



Ministry
of Justice

Guide to Justice Data Lab Pilot Statistics

10th October 2013

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What is the Justice Data Lab initiative, and how does it work?

The Justice Data Lab has been launched as a pilot for one year from April 2013. During this year, a small team from Analytical Services within the Ministry of Justice (the Justice Data Lab team) will support organisations that provide offender services by allowing them easy access to aggregate re-offending data, specific to the group of people they have worked with. This will support organisations in understanding their effectiveness at reducing re-offending.

Participating organisations supply the Justice Data Lab with details of the offenders who they have worked with, and information about the services they have provided. The Justice Data Lab team will match these individuals to the re-offending datasets held within the Ministry of Justice, then use statistical modeling techniques to generate a matched control group of individuals with very similar characteristics. As standard the Justice Data Lab will supply aggregate one-year proven re-offending rates for that group, and that of a matched control group of similar offenders. The re-offending rates for the organisation's group and the matched control group are compared using statistical testing to assess the impact of the organisation's work on reducing re-offending. The results are then returned to the organisation with explanations of the key metrics, and any caveats and limitations necessary for interpretation of the results. The tailored reports produced for each organisation will then be published on the Ministry of Justice website to promote transparency and ensure that findings produced through this service can be used by others to improve the rehabilitation of offenders.

What is being published?

From October 2013, this information will be published on the second Thursday of each month for the duration of the Justice Data Lab pilot. There are two types of publications:

- Official Statistics which summarise the findings of the Justice Data Lab to date.
- Tailored reports pertaining to the re-offending outcomes of services or interventions delivered by organisations who have requested information through the Justice Data Lab. Each report will be an Official Statistic.

From October, for the remainder of the duration of the Justice Data Lab pilot, the Official Statistics described above will be published at 9:30 on the second Thursday of each calendar month.

Why is this information being published?

The Justice Data Lab pilot is free at the point of service, paid for through the Ministry of Justice budget. The Ministry of Justice therefore has a duty to act transparently and openly about the outcomes of this initiative. It is anticipated that by making this information available in the public domain, organisations that work with offenders will have a greater evidence base about what works to rehabilitate offenders, and ultimately cut crime.

The remainder of this document focuses on the content of the tailored reports.

What figures will be presented in the tailored reports, and how?

Each report will demonstrate a standard format and content which will be tailored to the re-offending analysis for a particular service or intervention delivered by an organisation. Each key section of the report is described below, with a description of the content of that section:

Summary

This opening section will include the headline one year proven re-offending rate¹ associated with the individuals receiving a service or intervention from an organisation, and who could be matched to the administrative datasets used for analysis. The one year proven re-offending rate will also be given for a matched control group of offenders with very similar characteristics.

The proven re-offending rate for the treatment and matched control group will be compared using statistical tests, and the result of this test will be described. The test will either conclude that the observed difference in re-offending is statistically significant, implying that the individuals in the analysis have experienced a real change in offending behaviour compared to what would be expected. Or, alternatively, that the observed difference in re-offending is not statistically significant, implying that the individuals have not experienced a change in the offending behaviour expected.

¹ The **one year proven reoffending 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 begins when offenders leave custody or start a community sentence.

If the statistical testing gives a statistically significant result, but there are important caveats to the interpretation of this result, then they will be mentioned in the summary section, alongside an explanation of the potential impacts of this caveat. This will not normally be required if the result is not statistically significant, but there may be some exceptional circumstances where further explanation of the limitations of the analysis is required.

What you can say / What you cannot say

This next section draws out the key conclusions of the report in a clear format. Each report will contain a large amount of information, so to help users interpret the findings, the key conclusions are drawn out. The inclusion of this section is not an attempt by the Ministry of Justice to control how the figures in the report can be used.

If a statistically significant result has been observed, then it will not be necessary in most cases to include a “What you cannot say” conclusion, as the findings described in the report are clear. The range of impact on the one year proven re-offending rate will be given, which is a product of the statistical testing.

If a statistically significant result has not been observed, then the conclusion of the analysis is not always clear. There can be a number of reasons why a non-significant result is observed; including, that it could be that the sample size of the treatment group was too small to understand the impact with the necessary degree of precision; that the service does not primarily aim to reduce re-offending, instead aiming to improve one or more other aspects of an individuals life; or that there was genuinely no impact on re-offending. Because non significant results can be confusing, the conclusion of the report is bought out through using both “What you can say” and “What you cannot say”.

Introduction

This section of the report will give detail about the service or intervention, including how individuals are selected onto the course. This information will be supplied by the organisation when they make a request to the Justice Data Lab.

Processing the data

To get the one year proven re-offending rate, the treatment group supplied by an organisation must be matched to the administrative datasets used by the Ministry of Justice. There is an additional stage of modelling where the matched control group is found. These steps are clearly explained, but it is important to note here that in most cases, this will result in attrition from the original cohort shared. The primary aim in the processing stage is to produce the groundwork for an analysis which is robust, and that we are absolutely confident that this analysis is based

on the correct individuals and sentences. There are many reasons why the resulting attrition occurs, including:

- The minimum criteria to match individuals has not been provided (name, date of birth, gender etc);
- The identifying information about the individual may not be the same as what is held on the administrative databases (name, date of birth, gender etc) meaning that we could not be confident about the match;
- There may be more than one individual with the same identifying information, and it is not possible to establish which identity is correct;
- Information about the sentence (including sentence type) does not match what is held on the administrative records to an extent where we cannot be confident that a re-offending follow up would be appropriate;
- Individuals who were targeted in custody may have still been in custody after 31st December 2010 – currently the last date in the Data Lab where re-offending data can be calculated from;
- The individuals cannot be matched to offenders with similar characteristics.

Results

The results described in the summary section above are presented in further detail, including a graphical presentation of the results for easier interpretation.

Additional proven re-offending measures

In this section, additional breakdowns of proven re-offending are given. These measures will include the frequency of one year proven re-offending, and/or two year proven re-offending, and will be included where they are available and following discussion with the organisation.

Caveats and Limitations

In this section any relevant caveats and limitations to the analysis itself, or its interpretation, will be presented.

Assessing statistical significance

A description of how to interpret statistical significance is given.

Annex

The annex to the report includes a detailed tabulation of the characteristics of the treatment and matched control group. This is included to demonstrate how well matched the two groups were in matching, with any key issues in the matching reported again here. The characteristics will include demographic information about the two groups (including ethnicity, nationality, age, gender, all as appropriate), information about the index offence, criminal history, and employment and benefit information in the year prior to conviction.

Contact points

Relevant contact details for any enquiries for the Ministry of Justice will be given.

Contact details and further information

Press enquiries should be directed to the Ministry of Justice press office:

Tel: 020 3334 3536

Email: newsdesk@justice.gsi.gov.uk

Any other enquiries about this statistical notice should be directed to the Justice Statistics Analytical Services division of the Ministry of Justice:

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Ministry of Justice
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102 Petty France
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SW1H 9AJ
Email: statistics.enquiries@justice.gsi.gov.uk

General enquiries about the statistical work of the Ministry of Justice can be e-mailed to: statistics.enquiries@justice.gsi.gov.uk

General information about the official statistics system of the UK is available from: www.statistics.gov.uk

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