Asian	6.6%	5.1%	1.5% pts
Other	0.7%	0.6%	0.1% pts
Nationality			
UK	96.3%	96.8%	-0.5% pts
Not UK	2.2%	2.5%	-0.3% pts
Unknown	1.5%	0.7%	0.8% pts
Gender			
Male	88.2%	87.7%	0.6% pts
Female	11.8%	12.3%	-0.6% pts
Mean age at start of IAC	25.5	26.3	-0.8
Index Offence			
Violence	17.6%	25.7%	-8.1% pts
Robbery	1.5%	2.2%	-0.7% pts
Public Order	2.9%	5.3%	-2.4% pts
Sexual	2.2%	0.0%	2.2% pts
Domestic Burglary	8.8%	8.4%	0.5% pts
Other Burglary	7.4%	6.8%	0.5% pts
Theft	20.6%	16.5%	4% pts
Handling	4.4%	2.5%	1.9% pts
Fraud and Forgery	2.9%	2.2%	0.7% pts
Absconding or bail offences	1.5%	2.1%	-0.6% pts
Taking and driving away and related offences	4.4%	2.3%	2.1% pts
Theft from vehicles	2.2%	2.4%	-0.2% pts
Other motoring offences	5.9%	6.0%	-0.1% pts
Drink driving offences	2.9%	2.6%	0.3% pts
Criminal or malicious damage	1.5%	3.2%	-1.7% pts
Drugs (import, export, production, supply)	5.9%	3.0%	2.8% pts
Drugs (possession and small scale supply)	4.4%	6.3%	-1.9% pts
Other	2.9%	2.4%	0.6% pts
Tier 1 Severity	3.7%	2.4%	1.2% pts
Tier 2 Severity	15.4%	14.1%	1.3% pts
Tier 3 Severity	77.9%	83.5%	-5.5% pts
Unknown Severity	2.9%	0.0%	2.9% pts
Criminal History¹			
Mean Copas Rate	-0.7	-0.7	0.0
Mean previous offences	26.9	28.5	-1.5
Mean previous custodial sentences	3.0	3.2	-0.2
Mean previous cautions	1.4	1.3	0.1
Mean previous court orders	4.3	4.1	0.2
Mean previous court convictions	11.6	11.8	-0.2
Mean age at first offence	15.7	16.0	-0.3
Mean previous Tier 1 offences	0.1	0.1	0.0
Mean previous Tier 2 offences	2.0	2.1	-0.1
Mean previous Tier 3 offences	24.8	26.2	-1.4
Mean previous violent offences	2.1	2.6	-0.5
Mean previous public order offences	1.3	1.7	-0.3
Mean previous domestic burglary offences	1.0	0.9	0.2
Mean previous other burglary offences	1.2	1.2	0.0

	Without OASys assessment	With OASys assessment	Absolute Difference
Mean previous theft offences	5.5	5.2	0.3
Mean previous handling offences	0.6	0.6	0.0
Mean previous fraud and forgery offences	0.8	0.6	0.2
Mean previous vehicle theft offences	0.4	0.6	-0.2
Mean previous drink driving offences	0.3	0.4	-0.1
Mean previous criminal damage offences	1.2	1.6	-0.5
Mean previous sexual offences	0.0	0.0	0.0
Mean previous sexual (child) offences	0.0	0.0	0.0
Mean previous soliciting/prostitution offences	0.0	0.0	0.0
Mean previous drug (import, export, production, supply) offences	0.3	0.2	0.1
Mean previous drug (possession and small scale supply) offences	1.4	1.3	0.1
Mean previous breach offences	3.2	3.3	-0.1
Mean previous absconding bail offences	2.0	2.1	-0.1
Mean previous taking and driving away and related offences	1.0	1.1	-0.1
Mean previous other motoring offences	3.3	3.9	-0.6
Mean previous miscellaneous offences (certain breaches & offences outside E&W)	3.3	3.4	-0.1
Mean previous other offences	1.2	0.8	0.4
Labour Market			
Any P45 employment in year prior to sentence	30.9%	25.8%	5.1% pts
Any P45 employment in month prior to sentence	13.2%	13.8%	-0.6% pts
Any out of work benefit in year prior to sentence	76.5%	80.7%	-4.2% pts
Any Jobseeker's Allowance in year prior to sentence	62.5%	58.0%	4.5% pts
Any Incapacity Benefit in year prior to sentence	27.2%	32.2%	-5% pts
Any Income Support in year prior to sentence	14.7%	21.4%	-6.6% pts

