Ministry of Justice

Justice Data Lab
Re-offending Analysis:
Adelaide House- Approved Premise

Summary

This analysis assessed the impact on re-offending of residing at Adelaide House Female Approved Premises for women who receive a statutory referral to the premise after leaving custody, or in advance of or during a community sentence. The one year proven re-offending rate[1] for 49 offenders who resided at Adelaide House was 24%, compared with 38% for a matched control group of similar offenders. Statistical significance testing has shown that this difference is statistically significant[2]; meaning that we can be confident that there is a real difference in the re-offending rate for those women who resided at Adelaide House by between 1 and 30 percentage points.

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 very complex criminogenic needs which will have caused these women to be referred to residence at an Approved Premise. Statutory referral to residence at an Approved Premise is only requested for women who have particularly high levels of need and risk of either harm and/or re-offending, and should be considered a rare event. The particular needs that it would be advantageous to control for include; mental health problems, specific alcohol and drug needs, children and family relationships, or any other factors that are associated with statutory referrals to Adelaide House. In particular, we know that Adelaide House will work with women who are particularly vulnerable, as referrals to Adelaide House are statutory and are taken from Probation, Prison and Courts for those with a variety of needs, particularly multi-agency public protection arrangements (MAPPA) cases. This includes cases where the offenders are considered to fall in the very high and high risk of harm and medium risk/complex needs categories. These are variables which are not reflected adequately in our underlying data.

The control group against which re-offending rates for those residing at Adelaide House have been compared with will therefore include offenders both with and

[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 p-value for this significance test was 0.03. Statistical significance testing is described on page 7 of this report.

without the specific needs that Adelaide House are required to address during the statutory requirement for residence at an Approved Premise. It is also possible that the comparison group will include women who have also attended a different Approved Premise and received statutory care that is similar to that which is provided by Adelaide House, although the vast majority of women in the matched control group will not have attended an Approved Premise. It is important that the findings in this report should be interpreted with care because of these caveats detailed above. Further detail about the caveats and limitations to this analysis can be found later in this document.

In addition, although the results of this analysis are statistically significant, further years of data would provide a more accurate result; it would therefore be recommended that this analysis is repeated when further years of data become available.

What you can say: This analysis indicates that individuals residing at Adelaide House Approved Premises experienced a reduction in re-offending of between 1 and 30 percentage points.

Introduction

Adelaide House Approved Premise is an independently managed Female Approved Premises based in Liverpool, which accommodates female offenders across the risk of harm continuum. Referrals to Adelaide House are statutory and are taken from Probation, Prison and Courts for those with a variety of needs, particularly multi-agency public protection arrangements (MAPPA) cases. This includes cases where the offenders are considered to fall in the very high and high risk of harm and medium risk/complex needs categories. Specifically, Adelaide House will take statutory referrals due to one or more of the following factors: offending behaviour, drugs and alcohol addiction, personality disorder, mental health, being a victim of domestic violence, learning difficulties, self harm, and homelessness.

Whilst residing at Adelaide House the offender is accommodated and will receive support in various ways, with work being targeted to the individual and addressing the 9 recognised pathways out of offending[3]. A resident's stay will vary, taking into account several factors including length of prison licence and length of community order, with a compulsory condition of residence. However, for all residents, Adelaide House has 24 hour staffing, double waking night cover, CCTV monitoring throughout the premises and grounds, random and regular drug and alcohol testing, curfews and a variety of additional conditions as necessary for an individual. For this analysis the offenders that were residing with Adelaide House were placed on community orders or released from prison on licence between 2006 and 2010 with mandatory residence at Adelaide House.

[3] The 9 recognised pathways out of offending are: Accommodation, Employment, Training and Education, Drugs, Alcohol, Mental & Physical Health, Victims of Domestic Violence and Sexual Violence, Children & Families, Attitudes, Thinking & Behaviour and Finance & Debt.

Further information about Adelaide House can be found at the following link: www.adelaidehouse.org/

Processing the Data

Adelaide House sent data to the Justice Data Lab for 78 offenders who resided with Adelaide House between 2006 and 2010.

77 of the 78 offenders were matched to the Police National Computer, a match rate of 99%.

