



Summary

This provisional analysis assessed the impact on re-offending of support provided to women in the community by Lancashire Women's Centres. The one year proven re-offending rate¹ for 57² offenders who received support provided by Lancashire Women's Centres was 19%, compared with 18% for a matched control group of similar offenders. Statistical significance testing has shown that this difference in the re-offending rates is not statistically significant³; suggesting that at this stage there is insufficient evidence to draw a conclusion about the impact of receiving support provided by Lancashire Women's Centres on re-offending. However, the results of the analysis do not mean that support provided by Lancashire Women's Centres 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 support provided by Lancashire Women's Centres on re-offending.

What you can't say: This analysis shows that receiving support provided by Lancashire Women's Centres increased proven re-offending by 1 percentage point, or by any other amount.

These statistics are **provisional** as 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 of the offenders' 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 the complex lifestyle or criminogenic needs which will have caused these women to be referred, or to refer themselves to a Lancashire Women's Centre. The particular needs that it would be advantageous to control for include; mental health problems, specific substance misuse needs, domestic violence issues, homelessness or any other factors that are associated with referrals to Lancashire Women's Centres. In particular, we know that Lancashire Women's

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, start their court sentence, or from receipt of their caution.

² 57 individuals were matched from a cohort of 97 individuals, whose details were sent to the Justice Data Lab, as described on page 2 of this report.

³ The p-value for this significance test was 0.80. Statistical significance testing is described on page 8 of this report.

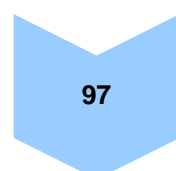
Centres will work with women who are particularly vulnerable. Although some of this contextual information about the individuals who Lancashire Women's Centre have worked with has been provided to the Justice Data Lab, these are variables which are not reflected adequately in our underlying data and therefore cannot be taken into account when matching the individuals to a suitable control group. It is recommended that this analysis is repeated if and when further contextual information is available to the Justice Data Lab in order to improve the modelling in the analysis.

Introduction

Lancashire Women's Centres offer a range of one-stop-shop services and opportunities to women in the community, including those that have an offending history. From May 2012 the Centres have expanded and rolled out programmes from two locations (Accrington and Blackburn) to 10 locations across Lancashire. The centres aim to help support, encourage and enable women to improve their quality of life and well-being, and are open to general drop-in to all women in the community. The work that the centre will carry out with an individual will be determined by an assessment of need across various pathways, including some of the following: finance and housing support, mental health interventions, support for substance misuse, support for domestic abuse and employment support. For those women with offending histories Lancashire Women's Centres work to address the underlying causes of offending behaviour with issues being explored in both a practical and therapeutic sense. A flexible and individualised approach is taken, along with a 'What's next' ethos when helping to support the individual to journey away from offending. Services offered by the Centres include personal development courses to enhance skills for life and work, and improve self esteem; courses aimed at improving home and family life with parenting support; courses for learning along with accredited courses; creative courses to improve confidence; money, debt and budgeting advice; housing support and advice; substance misuse referrals; domestic abuse referrals; health and wellbeing support; and counselling (through either BACP Accredited Counselling Service and couples counselling with RELATE trained counsellors). Work can be carried out both on an individual level and through group work, with Crèche facilities available for some training courses.

This analysis includes those women who were referred to Lancashire Women's Centres through several routes including probation officers, social services, community drugs team, as part of their sentence plan, or self referred to the service, and received support between 2010 and 2012. The engagement of these women with the services provided will have varied.

Processing the Data



Lancashire Women's Centres sent data to the Justice Data Lab for 97 individuals who received support between 2010 and 2012.



81

81 of the 97 were matched to the Police National Computer, a match rate of 84%. A possible reason that 16 of these women could not be identified is that a different surname may have been recorded either with Lancashire Women's Centres, or on the Police National Computer – for example due to marriage, or use of their maiden (or an alternative) surname. It is also possible that some women may have not ever received convictions (i.e they will not appear on the Police National Computer), for example if they attended Lancashire Women's Centres after being assessed as "at risk of offending", but have not necessarily offended.



