Ministry of Justice

Summary

This analysis assessed the impact on re-offending of a programme co-ordinated by the organisation NOMS CFO (National Offender Management Service Co-Financing Organisation) in the South West region, provided by A4E and where the programme was started in custody. The one year proven re-offending rate[1] for 355 offenders who were targeted in custody by A4E was 50%, compared with 53% for a matched control group of similar offenders. Statistical significance testing has shown that this difference in the re-offending rates is not significant[2]; suggesting that at this stage there is insufficient evidence to draw a conclusion about the impact of participating in the programme run by A4E on re-offending. However, the results of the analysis do not mean that the programme failed to impact on re-offending.

What you can say: There is insufficient evidence at this stage to draw a conclusion about the impact of participating in the NOMS CFO programme run by A4E where the programme was started in custody in the South West, on re-offending.
What you cannot say: This analysis shows that participating in the NOMS CFO programme run by A4E where the programme was started in custody in the South West, decreased proven re-offending by 3 percentage points or by any other amount.

Introduction

NOMS CFO service providers work with offenders in prison and the community, to help them access mainstream services with the aim of gaining skills and employment. This initiative is funded in partnership with the European Social Fund (ESF). The interventions are targeted at offenders considered to be 'hard to help', and who are typically unskilled, unqualified or de-motivated, and can often have drugs/alcohol, behavioural, debt or accommodation problems. This analysis relates to offenders who were involved in Phase 1 of the programme in 2010, starting the intervention while in custody in the South West region. Although the geographic coverage of the report includes Cornwall & Isles of Scilly, neither of those areas currently contains any prison establishments at present and so the data only includes offenders who participated in the programme in the South West. The

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[1] The **one year proven re-offending rate** is defined as the proportion of offenders in a cohort who commit an offence in a one year follow-up period which was proven through receipt of a court conviction, caution, reprimand or warning during the one year follow-up or in a further six month waiting period. The one year follow-up period begins when offenders leave custody or start their probation sentence.
[2] The difference was non-significant, p= 0.27. Statistical significance testing is described on page 6 of this report.

programme is about helping to put offenders into employment, or making services provided by the Skills Funding Agency and Department for Work and Pensions more accessible, as it is recognised that offenders in employment are less likely to re-offend than those who are unemployed. The programme uses a case management model which involves assessment, support in light of offenders' identified barriers to employment e.g. training; education; housing; finance; health; alcohol; drugs; relationships; attitude/life skills, and access to further learning or employment. The programme is voluntary, and participants can self-refer or be targeted by the providers, with the only conditions being that participants must be within three years of release from custody and eligible to work in the UK.

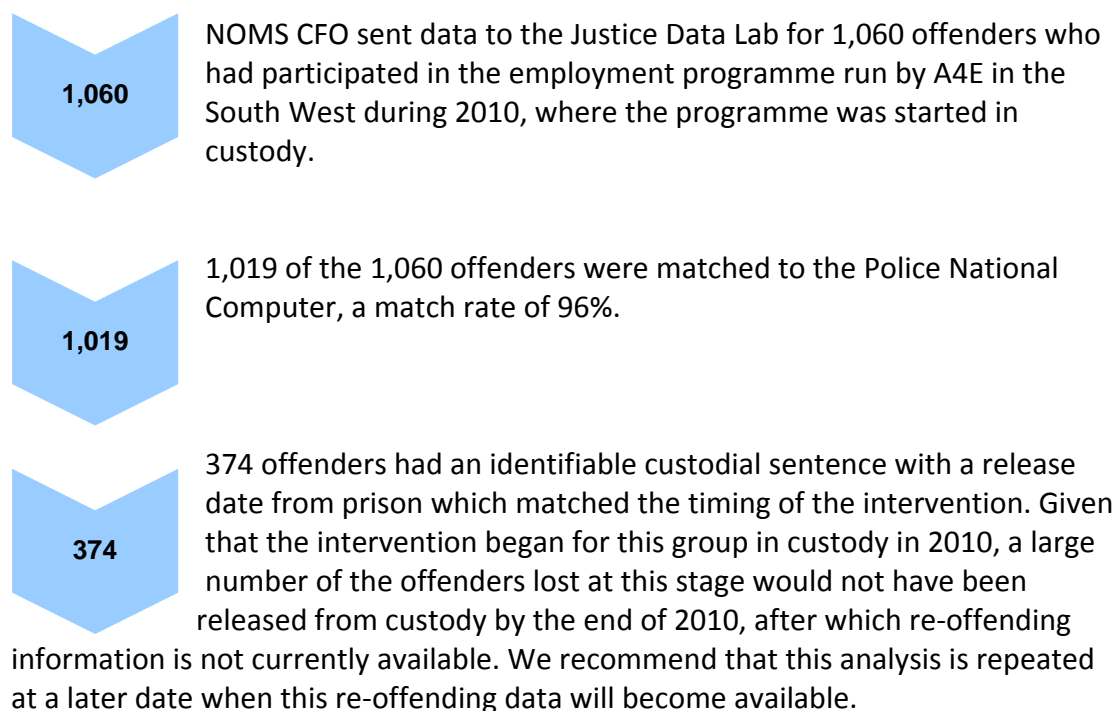## Producing re-offending reports for the NOMS CFO region