54 offenders had an identifiable custodial sentence or community sentence where they were released from custody or started their community sentence during the years 2006 to 2010. Individuals can be referred to Adelaide House before receiving a sentence, at sentencing, or during a sentence. For this analysis we have looked at referrals that were given within 6 months of the start of the community sentence or release from custody. Having a 6 month period between starting a community sentence or leaving custody and residing with Adelaide House, means that any observable difference in the one year proven re-offending rate would be more likely to be attributable to the work of Adelaide House, rather than any other factors which may have had an effect.

Analysis of the unmatched data revealed the following:

- There were 15 individuals for which their referral date fell outside of the 6 months range described above.
- There were 3 individuals who had sentence types that were not community orders or custodial sentences for their index offence.
- One offender could not be included in the analysis as their index offence appeared to be of a sexual nature.
- One offender could not be included in the analysis as they committed a re-offence before their residency at Adelaide House.
- One offender was not included in the analysis for modelling purposes.
- Sentences could not be found on the administrative datasets for 2 remaining individuals.

Two further offenders were removed at this stage for modelling purposes; these two offenders had an unusually high number of re-offences each. The re-offending information about these two individuals is correct, however because their patterns of re-offending are significantly different to the remainder of the matched group; it was necessary to remove them from the analysis in order for the statistical modelling to work. The criminal histories of these offenders are in line with the

offenders in this analysis, yet the difference in their patterns of re-offending suggests these individuals have particular characteristics which we are unable to take account for in our analysis. It was therefore 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, in particular the change in frequency of re-offending, detailed within this analysis would not be expected for those women who are likely to experience a high frequency of re-offending. Provisional statistical significance testing suggests that when including these two individuals the reduction in the one year proven re-offending rate would still be statistically significant, in line with the findings of this report.

Creating a Matched Control Group

Of the 52 offender records for which re-offending data was available, 49 could be matched to offenders with similar characteristics, but who did not reside at Adelaide House. In total the matched control group consisted of 42,102 offender records.

As this analysis refers to those that resided with Adelaide House after release from custody or at the start of a community order, an additional check needed to be 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 start date of the residency of the matched Adelaide House counterparts. Any matches where the control group had committed a proven re-offence prior to the start date of the Adelaide House counter part were excluded from the analysis. This check ensures that we have greater confidence that the matched control group presents a more accurate counterfactual for comparison.

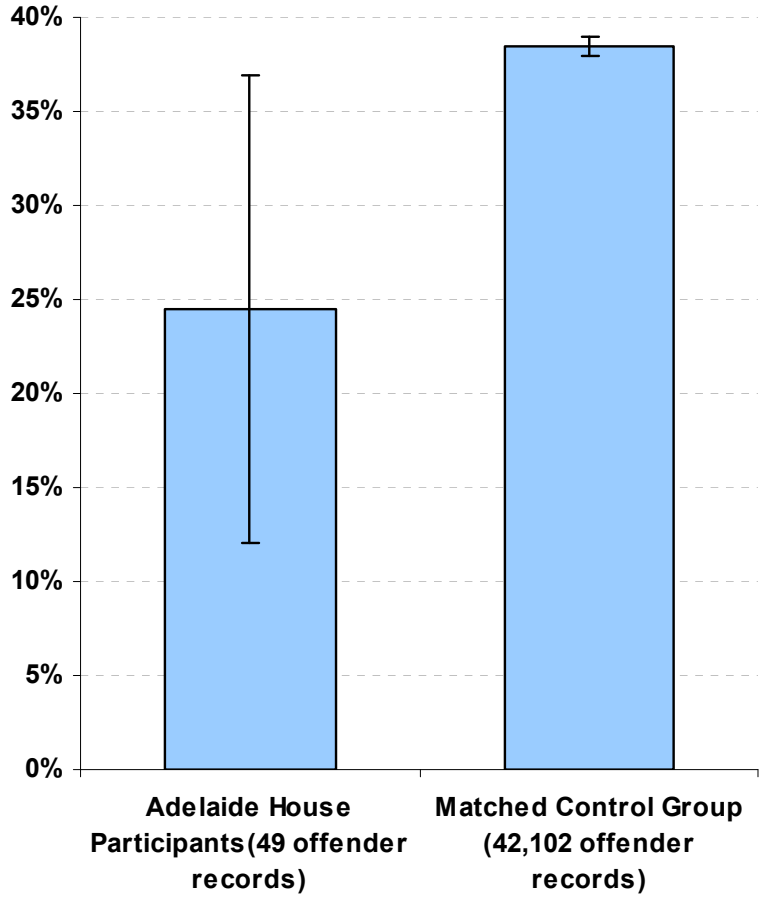
The Annex provides information on the similarity between the treatment and control groups. Further data on the matching process is available upon request.

