

## Summary

This analysis assessed the impact on re-offending of the Wigan Offender Accommodation Resettlement Service (Wigan OARS) run by Riverside ECHG. The one year proven re-offending rate<sup>1</sup> for 30 offenders who received the Wigan OARS was 70%, compared with 63% for a matched control group of similar offenders. Statistical significance testing has shown that this difference in the re-offending rates is not statistically significant<sup>2</sup>; suggesting that at this stage there is insufficient evidence to draw a conclusion about the impact of the Wigan OARS on re-offending. However, the results of the analysis do not mean that the service provided by Riverside ECHG 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 receiving the Wigan OARS run by Riverside ECHG on re-offending.

**What you cannot say:** This analysis shows that receiving the Wigan OARS increased proven re-offending by 7 percentage points, or by any other amount.

## Introduction

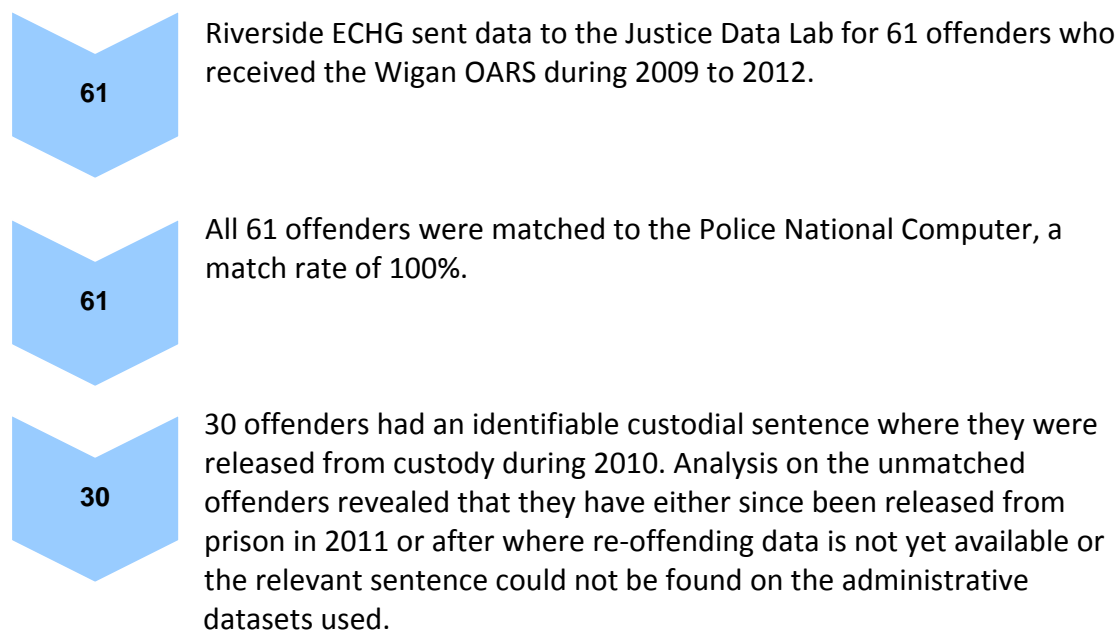
Riverside ECHG is a charitable Industrial and Provident Society that are providers of social housing in the UK. Wigan OARS is delivered by Riverside ECHG in prisons across the North West of England. The Wigan OARS works with offenders that have housing issues prior to their release from custody and will be returning to the Wigan area. The service aims to help find accommodation for offenders to avoid homelessness on release from custody, but can continue to work with offenders in the community after their release, whether they are accommodated immediately or not. If the client still requires further support 3 months after their release from custody, they are transferred to the “Floating Support Service” provided by Riverside ECHG. This analysis relates to offenders who received the Wigan OARS provided by Riverside ECHG between 2009 and 2010 in fifteen prisons.

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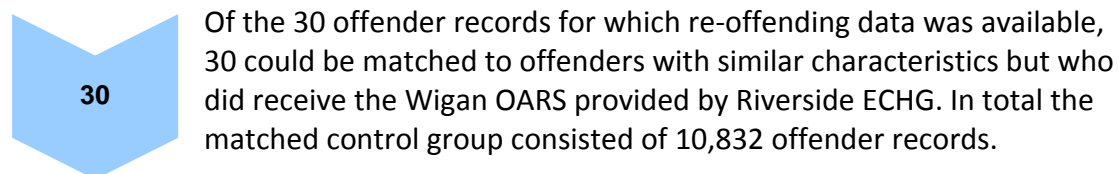
<sup>1</sup> The **one year proven re-offending rate** is defined as the proportion of offenders in a cohort who commit an offence in a one year follow-up period which was proven through receipt of a court conviction, caution, reprimand or warning during the one year follow-up or in a further six month waiting period. The one year follow-up period begins when offenders leave custody or start their probation sentence.

<sup>2</sup> The difference was non-significant,  $p=0.43$ . Statistical significance testing is described on page 5 of this report.