Notes:

¹ All excluding Penalty Notices for Disorder. All prior to Index Offence.

Annex B: List of variables to be tested for inclusion in logistic regression models used to calculate propensity scores²¹

Offender Demographics

- Gender
- Ethnicity
- Nationality
- Age at start of IAC or court order, or at discharge from prison*
- Cohort year (either 2009 or 2010)

Index Offence (this is the offence that led to the IAC/comparison group 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*²² (all prior to index offence)

- Number of previous offences*, both in total and also with breakdowns by offence type and severity (ranked 1 to 3 with 1 being the most severe)
- Copas Rate²³
- 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 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 in year before sentence
- Any Income Support in year before sentence

OASys Assessment

- OASys violence 2 year re-offending predictor
- OASys general 2 year re-offending predictor
- OASys3 2 year re-offending predictor
- Mean number of OASys assessment sections (3 to 12) where a need has been identified
- 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
- 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)
- 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)

²¹ A * besides the variable indicates that a squared term was tested for inclusion in the model. 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).

²² All offending history variables exclude Penalty Notices for Disorders.

²³ The Copas Rate controls for the rate at which an offender has built up convictions. The formula is a natural log of the number of court appearance or cautions + 1/length of criminal career in years + 10).

- 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
- 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)

Annex C: Standardised mean differences post-matching for the IAC/Short Term Custody comparison

	Intensive Alternatives to Custody	Matched Custodial Sentence (<12 months) Group	Standardised Difference
Number in group	1,183	13,384	
Ethnicity			
White	88.3%	88.4%	-0.2%
Black	5.9%	6.1%	-0.6%
Asian	5.2%	5.0%	0.9%
Other	0.6%	0.6%	0.3%
Nationality			
UK	96.8%	96.6%	1.2%
Not UK	2.5%	2.7%	-1.1%
Unknown	0.7%	0.7%	-0.5%
Gender			
Male	87.5%	87.3%	0.6%
Female	12.5%	12.7%	-0.6%
Age (when starting IAC or discharged from prison)			
Mean age	26.4	26.5	-1.1%
Mean age squared	764.2	770.0	-1.1%
Cohort Year			
2009	49.8%	49.7%	0.1%
2010	50.2%	50.3%	-0.1%
Index Offence			
Violence	25.8%	25.3%	1.2%
Robbery	2.2%	2.2%	-0.1%
Public Order	5.3%	5.4%	-0.3%
Domestic Burglary	8.3%	9.3%	-3.7%
Other Burglary	6.8%	6.6%	0.8%
Theft	16.5%	16.7%	-0.5%
Handling	2.5%	2.3%	1.4%
Fraud and Forgery	2.2%	2.2%	0.3%
Absconding or bail offences	2.1%	2.1%	-0.1%
Taking and driving away and related offences	2.3%	2.4%	-0.6%
Theft from vehicles	2.4%	2.3%	0.2%
Other motoring offences	6.0%	5.8%	0.9%
Drink driving offences	2.6%	2.7%	-0.2%
Criminal or malicious damage	3.2%	3.1%	0.8%
Drugs (import, export, production, supply)	3.0%	3.0%	0.4%
Drugs (possession and small scale supply)	6.3%	6.3%	0.4%
Other	2.4%	2.4%	-0.4%
Tier 1 Severity	2.5%	2.4%	0.5%
Tier 2 Severity	14.0%	15.1%	-3.1%
Tier 3 Severity	83.5%	82.5%	2.7%
Criminal History¹			
Mean Copas Rate	-0.7	-0.7	-1.2%
Mean previous offences	28.7	29.0	-1.1%
Mean previous offences squared	1813.5	1850.6	-0.7%
Mean previous custodial sentences	3.2	3.3	-0.6%
Mean previous cautions	1.3	1.3	0.6%
Mean previous court orders	4.1	4.2	-1.4%
Mean previous court orders squared	31.2	31.8	-1.1%
Mean previous court convictions	11.9	12.0	-1.4%
Mean age at first offence	16.1	16.1	0.0%
Mean age at first offence squared	285.3	285.8	-0.2%
Mean previous Tier 1 offences	0.1	0.1	-0.8%
Mean previous Tier 2 offences	2.1	2.1	0.4%
Mean previous Tier 2 offences squared	19.9	18.9	1.1%
Mean previous Tier 3 offences	26.4	26.7	-1.2%
Mean previous violent offences	2.7	2.7	-1.8%

