

Justice Data Lab analysis: Reoffending behaviour after support from P3 Link Worker Services

January 2020

This analysis looked at the reoffending behaviour of 439 individuals who participated in a P3 Link Worker Service intervention. The overall results show that those who took part in the intervention had a lower one-year proven reoffending rate, and lower offending frequency, and took longer to reoffend compared to a matched comparison group.

P3 Link Worker Services work with clients to help them build skills and support networks. Individuals who partake in the intervention present with multiple complex needs in some or all of the following; accommodation, education, employment, relationships, drugs, alcohol, mental health and financial management.

The headline analysis in this report measured proven reoffences in a one-year period for a 'treatment group' of 439 offenders who received support some time between 2015 and 2017 and for a much larger 'comparison group' of similar offenders who did not receive it. There may have been a different impact on participants whose details were submitted but who did not meet the criteria for analysis.

## Overall measurements of the treatment and comparison groups

- For **100** typical people in the **treatment** group, the equivalent of:
- **49** of the 100 people committed a proven reoffence within a one-year period (a rate of 49%), **6 people fewer** than in the comparison group.

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- 189 proven reoffences were committed by these 100 people during the year (a frequency of 1.9 offences per person), 72 offences fewer than in the comparison group.
- 167 days was the average time before a reoffender committed their first proven reoffence, 40 days later than the comparison group.

For **100** typical people in the **comparison** group, the equivalent of:

**54** of the 100 people committed a proven reoffence within a one-year period (a rate of 54%).

**261** proven reoffences were committed by these 100 people during the year (a frequency of 2.6 offences per person).

**127** days was the average time before a reoffender committed their first proven reoffence.

## Overall estimates of the impact of the intervention

For 100 typical people who receive support, compared with 100 similar people who do not receive it:



The number of people who commit a proven reoffence within one year after release could be lower by between 1 and 10 people. This is a statistically significant result.

The number of proven reoffences committed during the year could be lower by between 44 and 100 offences. This is a statistically significant result.

in average, the time before an offender committed their first proven reoffence could be longer by between 27 and 53 days. This is a statistically significant result.

Please note totals may not appear to equal the sum of the component parts due to rounding.

## ✓ What you can say about the one-year reoffending rate:

"This analysis provides evidence that support from P3 Link Worker Services may decrease the number of proven reoffenders during a one-year period."

## X What you cannot say about the one-year reoffending rate:

"This analysis provides evidence that support from P3 Link Worker Services increases/has no effect on the reoffending rate of its participants."

#### What you can say about the one-year reoffending frequency:

"This analysis provides evidence that support from P3 Link Worker Services may decrease the number of proven reoffences during a one-year period."

## X What you cannot say about the one-year reoffending frequency:

"This analysis provides evidence that support from P3 Link Worker Services increases/has no effect on the number of reoffences committed by its participants."

## What you can say about the time to first reoffence:

"This analysis provides evidence that support from P3 Link Worker Services may lengthen the average time to first proven reoffence."

#### X What you cannot say about the time to first reoffence:

"This analysis provides evidence that support from P3 Link Worker Services decreases/has no effect on the average time to first reoffence for its participants.."

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#### One-year proven reoffending rate after support from P3



Significant difference between groups

## One-year proven reoffending frequency after support from P3



Significant difference between groups

#### Average time to first proven reoffence after support from P3



Significant difference between groups

# P3 Link Worker Services in their own words

" The P3 Link Worker Service is best described as a system navigation service. It combines elements of advice and guidance, advocacy, practical and emotional support, mentoring and coaching. We work with clients to help them build skills and support networks that can support their move away from offending behaviour.

The interventions take place mainly in the community in all five of the CRCs run by Purple Futures, and last on average around four months (however the intervention is not time bound - clients can be worked with for as long as they require the intervention).

# Response from P3 Link Worker Services to the Justice Data Lab analysis

"We would like to thank the Justice Data Lab for producing this report. We feel that it gives an accurate reflection of the results that the Link Worker service can achieve.

This service has been delivered in 5 CRC Probation areas across the country over the past 4 years and had been available to people under probation supervision who have the highest likelihood of reoffending as defined by high OGRS scores.

The strength of this model lies in its ability to tailor support to a persons individual needs and wants while utilising their strengths and involving them in the support process. The development of trusting relationships between Link Workers and the people they support has been key to achieving progress and this has been done by listening to what people say, respecting their views and making them feel valued. Link Workers do what they say they are going to do, when they say they will do it. They are knowledgeable and compassionate and this is reflected in the feedback we get from people who have moved through our services.