Results

The one year proven re-offending rate for 49 offenders who resided at Adelaide House was 24%. This compares to 38% 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 1 and 30 percentage points. 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 resided at Adelaide House and a matched control group



Additional proven re-offending measures

Frequency of re-offending

The frequency of one year proven re-offending for the 49 offenders who resided at Adelaide House and were matched was 0.86 offences per individual, compared with 1.21 per individual in the matched control group. In this case the change in frequency of re-offending was not statistically significant[4].

This result is in the same direction of 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 on the next page.

[4] The difference was non-significant, p = 0.19. Statistical significance testing is described on page 7 of this report.

Caveats and Limitations

The statistical methods used in this analysis are based on data collected for administrative purposes. While these include details of each 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. There are additional underlying characteristics about the individuals included in this analysis which were not captured by the data. 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 Adelaide House. The control group against which re-offending rates for those residing at Adelaide House have been compared with will therefore include offenders both with and without the specific needs that Adelaide House are required to address. It is also possible that the comparison group will include women who have also attended a different Approved Premise and received statutory care that is similar to that which is provided by Adelaide House, although the vast majority of women in the matched control group will not have attended an Approved Premise. It is important that the findings in this report should be interpreted with care because of these caveats detailed above

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. In this instance it is mandatory for these women to reside at Adelaide House as they have received a statutory referral and this will therefore lead to a negative selection bias.

Furthermore, only 49 of the 78 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 resided at Adelaide House. 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 resided at Adelaide House, 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.

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	**49**	**42,102**	
Ethnicity			
White[1]	98%	100%	**n/a**
Nationality			
UK Citizen[2]	94%	100%	**n/a**
Gender			
Proportion that were female	100%	100%	**0**
Age			
Mean age at Index Offence	32	32	**-1**
Mean age at first contact with CJS	21	21	**-1**
Index Offence[3]			
Violent offences including robbery	37%	35%	**3**
Burglary and Theft and handling	20%	19%	**3**
Criminal Damage	10%	11%	**-3**
Drugs	18%	19%	**-1**
Other[4]	14%	15%	**-2**
Criminal History[5]			
Mean Copas Rate	-0.97	-0.98	**1**
Mean total previous offences	23	23	**3**
Mean previous criminal convictions	10	10	**2**
Mean previous custodial sentences	2	2	**3**
Mean previous court orders	3	3	**1**
Employment and Benefit History			
In P45 employment (year prior to conviction)	6%	6%	**0**
Claiming Out of Work Benefits (year prior to conviction)[6]	86%	85%	**3**
Claiming Job Seekers Allowance (year prior to conviction)	29%	28%	**1**
Claiming Incapacity Benefit (year prior to conviction)	55%	54%	**3**
Claiming Income Support (year prior to conviction)	63%	63%	**1**

Notes
1 See note on next page
2 See note on next page
3 Index Offence is based on OGRS categories. Further details on make-up of categories available upon request.
4 Other offences including Fraud and forgery and Motoring offences (which includes theft from vehicles).
5 All excluding Penalty Notices for Disorder. All prior to Index Offence.
6 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% 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%)

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.

In our final treatment group, there was one individual with a non-white ethnicity and three individuals of a foreign nationality. As these both comprise of a small proportion of our final treatment group it was not suitable to include the variables "Ethnicity" and "Nationality" in our final statistical model. Having too small a proportion of offenders comprising of a variable in the final treatment group will result in a high standard errors preventing the statistical model from running correctly and meaning reliable comparisons cannot be made between the treatment group and matched control group. It would not be appropriate to include individuals with these characteristics in the control group due to the limited representation these characteristics have in the final treatment group. In this particular case these four individuals had similar criminal histories and re-offending patterns to the other individuals in the treatment group suggesting that the variables "Ethnicity" and "Nationality" were not likely to be significant in determining the re-offending outcome of these individuals. Therefore, although there were no individuals of either a non-white ethnicity or a foreign nationality in the control group, we still feel this is a valid analysis.

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