	Intensive Alternatives to Custody	Matched Custodial Sentence (<12 months) Group	Standardised Difference
Mean previous violent offences squared	18.7	21.1	-2.5%
Mean previous robbery offences	0.3	0.3	0.3%
Mean previous public order offences	1.7	1.8	-1.1%
Mean previous other burglary offences	1.2	1.2	-0.5%
Mean previous theft offences	5.2	5.3	-0.9%
Mean previous theft offences squared	144.4	150.5	-0.6%
Mean previous handling offences	0.6	0.6	-0.9%
Mean previous handling offences squared	2.1	2.2	-0.8%
Mean previous fraud and forgery offences	0.6	0.6	-0.7%
Mean previous vehicle theft offences	0.6	0.6	1.5%
Mean previous vehicle theft offences squared	4.9	4.1	1.5%
Mean previous criminal damage offences	1.7	1.7	-1.0%
Mean previous sexual offences	0.0	0.0	-0.4%
Mean previous sexual offences squared	0.0	0.0	-0.1%
Mean previous sexual (child) offences	0.0	0.0	0.5%
Mean previous sexual (child) offences squared	0.0	0.0	0.6%
Mean previous soliciting/prostitution offences	0.0	0.0	0.1%
Mean previous drug (import, export, production, supply) offences	0.2	0.2	0.1%
Mean previous drug (possession and small scale supply) offences	1.3	1.3	0.6%
Mean previous breach offences	3.4	3.4	-1.5%
Mean previous breach offences squared	28.4	29.4	-1.5%
Mean previous absconding bail offences	2.1	2.1	-0.6%
Mean previous taking and driving away and related offences	1.1	1.1	-0.8%
Mean previous taking and driving away and related offences squared	7.3	7.4	-0.3%
Mean previous other motoring offences	4.0	4.0	-0.3%
Mean previous other offences	0.8	0.7	1.4%
Labour Market			
Any P45 employment in year prior to sentence	25.9%	26.5%	-1.4%
Any P45 employment in month prior to sentence	13.9%	14.1%	-0.8%
Any out of work benefit in year prior to sentence	80.6%	80.9%	-0.8%
Any Jobseeker's Allowance in year prior to sentence	57.9%	58.3%	-0.9%
Any Incapacity Benefit in year prior to sentence	32.3%	32.4%	-0.1%
OASys Assessment			
Overall predictor of general offending (2 year)	55.9	56.2	-1.2%
Mean number of OASys assessment sections (3 to 12) where attitudes linked to risk of serious harm	2.2	2.2	-0.4%
Mean number of OASys assessment sections (3 to 12) where attitudes linked to offending	5.5	5.6	-1.5%
Recognises impact of offending	78.1%	77.9%	0.5%
Currently of no fixed abode or in transient accommodation	13.6%	13.7%	-0.3%
Suitability of accommodation – no problems	65.3%	64.9%	1.0%
Suitability of accommodation – some problems	15.7%	16.0%	-0.9%
Suitability of accommodation – significant problems	18.9%	19.1%	-0.4%
Permanence of accommodation – no problems	63.1%	62.8%	0.8%
Permanence of accommodation – some problems	19.9%	20.2%	-0.5%
Permanence of accommodation – significant problems	16.9%	17.1%	-0.4%
Suitability of location of accommodation – no problems	59.4%	59.3%	0.3%
Suitability of location of accommodation – some problems	18.4%	18.7%	-0.8%
Suitability of location of accommodation – significant problems	22.1%	22.0%	0.4%
Unemployed at time of OASys assessment, or will be on release	73.5%	73.8%	-0.5%
Employment history – no problems	16.5%	16.1%	1.1%
Employment history – some problems	46.2%	46.3%	0.0%
Employment history – significant problems	37.3%	37.7%	-0.8%
School attendance – no problems	39.9%	39.2%	1.4%
School attendance – some problems	24.5%	24.3%	0.5%
School attendance – significant problems	35.6%	36.5%	-1.8%
Problems with literacy or numeracy – no problems	71.1%	70.8%	0.6%
Problems with literacy or numeracy – some problems	20.1%	20.2%	-0.2%
Problems with literacy or numeracy – significant problems	8.8%	9.0%	-0.7%
Offender's financial situation – no problems	29.4%	28.4%	2.2%
Offender's financial situation – some problems	41.3%	41.8%	-1.0%
Offender's financial situation – significant problems	29.3%	29.8%	-1.1%
Current relationship with close family – no problems	43.1%	42.1%	2.0%
Current relationship with close family – some problems	39.8%	40.7%	-1.7%