A single report was received from the organisation NOMS CFO to assess the impact on re-offending of this programme. The request included all individuals who had participated in the programme during 2010 in the nine regions in England. The programme in each region is delivered by a supplier who receives a contract from NOMS CFO, funding in partnership with ESF. The regions and providers are shown below:

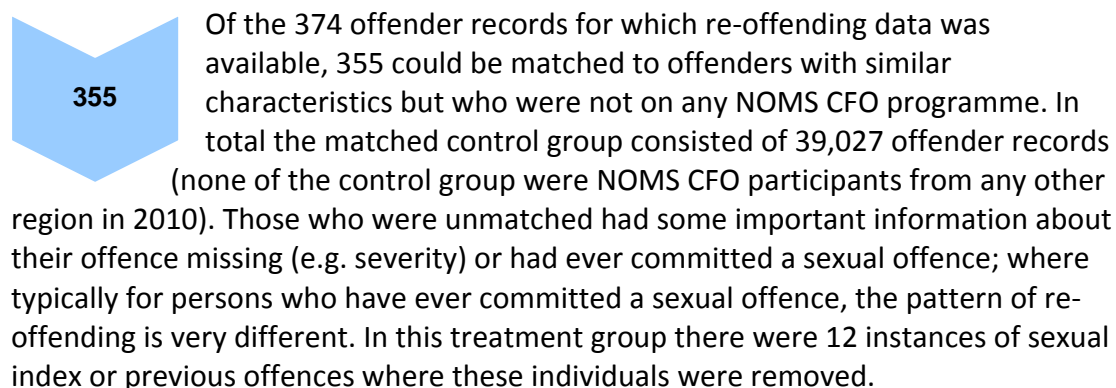| Region	Provider
East Midlands	Leicestershire & Rutland Probation Trust
East of England	Serco
London	London Probation Trust
North East	Pertemps People Development Group
North West (including Merseyside)	Merseyside Probation Trust
South East	Serco
South West (incl. Cornwall & Isles of Scilly)	A4E
West Midlands	The Manchester College
Yorkshire and the Humber (incl. South Yorkshire)	SOVA

In agreement with NOMS CFO, the Justice Data Lab will be issuing two or more reports for each region / provider; one report which covers individuals who participated in the programme whilst in custody; and one or more further reports which covers individuals who participated in the programme after leaving custody or during a community sentence. There may be one or more reports in the North West, South West and the Yorkshire and Humber, where distinct counties within the region were identified by NOMS CFO as appropriate for separate follow up. In each region, the provider will aim to deliver similar interventions, but each provider will have different targets based on the characteristics of the population they deliver to.