## Processing the Data



## Creating a Matched Control Group



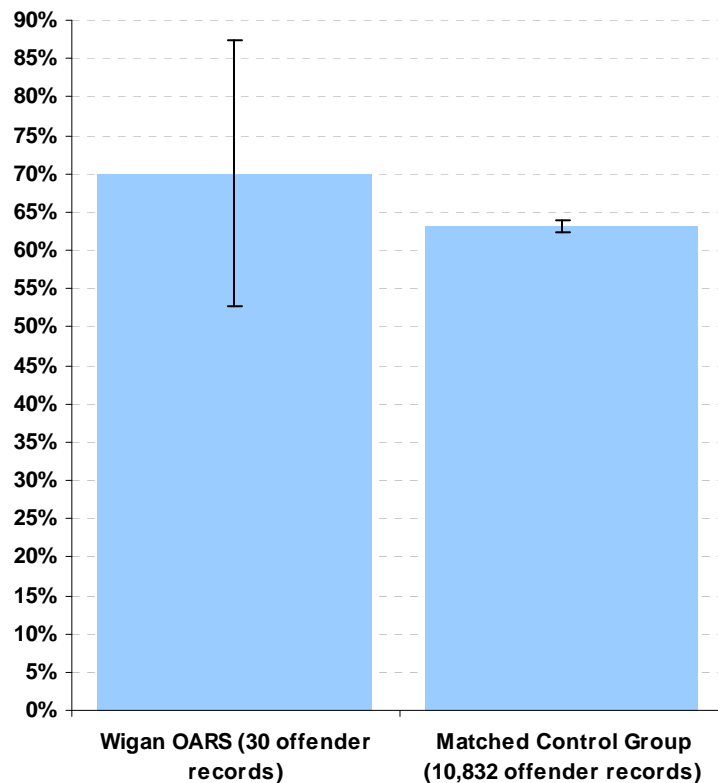
The Annex provides information on the similarity between the treatment and control groups. Further data on the matching process is available upon request.

## Results

The one year proven re-offending rate for 30 offenders who received the Wigan OARS was 70%. This compares to 63% 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 re-offending between two groups is between 25 and -11 percentage points. However, because this difference crosses 0, we cannot be sure either way that receiving the Wigan OARS from Riverside ECHG led to a reduction or an 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 who received the Wigan Offender Accommodation Resettlement Service (Wigan OARS) from Riverside ECHG and a matched control group.



In this case the confidence intervals are particularly wide; this is to be expected when the size of the treatment group (in this case, Wigan OARS) is very small. The precision of this estimate could be improved if the size of the offender 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.

### Caveats and Limitations

The statistical methods used in this analysis are based on data collected for administrative purposes. It should be noted that it has only been possible to control for a limited amount of information about the offenders who are included within this analysis. 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. In particular, we have been unable to statistically control for accommodation or homelessness status in this analysis, or any other factors associated with resettlement following a custodial sentence. The control group against which re-offending rates for those using the

Wigan OARS have been compared will therefore include offenders both with and without the specific accommodation needs that Riverside ECHG are seeking to address.

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 on other interventions targeted at offenders, that may have impacted re-offending behaviour.

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

Furthermore, only 30 of the 61 offenders originally shared with the MoJ 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 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 received the Wigan OARS provided by Riverside ECHG. 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.

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 persons who received the Wigan OARS, and 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](http://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
<b>Number in group</b>	<b>30</b>	<b>10,832</b>	
<b>Ethnicity</b>			
White	100%	100%	<b>0</b>
<b>Nationality</b>			
UK Citizen	100%	100%	<b>0</b>
<b>Gender</b>			
Proportion that were male	93%	93%	<b>1</b>
<b>Age</b>			
Mean age at Index Offence	31	31	<b>0</b>
Mean age at first contact with CJS	16	16	<b>0</b>
<b>Index Offence<sup>1</sup></b>			
Violent offences including robbery	37%	36%	<b>1</b>
Burglary	13%	13%	<b>0</b>
Theft and handling	27%	26%	<b>0</b>
Fraud and Forgery	13%	14%	<b>-1</b>
Other, including drugs and motoring offences	10%	11%	<b>-2</b>
<b>Length of Custodial Sentence</b>			
6 months or less	37%	35%	<b>3</b>
6 months to 12 months	17%	17%	<b>-2</b>
12 months to 4 years	47%	47%	<b>-1</b>
<b>Criminal History<sup>2</sup></b>			
Mean Copas Rate	-0.23	-0.24	<b>1</b>
Mean total previous offences	47	45	<b>4</b>
Mean previous criminal convictions	22	21	<b>4</b>
Mean previous custodial sentences	8	7	<b>6</b>
Mean previous court orders	7	7	<b>1</b>
<b>Employment and Benefit History</b>			
In P45 employment (year prior to conviction)	23%	24%	<b>-2</b>
In P45 employment (month prior to conviction)	0%	0%	<b>0</b>
Claiming Out of Work Benefits (year prior to conviction) <sup>3</sup>	93%	94%	<b>-2</b>
Claiming Job Seekers Allowance (year prior to conviction)	73%	72%	<b>4</b>
Claiming Incapacity Benefit (year prior to conviction)	47%	48%	<b>-3</b>
Claiming Income Support (year prior to conviction)	17%	19%	<b>-6</b>
<b>Notes:</b>			
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%.			
<b>Standardised Difference Key</b>			
<b>Green - the two groups were well matched on this variable (-5% to 5%)</b>			

**Amber - the two groups were reasonably matched on this variable (6% to 10% or -6% to -10%)**

**Red - the two groups were poorly matched on this variable (greater than 10% or less than -10%)**

Table 1 shows that the two groups were well matched on all but two variables found to have associations with receiving treatment and/or re-offending. Nearly all of the standardised mean differences are highlighted green because they were between -5% and 5%, indicating close matches on these characteristics. The variables “mean previous custodial sentences” and “claiming income support in the year prior to conviction” is not as well balanced in the treatment and control groups in this instance, but overall the groups were still well balanced on the vast majority of characteristics.

## Contact Points

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