	Intensive Alternatives to Custody	Matched Custodial Sentence (<12 months) Group	Standardised Difference
Current relationship with close family – significant problems	17.1%	17.2%	-0.4%
Experience of childhood – no problems	50.0%	48.8%	2.2%
Experience of childhood – some problems	25.0%	25.7%	-1.5%
Experience of childhood – significant problems	25.0%	25.5%	-1.1%
Close relationship with partner – no problems	69.7%	69.7%	0.0%
Close relationship with partner – some problems	18.9%	18.9%	0.0%
Close relationship with partner – significant problems	11.4%	11.4%	0.0%
Perpetrator of domestic violence	28.5%	28.7%	-0.5%
Leisure activities encourage offending – no problems	27.3%	26.4%	2.0%
Leisure activities encourage offending – some problems	43.5%	43.8%	-0.5%
Leisure activities encourage offending – significant problems	29.2%	29.8%	-1.4%
Easily influenced by criminal associates – no problems	35.2%	34.9%	0.8%
Easily influenced by criminal associates – some problems	44.0%	43.7%	0.7%
Easily influenced by criminal associates – significant problems	20.7%	21.4%	-1.8%
Manipulative/predatory lifestyle – no problems	61.1%	61.0%	0.3%
Manipulative/predatory lifestyle – some problems	28.3%	28.1%	0.6%
Manipulative/predatory lifestyle – significant problems	10.6%	11.0%	-1.3%
Recklessness and risk-taking behaviour – no problems	22.3%	21.6%	1.7%
Recklessness and risk-taking behaviour – some problems	43.4%	43.7%	-0.6%
Recklessness and risk-taking behaviour – significant problems	34.2%	34.7%	-0.9%
History of drug abuse	82.4%	82.4%	0.0%
Current drug user	22.9%	22.8%	0.4%
Motivation to tackle drug misuse – no problems	61.3%	61.2%	0.2%
Motivation to tackle drug misuse – some problems	31.7%	31.8%	-0.1%
Motivation to tackle drug misuse – significant problems	7.0%	7.1%	-0.1%
Current alcohol use – no problems	53.0%	52.2%	1.7%
Current alcohol use – some problems	23.0%	23.1%	-0.2%
Current alcohol use – significant problems	24.0%	24.8%	-1.8%
Past alcohol use – no problems	38.4%	37.3%	2.3%
Past alcohol use – some problems	23.8%	23.8%	-0.1%
Past alcohol use – significant problems	37.9%	38.9%	-2.2%
Current psychological problems/depression – no problems	62.1%	61.7%	0.9%
Current psychological problems/depression – some problems	27.9%	27.8%	0.2%
Current psychological problems/depression – significant problems	10.0%	10.5%	-1.8%
Current psychiatric problems – no problems	87.2%	86.7%	1.3%
Current psychiatric problems – some problems	9.9%	10.3%	-1.3%
Current psychiatric problems – significant problems	3.0%	3.0%	-0.2%
Impulsivity – no problems	11.4%	11.1%	1.1%
Impulsivity – some problems	45.8%	45.6%	0.5%
Impulsivity – significant problems	42.8%	43.4%	-1.2%
Temper control – no problems	37.4%	36.7%	1.5%
Temper control – some problems	41.0%	41.3%	-0.5%
Temper control – significant problems	21.6%	22.1%	-1.1%
Problem solving skills – no problems	4.6%	4.6%	0.0%
Problem solving skills – some problems	45.7%	45.2%	1.0%
Problem solving skills – significant problems	49.7%	50.2%	-1.0%
Awareness of consequences – no problems	10.1%	9.9%	0.6%
Awareness of consequences – some problems	52.5%	52.2%	0.5%
Awareness of consequences – significant problems	37.4%	37.9%	-0.9%
Understands other people's views – no problems	35.5%	34.5%	2.1%
Understands other people's views – some problems	49.3%	49.7%	-0.8%
Understands other people's views – significant problems	15.2%	15.8%	-1.7%
Pro-criminal attitudes – no problems	47.9%	47.2%	1.4%
Pro-criminal attitudes – some problems	42.2%	43.0%	-1.6%
Pro-criminal attitudes – significant problems	9.9%	9.8%	0.2%
Motivated to address offending – no problems	31.1%	30.1%	2.2%
Motivated to address offending – some problems	62.0%	62.9%	-1.9%
Motivated to address offending – significant problems	6.9%	7.0%	-0.3%