More information on this and on wider aspects of the NOMS CFO project can be found here: co-financing.org/about_main.php

Processing the Data

1,060

NOMS CFO sent data to the Justice Data Lab for 1,060 offenders who had participated in the employment programme run by A4E in the South West during 2010, where the programme was started in custody.

1,019

1,019 of the 1,060 offenders were matched to the Police National Computer, a match rate of 96%.

374

374 offenders had an identifiable custodial sentence with a release date from prison which matched the timing of the intervention. Given that the intervention began for this group in custody in 2010, a large number of the offenders lost at this stage would not have been released from custody by the end of 2010, after which re-offending information is not currently available. We recommend that this analysis is repeated at a later date when this re-offending data will become available.

Creating a Matched Control Group

355

Of the 374 offender records for which re-offending data was available, 355 could be matched to offenders with similar characteristics but who were not on any NOMS CFO programme. In total the matched control group consisted of 39,027 offender records (none of the control group were NOMS CFO participants from any other region in 2010). Those who were unmatched had some important information about their offence missing (e.g. severity) or had ever committed a sexual offence; where typically for persons who have ever committed a sexual offence, the pattern of re-offending is very different. In this treatment group there were 12 instances of sexual index or previous offences where these individuals were removed.

The Annex provides information on the similarity between the treatment and control groups. Further data on the matching process is available upon request.

Results

The one year proven re-offending rate for 355 offenders who were targeted in custody by A4E was 50%, compared with 53% for a matched control group of similar offenders. This information is displayed in Figure 1 on the next page.

Figure 1 on the next page presents the 95 per cent confidence intervals for the re-offending rates of both groups, i.e. the range in which we can be 95 per cent sure that the true re-offending rate for the groups lie. For this analysis we can be

confident that the true difference in proven re-offending between the groups is somewhere between -9 and 3 percentage points. However because this difference crosses 0, we cannot be sure either way that participating in this programme lead to a reduction or increase in re-offending, and thus cannot draw a firm conclusion about its impact. It is important to show confidence intervals because both the treatment and matched control groups are samples of larger populations; the re-offending rate is therefore an estimate for each population based on a sample, rather than the actual rate.

Figure 1: The best estimates for the one year proven re-offending rate for offenders on the NOMS CFO South West A4E programme and a matched control group.
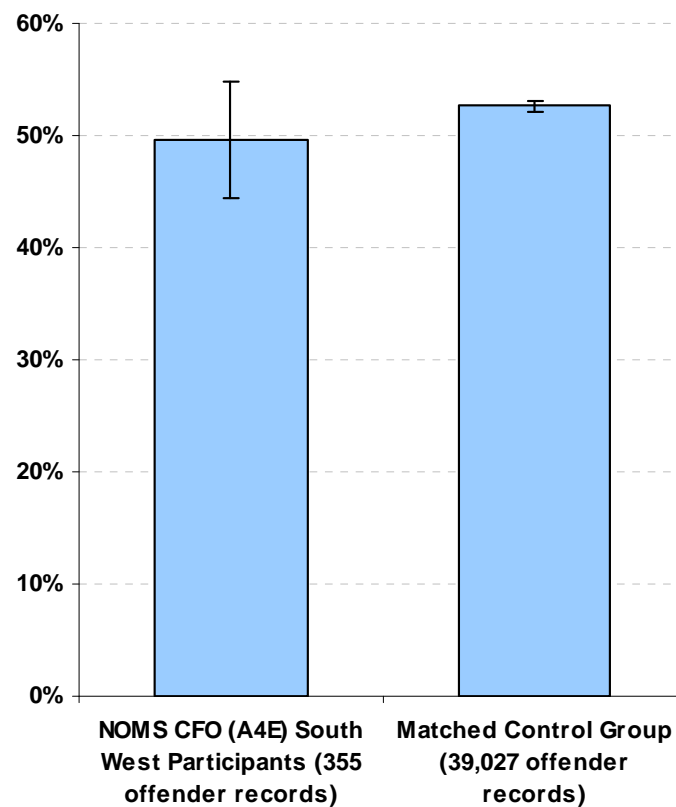
The precision of this estimate could be improved if the size of the NOMS CFO South West programme group used in the analysis was increased. It is recommended that the analysis is repeated on a larger sample, including previous years of information, and when additional years of data become available.