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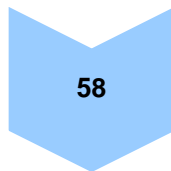
59 offenders received support from Lancashire Women's Centres within a year of release from custody (7 individuals), receiving a community sentence; either a Community Order or Suspended Sentence Order (51 individuals), or receiving a fine (1 individual). Restricting the period to a year between release from custody or the start of a community sentence, and receiving the support provided by Lancashire Women's Centres, means that any observable difference in the one year proven re-offending rate would be more likely to be attributable to the work of Lancashire Women's Centre, rather than any other factors which may have had an effect.

Analysis of the unmatched data (22 offenders who were matched to the PNC but were not suitable for the analysis) revealed the following:

- There were 12 individuals who had an identifiable sentence (including custodial sentences, community sentences and fines) as the most recent proven offence before receiving support provided by Lancashire Women's Centre, but who were not included in the analysis. All of these individuals did not commence receiving the support provided by Lancashire Women's Centre within a year of release from custody, start of their community sentence, or receiving a fine, meaning that we could not be confident that that any observable difference in the re-offending rates of the treatment, and matched control group is due to the work of Lancashire Women's Centres rather than any other factors.
- There were 6 individuals who could not be included in the analysis for modelling purposes. 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. 4 individuals could not be included in the analysis for this reason. The remaining 2 individuals could not be included in the analysis as they had a criminal history that was significantly different from the remainder of the matched group, in that they had much more complex criminal histories compared to the matched group. In order to allow for the statistical modelling to work, and achieve reasonable matching quality it was necessary to remove these two individuals at this stage; however it does mean the results of this analysis

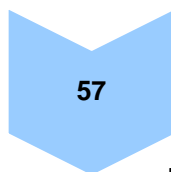
should be interpreted with particular care as the effect on re-offending detailed within this analysis may not be expected for those women who have had particularly complex criminal histories.

- Sentences could not be found on the administrative datasets for the remaining 4 individuals.



1 individual was removed because they had committed a re-offence before receiving support from Lancashire Women's Centres.

Creating a Matched Control Group



57 of the 58 offender records for which re-offending data was available could be matched to offenders with similar characteristics but who had not received support from Lancashire Women's Centres. In total the matched control group consisted of 20,016 offender records.

As this analysis refers to those that received support provided by Lancashire Women's Centres after release from custody, after the start of a community sentence or after receiving a fine, additional checks were imposed on the control group to ensure that the matched individuals had similar characteristics. All members of the matched control group could not have committed a proven re-offence before the intervention start date for the matched Lancashire Women's Centres counterparts. Any matches where the control group had committed a proven re-offence prior to the intervention start date of the Lancashire Women's Centres counterpart were excluded from the analysis. Also, all the members of the matched control group were female, and could only be matched to the Lancashire Women's Centres counterparts if they received the same sentence type. These checks ensured that we have greater confidence that the matched control group presents a more accurate counterfactual for comparison.