Notes:

¹ All excluding Penalty Notices for Disorder. All prior to Index Offence

Annex D: Standardised differences post-matching for the IAC/Court Order comparison

	Intensive Alternatives to Custody	Matched Court Order Group	Standardised Difference
Number in group	1,185	61,022	
Ethnicity			
White	88.3%	88.4%	-0.3%
Black	5.9%	5.9%	-0.1%
Asian	5.2%	5.1%	0.5%
Other	0.6%	0.6%	0.4%
Nationality			
UK	96.8%	96.7%	0.7%
Not UK	2.5%	2.6%	-0.4%
Unknown	0.7%	0.7%	-0.6%
Gender			
Male	87.5%	87.2%	0.8%
Female	12.5%	12.8%	-0.8%
Age (when starting IAC or court order)			
Mean age	26.4	26.5	-1.1%
Mean age squared	763.9	770.2	-1.2%
Cohort Year			
2009	49.7%	50.1%	-0.7%
2010	50.3%	49.9%	0.7%
Index Offence			
Violence	25.8%	25.7%	0.1%
Robbery	2.2%	2.3%	-0.5%
Public Order	5.3%	5.2%	0.5%
Domestic Burglary	8.3%	8.4%	-0.3%
Other Burglary	6.8%	6.8%	0.0%
Theft	16.6%	16.5%	0.2%
Handling	2.5%	2.4%	0.8%
Fraud and Forgery	2.2%	2.2%	-0.3%
Absconding or bail offences	2.1%	2.2%	-0.4%
Taking and driving away and related offences	2.3%	2.2%	0.2%
Theft from vehicles	2.4%	2.3%	0.5%
Other motoring offences	6.0%	6.2%	-0.7%
Drink driving offences	2.6%	2.7%	-0.3%
Criminal or malicious damage	3.2%	3.3%	-0.2%
Drugs (import, export, production, supply)	3.0%	3.0%	0.1%
Drugs (possession and small scale supply)	6.3%	6.2%	0.4%
Other	2.4%	2.4%	-0.3%
Tier 1 Severity	2.4%	2.5%	-0.4%
Tier 2 Severity	14.0%	14.1%	-0.2%
Tier 3 Severity	83.5%	83.4%	0.4%
Criminal History¹			
Mean Copas Rate	-0.7	-0.7	-0.4%
Mean previous offences	28.6	28.8	-0.6%
Mean previous custodial sentences	3.2	3.2	-0.4%
Mean previous custodial sentences squared	34.2	34.7	-0.4%
Mean previous cautions	1.3	1.3	0.7%
Mean previous cautions squared	3.2	3.1	0.4%
Mean previous court orders	4.1	4.2	-1.0%
Mean previous court orders squared	31.1	31.7	-1.0%
Mean previous court convictions	11.9	12.0	-0.8%
Mean age at first offence	16.1	16.1	-0.9%
Mean age at first offence squared	285.4	288.8	-1.3%
Mean previous Tier 1 offences	0.1	0.1	-0.5%
Mean previous Tier 2 offences	2.1	2.1	-0.4%
Mean previous Tier 3 offences	26.4	26.6	-0.6%
Mean previous Tier 3 offences squared	1558.1	1586.3	-0.6%
Mean previous violent offences	2.7	2.7	-0.9%

	Intensive Alternatives to Custody	Matched Court Order Group	Standardised Difference
Mean previous violence offences squared	18.7	19.4	-0.9%
Mean previous robbery offences	0.3	0.3	-0.4%
Mean previous robbery offences squared	1.1	1.1	-0.6%
Mean previous public order offences	1.7	1.7	-0.1%
Mean previous public order offences squared	26.6	25.7	0.1%
Mean previous domestic burglary offences	0.8	0.8	-0.1%
Mean previous other burglary offences	1.2	1.2	0.0%
Mean previous other burglary offences squared	11.6	11.5	0.1%
Mean previous theft offences	5.2	5.3	-0.6%
Mean previous theft offences squared	144.3	152.4	-0.8%
Mean previous handling offences	0.6	0.6	-0.6%
Mean previous handling offences squared	2.1	2.1	-0.3%
Mean previous vehicle theft offences	0.6	0.6	0.1%
Mean previous drink driving offences	0.4	0.4	0.0%