Additional proven re-offending measures
Frequency of re-offending
The frequency of one year proven re-offending for 95 offenders targeted by A4E while in custody in the South West was 2.25 offences per individual, compared with

2.31 per individual in the matched control group. Statistical significance testing has shown that this difference in the re-offending rates is not statistically significant[3].

This result is in line with the findings around the indicator of one year proven re-offending; the subject of this report. The same caveats and limitations apply to these findings, which are described below.

Caveats and Limitations

The statistical methods used in this analysis are based on data collected for administrative purposes. While these include details of each offender's previous criminal, benefit and employment history alongside more basic offender characteristics such as age, gender and ethnicity, it is possible that other important contextual information that may help explain the results has not been accounted for. It is possible that underlying characteristics about the individuals included in the analysis which were not captured by the data (e.g. previous employment history; education history) may have impacted participants' success in achieving the aims of the programme, and re-offending behaviour. It is also possible that there are additional underlying characteristics about the individuals included in the analysis which were not captured by the data, for example attendance at other interventions targeted at offenders, that may have impacted re-offending behaviour.

In this analysis we have not been able to statistically control for employment outcomes in the control group, therefore this analysis cannot present a direct comparison with NOMS CFO employment programme and any other type of employment, or NOMS CFO employment programme and no employment at all. This analysis presents a comparison between offenders with similar characteristics, where one group (the treatment group) was known to receive support through the NOMS CFO employment programme from the organisation A4E, and the comparison group did not.

Many organisations that work with offenders will look to target specific needs of individuals; for example improving housing, or employability. However, how the organisations select those individuals to work with could lead to selection bias, which can impact on the direction of the results. For example; individuals may self select into a service, because they are highly motivated to address one or more of their needs. This would result in a positive selection bias, meaning that for these persons we would generally expect a better re-offending outcome as they are more motivated. Alternatively, some organisations might specifically target persons who are known to have more complex needs and whose attitudes to addressing their needs are more challenging. This would result in a negative selection bias, meaning that for these persons we would generally expect a poorer re-offending outcome as they are not motivated. However, factors which would lead to selection bias in either direction are not represented in our underlying data, and cannot be reflected

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[3] The p-value for this significance test was 0.76. Statistical significance testing is described on page 6 of this report.

in our modelling. This means that all results should be interpreted with care, as selection bias cannot be accounted for in analyses.

Furthermore, only 355 of the 1,060 offenders on the NOMS CFO South West programme run by A4E were in the final treatment group. The section "Processing the Data" outlines key steps taken to obtain the final group used in the analysis. In many analyses, the creation of the matched control group will mean that some individuals, who will usually have particular characteristics – for example a particular ethnicity, or have committed a certain type of offence, will need to be removed to ensure that the modelling will work. Steps will always be taken at this stage to preserve as many individuals as possible, but due to the intricacies of statistical modelling some attrition at this stage will often result. As such, the final treatment group may not be representative of all offenders who have been on this programme. In all analyses from the Justice Data Lab, persons who have ever been convicted of sex offences will be removed, as these individuals are known to have very different patterns of re-offending.

Although the geographic coverage of the report includes Cornwall & Isles of Scilly, neither of those areas currently contains any prison establishments at present and so the data only includes offenders who participated in the programme in the South West.

The re-offending rates included in this analysis **should not** be compared to the national average, nor any other reports or publications which include re-offending rates – including those assessing the impact of other interventions. The re-offending rates included in this report are specific to the characteristics of those NOMS CFO South West participants targeted by A4E while in custody, who could be matched. Any other comparison would not be comparing like for like.