In delivering this support we have also been able to vary the level and length of involvement we offer so we can adapt to the changes in circumstance which are so often experienced by this group of people. We believe that there is never one size that fits all and everyone should be in receipt of bespoke services which make sense to them.

We hope that we can go on to deliver this support to many more people in the future."

# Results in detail

Four analyses were conducted in total, controlling for offender demographics and criminal history and the following risks and needs: employment, education, financial management, relationships, alcohol use, mental health, thinking skills and attitudes.

## Analyses

1. **National analysis:** treatment group matched to offenders across England and Wales using demographics, criminal history and individual risks and needs.

2. **Yorkshire and the Humber analysis:** treatment group matched to offenders in Yorkshire and the Humber using demographics, criminal history and individual risks and needs.

3. **North West analysis:** treatment group matched to offenders in North West using demographics, criminal history and individual risks and needs.

4. **South East analysis:** treatment group matched to offenders in South East using demographics, criminal history and individual risks and needs.

## The headline results in this report refer to the National analysis.

The sizes of the treatment and comparison groups for reoffending rate and frequency analyses are provided below. To create a comparison group that is as similar as possible to the treatment group, each person within the comparison group is given a weighting proportionate to how closely they match the characteristics of individuals in the treatment group. The calculated reoffending rate uses the weighted values for each person and therefore does not necessarily correspond to the unweighted figures.

Analyses	Controlled for Region	Treatment Group Size	Comparison Group Size	Reoffenders in treatment group	Reoffenders in comparison group
National		439	50,980	214	24,755
Yorkshire and the Humber	Х	159	4,181	85	2,119
North West	Х	150	2,333	62	1,048
South East	Х	73	3,325	39	1,726

In each analysis, **three headline measures** of one-year reoffending were analysed, as well as four additional measures (see results in Tables 1-7):

- 1. Rate of reoffending
- 2. Frequency of reoffending
- 3. Time to first reoffence
- 4. Rate of first reoffence by court outcome
- 5. Frequency of reoffences by court outcome
- 6. Rate of custodial sentencing for first reoffence
- 7. Frequency of custodial sentencing

# Significant results

#### 22 measures show a statistically significant result. These provide significant evidence that:

#### National

- Participants are less likely to commit a reoffence than non-participants
- Participants commit fewer reoffences than non-participants
- Participants who reoffend within a one-year period commit their first proven reoffence later than non-participants
- Participants who reoffend within a one-year period are less likely to commit a triable-eitherway offence for their first reoffence than non-participants
- Participants who reoffend within a one-year period are more likely to commit a summary offence for their first reoffence than non-participants
- Participants who reoffend within a one-year period commit fewer triable-either-way offences than non-participants
- Participants who reoffend within a one-year period are less likely to receive a custodial sentence for their first reoffence than non-participants
- Participants who reoffend within a one-year period receive fewer custodial sentences than non-participants

#### Yorkshire and the Humber

- Participants commit fewer reoffences than non-participants
- Participants who reoffend within a one-year period commit their first proven reoffence later than non-participants
- Participants who reoffend within a one-year period commit fewer triable-either-way offences than non-participants
- Participants who reoffend within a one-year period are less likely to receive a custodial sentence for their first reoffence than non-participants
- Participants who reoffend within a one-year period receive fewer custodial sentences than non-participants

#### North West

- Participants are less likely to commit a reoffence than non-participants
- Participants commit fewer reoffences than non-participants
- Participants who reoffend within a one-year period commit their first proven reoffence later than non-participants
- Participants who reoffend within a one-year period commit fewer triable-either-way offences than non-participants
- Participants who reoffend within a one-year period are less likely to receive a custodial sentence for their first reoffence than non-participants
- Participants who reoffend within a one-year period receive fewer custodial sentences than non-participants

#### South East

- Participants commit fewer reoffences than non-participants
- Participants who reoffend within a one-year period commit fewer triable-either-way offences than non-participants
- Participants who reoffend within a one-year period receive fewer custodial sentences than non-participants

Tables 1-7 show the overall measures of reoffending. Rates are expressed as percentages and frequencies expressed per person. Tables 3 to 7 include reoffenders only. Comparison group rates are calculated using weighted population figures (see note on p8).