Mean previous drink driving offences squared	1.0	1.1	-0.3%
Mean previous criminal damage offences	1.7	1.7	-0.6%
Mean previous criminal damage offences squared	9.3	9.5	-0.2%
Mean previous sexual offences	0.0	0.0	-0.1%
Mean previous sexual offences squared	0.0	0.0	0.0%
Mean previous sexual (child) offences	0.0	0.0	-0.2%
Mean previous sexual (child) offences squared	0.0	0.0	-0.2%
Mean previous soliciting/prostitution offences	0.0	0.0	0.1%
Mean previous soliciting/prostitution offences squared	0.0	0.0	0.2%
Mean previous drug (import, export, production, supply) offences	0.2	0.2	1.1%
Mean previous drug (import, export, production, supply) offences squared	1.0	0.9	1.5%
Mean previous drug (possession and small scale supply) offences	1.3	1.3	0.4%
Mean previous breach offences	3.3	3.4	-0.8%
Mean previous breach offences squared	28.3	28.8	-0.8%
Mean previous absconding bail offences	2.1	2.1	0.0%
Mean previous absconding bail squared	16.1	16.3	-0.3%
Mean previous taking and driving away and related offences	1.1	1.1	-1.0%
Mean previous taking and driving away and related offences squared	7.3	7.6	-0.7%
Mean previous other offences	0.8	0.8	0.3%
Mean previous other offences squared	7.5	7.0	0.6%
Labour Market			
Any P45 employment in year prior to sentence	25.8%	25.9%	-0.2%
Any P45 employment in month prior to sentence	13.9%	13.9%	-0.3%
Any out of work benefit in year prior to sentence	80.7%	80.6%	0.2%
Any Incapacity Benefit in year prior to sentence	32.3%	32.5%	-0.5%
Any Income Support in year prior to sentence	21.4%	21.4%	-0.1%
OASys Assessment			
OASys general predictor	55.9	55.9	-0.2%
OASys re-offending predictor	65.5	65.6	0.0%
Mean number of OASys assessment sections (3 to 12) where attitudes linked to risk of serious harm	2.2	2.2	-0.5%
Mean number of OASys assessment sections (3 to 12) where attitudes linked to offending	5.5	5.5	-0.6%
Recognises impact of offending	78.1%	78.3%	-0.3%
Accepts responsibility for the current offence(s)	85.5%	85.5%	0.1%
Suitability of accommodation – no problems	65.4%	65.2%	0.4%
Suitability of accommodation – some problems	15.7%	15.9%	-0.6%
Suitability of accommodation – significant problems	18.9%	18.9%	0.1%
Permanence of accommodation – no problems	63.1%	63.1%	0.1%
Permanence of accommodation – some problems	20.0%	20.1%	-0.2%
Permanence of accommodation – significant problems	16.9%	16.9%	0.1%
Suitability of location of accommodation – no problems	59.5%	59.4%	0.2%
Suitability of location of accommodation – some problems	18.5%	18.5%	0.0%
Suitability of location of accommodation – significant problems	22.0%	22.1%	-0.2%
Unemployed at time of OASys assessment, or will be on release	73.6%	73.4%	0.4%
Employment history – no problems	16.5%	16.6%	-0.4%
Employment history – some problems	46.4%	45.9%	1.0%
Employment history – significant problems	37.2%	37.5%	-0.7%
Attitude to employment – no problems	52.4%	52.0%	0.6%
Attitude to employment – some problems	37.4%	37.5%	-0.2%