For a full description of the methodology, including the matching process, see www.justice.gov.uk/downloads/justice-data-lab/justice-data-lab-methodology.pdf.

Assessing Statistical Significance

This analysis uses statistical testing to assess whether any differences in the observed re-offending rates are due to chance, or if the intervention is likely to have led to a real change in behaviour. The outcome of the statistical testing is a value between 0 and 1, called a 'p-value', indicating the certainty that a real difference in re-offending between the two groups has been observed. A value closer to 0 indicates that the difference in the observed re-offending rates is not merely due to chance. For example, a p-value of 0.01 suggests there is only a 1 per cent likelihood that any observed difference in re-offending has been caused by chance.

For the purposes of the analysis presented in this report, we have taken a p-value of up to 0.05 as indicative of a real difference in re-offending rates between the treatment and control groups.

The confidence intervals in the figure are helpful in judging whether something is significant at the 0.05 level. If the confidence intervals for the two groups do not overlap, this indicates that there is a real difference between the re-offending rates.

Annex

Table 1: Characteristics of offenders in the treatment and control groups

	Treatment Group	Matched Control Group	Standardised Difference
Number in group	**355**	**39,027**	
Ethnicity			
White	90%	91%	**-2**
Black	7%	7%	**1**
Asian and Other and Unknown	3%	2%	**3**
Nationality			
UK Citizen	97%	98%	**-6**
Foreign National and Unknown	3%	2%	**6**
Gender			
Proportion that were male	97%	97%	**-3**
Age			
Mean age at Index Offence	29	29	**2**
Mean age at first contact with CJS	17	17	**1**
Index Offence[1]			
Violent offences including robbery	39%	39%	**-1**
Burglary	11%	11%	**-1**
Theft and handling	18%	18%	**1**
Fraud and Forgery/Criminal Damage/Other	10%	9%	**1**
Motoring offences, including theft of and from Vehicles	10%	10%	**0**
Drugs	13%	13%	**0**
Length of Custodial Sentence			
6 months or less	35%	35%	**0**
6 months to 12 months	15%	15%	**0**
12 months to 4 years	41%	41%	**0**
4 years to more than 10 years	9%	9%	**1**
Criminal History[2]			
Mean Copas Rate	-0.6	-0.6	**1**
Mean total previous offences	36	35	**3**
Mean previous criminal convictions	14	14	**2**
Mean previous custodial sentences	4	4	**2**
Mean previous court orders	4	4	**1**
Employment and Benefit History			
In P45 employment (year prior to conviction)	35%	35%	**0**
In P45 employment (month prior to conviction)	16%	16%	**1**
Claiming Out of Work Benefits (year prior to conviction)[3]	77%	77%	**-1**
Claiming Job Seekers Allowance (year prior to conviction)	52%	54%	**-4**
Claiming Incapacity Benefit (year prior to conviction)	36%	35%	**2**
Claiming Income Support (year prior to conviction)	16%	16%	**0**
Notes:			

1 Index Offence is based on OGRS categories. Further details on make-up of categories available upon request.

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

3 Out of Work Benefits include people on Jobseeker's Allowance (JSA), Employment and Support Allowance (ESA), Incapacity Benefits (IB) and Income Support (IS) but it does not count people whose primary benefit is Carer's Allowance (CA).
All figures (except mean copas rate) are rounded to the nearest whole number, this may mean that percentages do not sum to 100%.
Standardised Difference Key
Green - the two groups were well matched on this variable (5% or less)
Amber - the two groups were reasonably matched on this variable (6%-10%)
Red - the two groups were poorly matched on this variable (10% +)

Table 1 on the previous page shows that the two groups were well matched on most variables found to have associations with receiving treatment and/or re-offending. The standardised mean differences highlighted green were between -5% and 5%, indicating close matches on these characteristics, and those highlighted amber were between 6% and 10% or -6% and -10%, indicating that the two groups were not as well balanced in these instances, but overall were well balanced on the vast majority of characteristics.

Contact Points

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