Table 1: Proportion of people who committed a proven reoffence in a one-year period after support fromP3 Link Worker Services, compared with matched comparison groups

			One-year proven reoffending rate						
Analysis	Number in treatment group	Number in comparison group	Treatment group rate (%)	Comparison group rate (%)	Estimated difference (% points)	Significant difference?	p-value		
National	439	50,980	49	54	-10 to -1	Yes	0.02		
Yorkshire and the Humber	159	4,181	53	54	-8 to 8	No	0.93		
North West	150	2,333	41	54	-20 to -4	Yes	<0.01		
South East	73	3,325	53	50	-8 to 15	No	0.57		

Table 2: Number of proven reoffences committed in a one-year period by people who received support from P3 Link Worker Services, compared with matched comparison groups

	One-year proven reoffending frequency (offen						rson)
Analysis	Number in treatment group	Number in comparison group	Treatment group frequency	Comparison group frequency	Estimated difference	Significant difference?	p-value
National	439	50,980	1.89	2.61	-1.00 to -0.44	Yes	<0.01
Yorkshire							
and the	159	4,181	2.15	2.68	-1.01 to -0.05	Yes	0.03
Humber							
North West	150	2,333	1.55	2.30	-1.21 to -0.29	Yes	<0.01
South East	73	3,325	1.81	2.42	-1.20 to -0.02	Yes	0.04

Table 3: Average time to first proven reoffence in a one-year period for people who received support from P3 Link Worker Services, compared with matched comparison groups

	Number in	Number in	Average tim	ne to first prover reoffend	n reoffence in a ders only (days		od, for
Analysis	treatment group	comparison group	Treatment group time	Comparison group time	Estimated difference	Significant difference?	p-value
National	214	24,755	167	127	27 to 53	Yes	<0.01
Yorkshire and the Humber	85	2,119	167	129	16 to 60	Yes	<0.01
North West	62	1,048	177	138	14 to 63	Yes	<0.01
South East	39	1,726	149	124	-5 to 55	No	0.10

Table 4: Proportion of people supported by P3 Link Worker Services with first proven reoffence in a one-year period by court outcome, compared with similar non-participants (reoffenders only)

	Number in	Number in	One-year proven reoffending rate by court outcome of first reoffence, for reoffenders only						
Analysis treatment co group		comparison group	Court outcome	Treatment group rate (%)	Comparison group rate (%)	Estimated difference (% points)	Significant difference?	p-value	
National	214	24,752	Either way	65	72	-13 to 0	Yes	0.04	
			Summary	35	27	1 to 14	Yes	0.02	
Yorkshire and the Humber	85	2,119	Either way	64	67	-15 to 7	No	0.47	
			Summary	36	30	-4 to 17	No	0.25	
North West	62	1,048	Either way	61	71	-22 to 3	No	0.14	
			Summary	37	27	-3 to 23	No	0.12	
South East	39	1,726	Either way	64	66	-18 to 14	No	0.77	
			Summary	36	32	-12 to 19	No	0.66	

Note, each court outcome is only shown if the number of offenders in both the treatment and comparison groups is greater than 10 for that outcome.

Table 5: Number of proven reoffences in a one-year period by court outcome for people supported by P3 Link Worker Services, compared with similar non-participants (reoffenders only)

	Number in	Number in	One-year proven reoffending frequency by court outcome, for reoffenders only						
Analysis	treatment comparison group group		Court outcome	Treatment group frequency	Comparison group frequency	Estimated difference	Significant difference?	p-value	
National	214	24,752	Either way	2.52	3.50	-1.38 to -0.59	Yes	<0.01	
			Summary	1.33	1.25	-0.19 to 0.36	No	0.54	
Yorkshire and the Humber	85	2,119	Either way	2.47	3.54	-1.65 to -0.48	Yes	<0.01	
			Summary	1.54	1.39	-0.35 to 0.66	No	0.55	
North West	62	1,048	Either way	2.39	3.20	-1.56 to -0.06	Yes	0.04	
			Summary	1.31	1.03	-0.26 to 0.81	No	0.31	
South East	39	1,726	Either way	2.13	3.42	-2.06 to -0.52	Yes	<0.01	
			Summary	1.26	1.37	-0.63 to 0.40	No	0.65	

Note, each court outcome is only shown if the number of offenders in both the treatment and comparison groups is greater than 10 for that outcome.