	Intensive Alternatives to Custody	Matched Court Order Group	Standardised Difference
Attitude to employment – significant problems	10.2%	10.5%	-0.8%
Problems with literacy or numeracy – no problems	71.1%	70.7%	0.9%
Problems with literacy or numeracy – some problems	20.1%	20.1%	-0.1%
Problems with literacy or numeracy – significant problems	8.8%	9.2%	-1.4%
Offender's financial situation – no problems	29.5%	29.3%	0.3%
Offender's financial situation – some problems	41.3%	41.6%	-0.5%
Offender's financial situation – significant problems	29.2%	29.1%	0.3%
Current relationship with close family – no problems	43.1%	43.4%	-0.6%
Current relationship with close family – some problems	39.9%	39.6%	0.5%
Current relationship with close family – significant problems	17.1%	17.0%	0.2%
Experience of childhood – no problems	49.9%	49.4%	0.9%
Experience of childhood – some problems	25.1%	25.2%	-0.2%
Experience of childhood – significant problems	25.0%	25.4%	-0.9%
Close relationship with partner – no problems	69.7%	69.7%	0.0%
Close relationship with partner – some problems	18.9%	18.9%	0.1%
Close relationship with partner – significant problems	11.4%	11.5%	-0.2%
Previous experience of close relationships – no problems	50.1%	49.9%	0.4%
Previous experience of close relationships – some problems	25.9%	26.2%	-0.5%
Previous experience of close relationships – significant problems	24.0%	24.0%	0.0%
Victim of domestic violence	13.3%	12.5%	2.6%
Leisure activities encourage offending – no problems	27.3%	27.3%	-0.1%
Leisure activities encourage offending – some problems	43.7%	43.3%	0.7%
Leisure activities encourage offending – significant problems	29.1%	29.4%	-0.7%
Easily influenced by criminal associates – no problems	35.2%	35.3%	-0.2%
Easily influenced by criminal associates – some problems	44.1%	43.7%	0.8%
Easily influenced by criminal associates – significant problems	20.7%	21.0%	-0.7%
Manipulative/predatory lifestyle – no problems	61.1%	60.9%	0.3%
Manipulative/predatory lifestyle – some problems	28.3%	28.5%	-0.6%
Manipulative/predatory lifestyle – significant problems	10.6%	10.5%	0.4%
Recklessness and risk-taking behaviour – no problems	22.4%	22.4%	-0.1%
Recklessness and risk-taking behaviour – some problems	43.5%	43.2%	0.6%
Recklessness and risk-taking behaviour – significant problems	34.1%	34.4%	-0.6%
Drugs ever misused	82.4%	82.3%	0.2%
Current drug used is either heroin, methadone (not prescribed), another opiate, crack/cocaine, cocaine hydrochloride, or a misused prescribed drug	22.9%	22.8%	0.2%