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

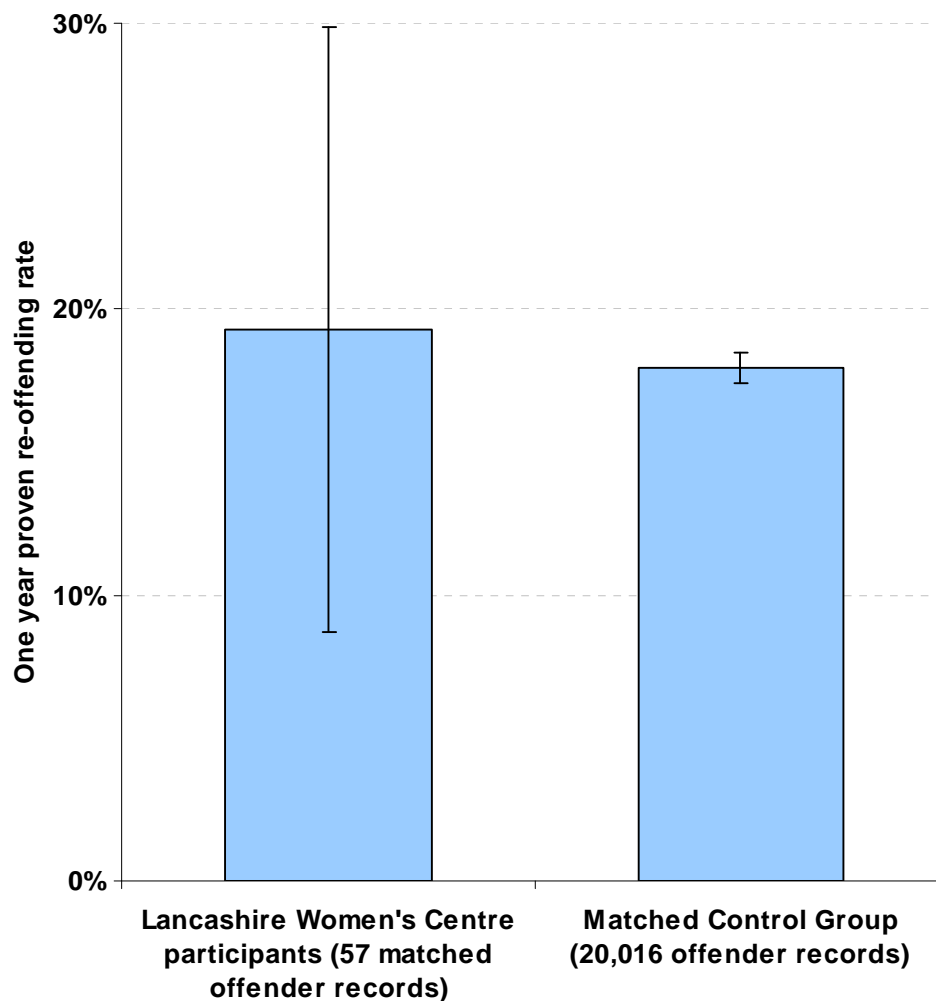
Results (Provisional Statistics)

The one year proven re-offending rate¹ for 57² offenders who received support from the Lancashire Women's Centres was 19%, compared with 18% for a matched control group of similar offenders. This information is displayed in Figure 1 below.

Figure 1 below 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 two groups is between a 10

percentage point reduction and a 12 percentage point increase. 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 support provided by Lancashire Women’s Centres in the community, and a matched control group (Provisional Statistics).



The precision of this estimate could be improved if the size of the Lancashire Women’s Centre group used in the analysis was increased. It is recommended that the analysis is repeated on a larger sample when additional years of data become available, and, when further contextual information is available to the Justice Data Lab in order to improve the modelling in the analysis.

Additional proven re-offending measures

Frequency of re-offending (Provisional Statistics)

The frequency of one year proven re-offending⁴ for 57² offenders who received support provided by Lancashire Women's Centres was 0.72 offences per individual, compared with 0.42 per individual in the matched control group. Statistical significance testing has shown that this difference in the re-offending rates is not statistically significant⁵.

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.

Time to re-offending (Provisional Statistics)

The average time to the first re-offence within a year for the 11 individuals that were matched, and who had re-offended after receiving support provided by Lancashire Women's Centres was 153 days. This compares to 163 days for the 4,121 individuals who re-offended from the matched control group. Statistical significance testing has shown that this difference in the time to first re-offence within a year is not statistically significant⁶.

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. In particular it was not possible to statistically control for mental health problems, specific alcohol and drug needs, children and family relationships, or any other factors that are associated with referrals to Lancashire Women's Centres. The control group against which re-offending rates for those receiving support provided by Lancashire Women's Centres have been compared with will therefore include offenders both with and without the specific needs that Lancashire women's Centres aim to address. It is also possible that the comparison group will include women who have also attended a different Women's Centre elsewhere in the UK, and received support that is similar to that which is provided by Lancashire Women's Centres. It is

⁴ The **frequency of one year proven re-offending** is defined as the number of re-offences committed in a one year follow-up period which were 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, start their court sentence, or from receipt of their caution.

