



## Summary

This analysis assessed the impact on re-offending of a project run by the Chaplaincy Department in HMP Swansea. The one year proven re-offending rate<sup>1</sup> for 81 offenders on the Swansea Community Chaplaincy Project was 57%, 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 statistically significant<sup>2</sup>; suggesting that at this stage there is insufficient evidence to draw a conclusion about the impact of being part of the Swansea Community Chaplaincy Project on re-offending. However, the results of the analysis do not mean that the Chaplaincy project 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 the Swansea Community Chaplaincy Project on re-offending.

**What you cannot say:** This analysis shows that entering the Swansea Community Chaplaincy Project increased proven re-offending by 4 percentage points, or by any other amount.

## Introduction

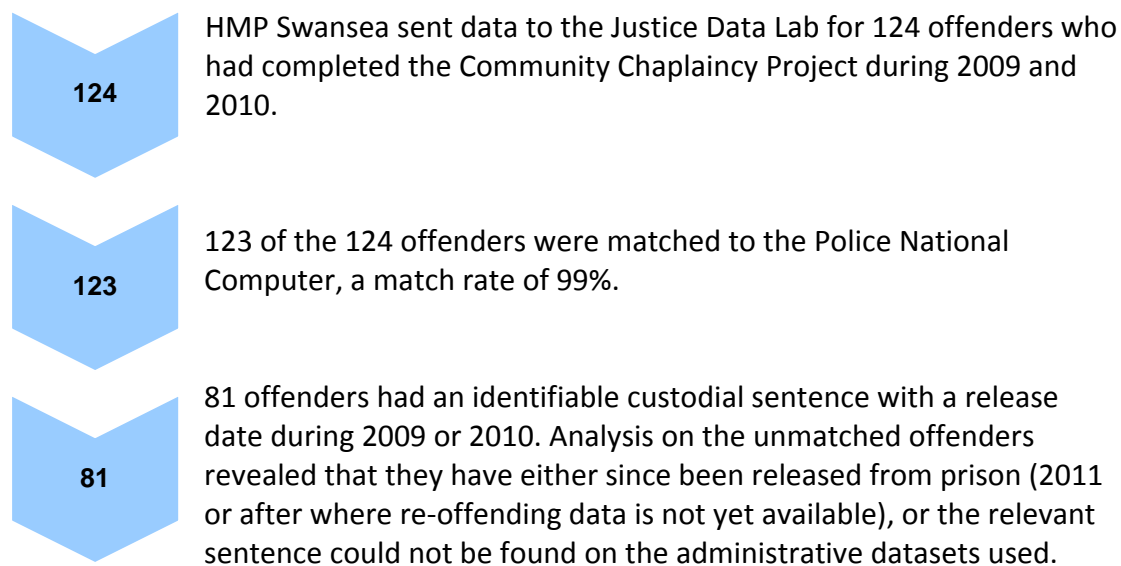
The Swansea Community Chaplaincy Project is a service delivered by the Chaplaincy Department at HMP Swansea. The project works with prisoners who volunteer to engage with the chaplaincy department, but working with individuals especially who are known to have particularly complex needs, and who are at very high risk of re-offending. The framework for engaging with prisoners is to work together for the six weeks prior to their release and for 12 weeks after their release (however there is some flexibility depending upon needs). The project does not specifically target prisoners' needs but aims to work alongside and enable the prisoner to engage with 'target set' agencies as required by the prisoner. The project will work with individuals with multiple interventions as is deemed necessary by the prisoner. The Project has been serving the needs of prisoners upon their release since 2001, but this analysis is on interventions run in 2009 and 2010.

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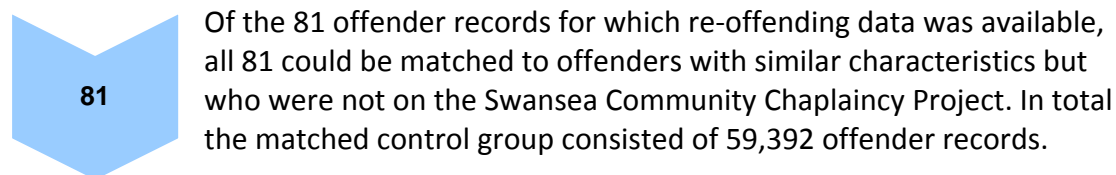
<sup>1</sup> The **one year proven re-offending rate** is defined as the proportion of offenders in a cohort who commit an offence in a one year follow-up period which was proven through receipt of a court conviction, caution, reprimand or warning during the one year follow-up or in a further six month 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,  $p = 0.45$ . 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.