Motivation to tackle drug misuse – no problems	61.2%	61.1%	0.4%
Motivation to tackle drug misuse – some problems	31.8%	31.9%	-0.3%
Motivation to tackle drug misuse – significant problems	7.0%	7.1%	-0.2%
Current alcohol use – no problems	53.0%	52.5%	1.1%
Current alcohol use – some problems	23.0%	23.1%	-0.4%
Current alcohol use – significant problems	24.0%	24.3%	-0.8%
Past alcohol use – no problems	38.3%	38.1%	0.4%
Past alcohol use – some problems	23.8%	23.7%	0.4%
Past alcohol use – significant problems	37.8%	38.2%	-0.7%
Motivation to tackle alcohol misuse – no problems	61.8%	61.2%	1.4%
Motivation to tackle alcohol misuse – some problems	31.8%	32.3%	-1.1%
Motivation to tackle alcohol misuse – significant problems	6.3%	6.5%	-0.6%
Current psychological problems/depression – no problems	62.2%	61.7%	1.0%
Current psychological problems/depression – some problems	27.9%	28.1%	-0.6%
Current psychological problems/depression – significant problems	10.0%	10.2%	-0.7%
Current psychiatric problems – no problems	87.2%	86.9%	0.8%
Current psychiatric problems – some problems	9.9%	10.0%	-0.4%
Current psychiatric problems – significant problems	3.0%	3.1%	-0.8%
Impulsivity – no problems	11.4%	11.4%	0.1%
Impulsivity – some problems	45.9%	45.6%	0.7%
Impulsivity – significant problems	42.7%	43.0%	-0.8%
Temper control – no problems	37.4%	37.4%	0.1%
Temper control – some problems	41.0%	40.9%	0.2%
Temper control – significant problems	21.6%	21.8%	-0.3%
Problem solving skills – no problems	4.6%	4.6%	-0.3%
Problem solving skills – some problems	45.9%	45.6%	0.6%
Problem solving skills – significant problems	49.6%	49.8%	-0.4%
Awareness of consequences – no problems	10.1%	10.1%	-0.1%
Awareness of consequences – some problems	52.6%	52.5%	0.2%
Awareness of consequences – significant problems	37.3%	37.4%	-0.2%
Understands motivation for offending – no problems	32.8%	32.7%	0.2%

	Intensive Alternatives to Custody	Matched Court Order Group	Standardised Difference
Understands motivation for offending – some problems	55.9%	56.1%	-0.4%
Understands motivation for offending – significant problems	11.3%	11.3%	0.2%
Motivated to address offending – no problems	31.3%	31.0%	0.5%
Motivated to address offending – some problems	61.9%	62.1%	-0.5%
Motivated to address offending – significant problems	6.8%	6.8%	0.0%

Notes:

¹ All excluding Penalty Notices for Disorder. All prior to Index Offence