⁵ The p-value for this significance test was 0.44. Statistical significance testing is described on page 8 of this report.

⁶ The p-value for this significance test was 0.72. Statistical significance testing is described on page 8 of this report.

important that the findings in this report should be interpreted with care because of these caveats detailed above.

It is possible that underlying characteristics about the individuals included in the analysis which were not captured by the data (e.g. homelessness; education history; history of drug and alcohol use etc) may have impacted participants' success in achieving the aims of the support provided by Lancashire Women's Centres, and may also have a role in affecting their 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. Therefore, there remains a possibility that any difference in re-offending behaviour after matching reflects differences in underlying characteristics between the two groups which are not recorded in the data, rather than differences in re-offending behaviour associated with support from Lancashire Women's Centres.

Only around a fifth of all fines given out by the courts are included in the PNC. This is because the PNC does not generally cover the less serious summary offences (such as TV licence evasion) which are more likely to receive a sentence of a fine. This analysis includes some individuals that received support provided by Lancashire Women's Centres following receipt of a fine, and therefore we cannot be certain we are comparing like for like in these cases. As a result of this it is important that the findings in this report are interpreted with care, particularly for the analysis on offenders receiving a fine.

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 57 of the 97 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 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. 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. As such, the final treatment group may not be representative of all offenders who have been on this programme; it is possible that the cohort as a whole experienced a different impact on their re-offending behaviour.

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 who received support provided by Lancashire Women’s Centres, and 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 <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
Number in group	57	20,016	
Ethnicity			
White	84%	82%	5
Asian	7%	9%	-7
Unknown	9%	9%	0
Nationality			
UK Citizen	88%	88%	0
Unknown Nationality	12%	12%	0
Gender			
Proportion that were female	100%	100%	0
Age			
Mean age at Index Offence	33	33	-2
Mean age at first contact with CJS	25	25	3
Index Offence¹			
Violent offences including Robbery	47%	47%	0
Theft and Handling	16%	16%	-1
Fraud and Forgery	12%	12%	0
Motoring offences	7%	7%	-1
Drug related ²	9%	8%	1
Other	9%	9%	0
Sentence Type			
Individuals on custodial sentences	12%	12%	0
Individuals on Community Orders	65%	65%	0
Individuals on Suspended Sentence Orders	21%	21%	1
Individuals receiving fines	2%	2%	0
Criminal History³			
Mean Copas Rate	-1.65	-1.66	1
Mean total previous offences	6	6	-1
Mean previous criminal convictions	3	3	-2
Mean previous custodial sentences	0.1	0.2	-10
Mean previous court orders	1	1	0
Employment and Benefit History			
In P45 employment (year prior to conviction)	28%	30%	-5
In P45 employment (month prior to conviction)	23%	25%	-4
Claiming Out of Work Benefits (year prior to conviction) ⁴	79%	80%	-2
Claiming Job Seekers Allowance (year prior to conviction)	26%	28%	-3
Claiming Incapacity Benefit and/or Income Support (year prior to conviction)	72%	71%	3
Notes:			
<p>1 Index Offence is based on OGRS categories. Further details on make-up of categories available upon request. 2 Drug related offences including importation, exportation, possession, and supply of drugs. 3 All excluding Penalty Notices for Disorder. All prior to Index Offence. 4 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).</p>			

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% to 5%)

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%)

We assess whether the treatment group and the matched control group are balanced and well matched through a comparison of the standardised differences generated for every variable included in the matching process. Table 1 shows that the two groups were reasonably matched on all variables found to have associations with receiving treatment and/or re-offending. The standardised differences are highlighted as amber (i.e. between 6% to 10% or -6% to -10%) in a few cases, suggesting that the control group could have been slightly better matched in these cases, but were still indicative of a control group who exhibit similar characteristics.

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