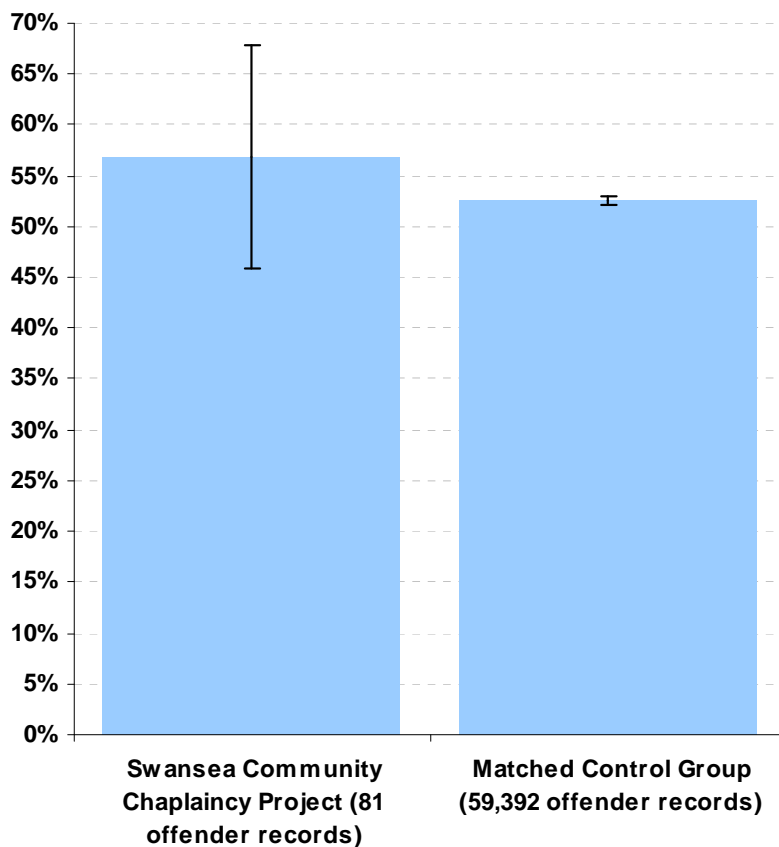
## Results

The one year proven re-offending rate for 81 offenders on the Swansea Community Chaplaincy Project was 57%. This compares to 53% for a matched control group of similar offenders. This information is displayed in Figure 1, which is shown on the next page.

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. However, because this difference crosses 0, we cannot be sure either way that the Swansea Community Chaplaincy Project 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 on the Swansea Community Chaplaincy Project and a matched control group.



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. While these include details of each 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. It is possible that underlying characteristics about the individuals included in the analysis which were not captured by the data (e.g. attendance at other interventions or services targeted at offenders) may have impacted re-offending behaviour.

For this analysis in particular, it is known that the Chaplaincy project engage with offenders who have particularly complex needs (including addictions to drugs and

alcohol, and complex mental health problems), and who are at very high risk of re-offending, and as such could be considered to be harder to help to break the cycle of re-offending. Having particularly complex needs and being at very high risk of re-offending is not well reflected in the administrative datasets which have been used for this analysis, which means that the results of this analysis should be interpreted with care.

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 81 of the 124 offenders who volunteered to sign up for the Swansea Community Chaplaincy Project 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 have been on the project. 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 Swansea Community Chaplaincy Project participants 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](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>81</b>	<b>59,392</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	100%	100%	<b>0</b>
<b>Age</b>			
Mean age at Index Offence	31	31	<b>-1</b>
Mean age at first contact with CJS	17	17	<b>0</b>
<b>Index Offence<sup>1</sup></b>			
Violent offences including robbery	37%	37%	<b>1</b>
Burglary	17%	18%	<b>-1</b>
Theft and handling	17%	18%	<b>-1</b>
Motoring offences, including theft of Vehicles	11%	11%	<b>1</b>
Drugs	10%	10%	<b>1</b>
Other	7%	8%	<b>0</b>
<b>Length of Custodial Sentence</b>			
Less than 12 months	52%	52%	<b>1</b>
12 months to 4 years	48%	48%	<b>-1</b>
<b>Criminal History<sup>2</sup></b>			
Mean Copas Rate	-0.53	-0.50	<b>-4</b>
Mean total previous offences	42	43	<b>-3</b>
Mean previous criminal convictions	15	16	<b>-4</b>
Mean previous custodial sentences	4	4	<b>-2</b>
Mean previous court orders	5	5	<b>-3</b>
<b>Employment and Benefit History</b>			
In P45 employment (year prior to conviction)	19%	18%	<b>2</b>
In P45 employment (month prior to conviction)	9%	8%	<b>2</b>
Claiming Out of Work Benefits (year prior to conviction) <sup>3</sup>	77%	77%	<b>0</b>
Claiming Job Seekers Allowance (year prior to conviction)	44%	44%	<b>0</b>
Claiming Incapacity Benefit (year prior to conviction)	44%	46%	<b>-2</b>
Claiming Income Support (year prior to conviction)	28%	29%	<b>-2</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>
<b>Amber - the two groups were reasonably matched on this variable (6% to 10% or -6% to -10%)</b>
<b>Red - the two groups were poorly matched on this variable (greater than 10% or less than -10%)</b>

Table 1 shows that the two groups were well matched on all variables found to have associations with receiving treatment and/or re-offending. All of the standardised mean differences are highlighted green because they were between -5% and 5%, indicating close matches on these characteristics.

## Contact Points

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General information about the official statistics system of the United Kingdom is available from [www.statistics.gov.uk](http://www.statistics.gov.uk)

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