 Table 6: Proportion of people who received a custodial sentence for their first proven reoffence after

 support from P3 Link Worker Services, compared with similar non-participants (reoffenders only)

			One-year	rate of custodia	l sentencing, fo	or reoffenders	only
Analysis	Number in treatment group	Number in comparison group	Treatment group rate (%)	Comparison group rate (%)	Estimated difference (% points)	Significant difference?	p-value
National	214	24,752	30	44	-20 to -7	Yes	<0.01
Yorkshire and the Humber	85	2,119	26	38	-22 to -3	Yes	0.01
North West	62	1,048	32	52	-32 to -7	Yes	<0.01
South East	39	1,726	31	39	-24 to 7	No	0.28

Table 7: Number of custodial sentences received in a one-year period by people who received support from P3 Link Worker Services, compared to similar non-participants (reoffenders only)

	Number in	Number in	One-year fre		dial sentencing, ces per person)	for reoffende	rs only
Analysis	treatment group	comparison group	Treatment group frequency	Comparison group frequency	Estimated difference	Significant difference?	n-value
National	214	24,752	1.39	2.47	-1.39 to -0.77	Yes	<0.01
Yorkshire							
and the	85	2,119	1.27	2.55	-1.76 to -0.80	Yes	<0.01
Humber							
North West	62	1,048	1.47	2.60	-1.78 to -0.49	Yes	<0.01
South East	39	1,726	1.08	2.11	-1.63 to -0.44	Yes	<0.01

# Profile of the treatment group

The P3 Link Worker Service works with individuals serving community sentences or who are 'through-thegate' (i.e. leaving custody).

Referrals into the service are sent from offender managers. Entry criteria requires a high Offender Group Reconviction Score (OGRS), and at least four identified needs on the Offender Assessment System (OASYS). Specific criteria however varies across CRCs. Regional variations in criteria are accounted for via OASYS scores, wherein a seperate Propensity Score Matching process is conducted for each regional analysis.

Participants included in analysis (439 offenders in National analysis)	Participants <u>not</u> included in analysis (163 offenders with available data)
<ul> <li>Female 20%, Male 80%</li> <li>White 97%, Black 1%, Asian 1%, Other ethnicity 0%, Unknown ethnicity 0%</li> <li>UK national 99%, Non-UK nationality 1%, Unknown nationality 0%</li> <li>Aged 17 to 62 years at the beginning of their one-year period (average age 34)</li> </ul>	<ul> <li>Female 26%, Male 74%</li> <li>White 94%, Black 4%, Asian 2%</li> <li>UK nationality 98%, Non-UK nationality 2%</li> </ul> Information on index offences is not available for this group, as they could not be linked to a suitable sentence.
<ul> <li>Sentence length:</li> <li>Community sentence</li> <li>Less than or equal to 6 months</li> <li>Between 6 and 12 months</li> <li>9 Between 6 and 12 months</li> <li>12 months to less than 4 years</li> <li>12 months to less than 4 years</li> <li>4 to 10 years</li> <li>More than 10 years</li> <li>Indeterminate or life sentence</li> </ul>	For <b>17 people</b> no personal information is available.

#### Please note totals may not appear to equal the sum of the component parts due to rounding.

Information on individual risks and needs was available for 439 people in the overall treatment group (96%), recorded near to the time of their original conviction.

- 65% had some problems with financial management
- 48% had significant difficulties in coping
- 48% had significant issues in problem solving skills

# Matching the treatment and comparison groups

The analyses matched a comparison group to the treatment group. A summary of the matching quality is as follows:

- All variables in the national model were well matched
- All variables in the Yorkshire and the Humber regional model were well matched
- All variables in the North West regional model were well matched
- All variables in the South East regional model were well matched

Further details of group characteristics and matching quality, including risks and needs recorded by the Offender Assessment System (OASys), can be found in the Excel annex accompanying this report.

This report is also supplemented by a general annex, which answers frequently asked questions about Justice Data Lab analyses and explains the caveats associated with them.



619 people were submitted for analysis by P3



2 people (<1%) were excluded from the analyses because they could not be identified on the Police National Computer (PNC)



135 people (22%) were excluded because they did not have a record in the reoffending database that corresponded to their period of participation with P3, some of these may have started their intervention 6 months after their index date



14 people (2%) were excluded from the analyses because they were under 18 and/or had previously been convicted of sex offences



29 people (5%) were excluded because they had reoffended before the intervention began, or they did not match during the Propensity Score Matching stage



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