



Ministry of
JUSTICE

**Local Adult Reoffending
1 April 2008 –
31 March 2009
England and Wales**

Ministry of Justice
Statistics bulletin

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Local Adult Reoffending

Introduction

Local adult reoffending data has been developed to provide more timely performance data on trends in reoffending, and to provide insight into reoffending at the regional and local levels.

The key uses of this data will be to monitor the progress of Local Area Agreements in reducing reoffending under National Indicator 18 within the National Indicator Set¹, and to provide key outcome data to assist in assessing Probation Area performance.

This bulletin contains reoffending data at the following geographic levels:

- England and Wales as a whole
- Government Office regions and Wales
- Probation Areas
- Local Authorities².

It covers reoffending in the period 1 April 2008 to 31 March 2009.

These statistics will be published on a quarterly basis, and are available via the Ministry of Justice website:

www.justice.gov.uk/publications/local-adult-reoffending.htm

The reoffending data in this bulletin are based on a different methodology and timescale to the annual National Statistics on adult reoffending:

www.justice.gov.uk/publications/reoffendingofadults.htm

Appendix B gives details and reasons for the main differences in the measures.

¹ For more information on the National Indicator Set please see:
www.communities.gov.uk/localgovernment/performanceframeworkpartnerships/nationalindicators

² "Local authorities" in this report, are unitary authorities in single-tier areas, or upper tier authorities (e.g. county councils) in two-tier areas.

Local Adult Reoffending

Key points

All statements on increases or decreases in reoffending rates in this section refer to rates that have been adjusted to control for changes in the characteristics of offenders on the probation caseload³.

- The three month reoffending rate of all offenders on the probation caseload in England and Wales during the period 1 April 2008 to 31 March 2009 was 9.98 per cent. This was an increase of 0.57 per cent compared to the 2007/2008 baseline (1 April 2007 to 31 March 2008) which was not statistically significant.
- Three Government Office regions had a statistically significant increase in reoffending compared to the baseline (East of England, North West and South West) and one Government Office Region had a statistically significant reduction in reoffending (Yorkshire & Humberside)⁴.
- Ten probation areas had a statistically significant increase in reoffending, whilst four probation areas showed a statistically significant reduction in reoffending.
- Thirteen local authorities had a statistically significant increase in reoffending, whilst sixteen local authorities showed a statistically significant reduction in reoffending.
- Reoffending by offenders on licence from custodial sentences showed a statistically significant increase of 6.50 per cent compared to the baseline, although the actual rate of reoffending remained lower than for offenders on court orders under probation supervision.
- The unadjusted rate of reoffending in the period 1 April 2008 to 31 March 2009 was 0.16 percentage points higher than reoffending in the period 1 April 2007 to 31 March 2008.

Results for all regions, probation areas and local authorities are available in Appendix A, and are presented by Government Office Region.

³ See Appendix C for more information on the predicted rate, what variables we control for and why it is important to control for changes in offender characteristics.

⁴ Changes in reoffending performance are only reported where the changes are statistically significant (i.e. we are 95 per cent confident that the change is a real one, and not due to random volatility in the datasets).

Performance over 2008/09 financial year

We now have local reoffending data covering the financial year 2008/09. We can now make comparisons between this year and the baseline year (2007/08). The charts below show the proportion of all probation areas and local authorities that have seen an increase, decrease or no significant change in reoffending since the baseline period.

Chart 1 shows that one year after the baseline period, just over 20 per cent of probation areas have seen an increase in reoffending. Fewer than ten per cent have seen a reduction since the baseline. These results are similar to those in the previous period (January to December 2008). Previous periods saw fewer datasets showing significant changes in reoffending – this is to be expected given the proximity to the baseline period.

Chart 1: Proportion of probation areas with increases/decreases/no change in reoffending, July 2007 – March 2009

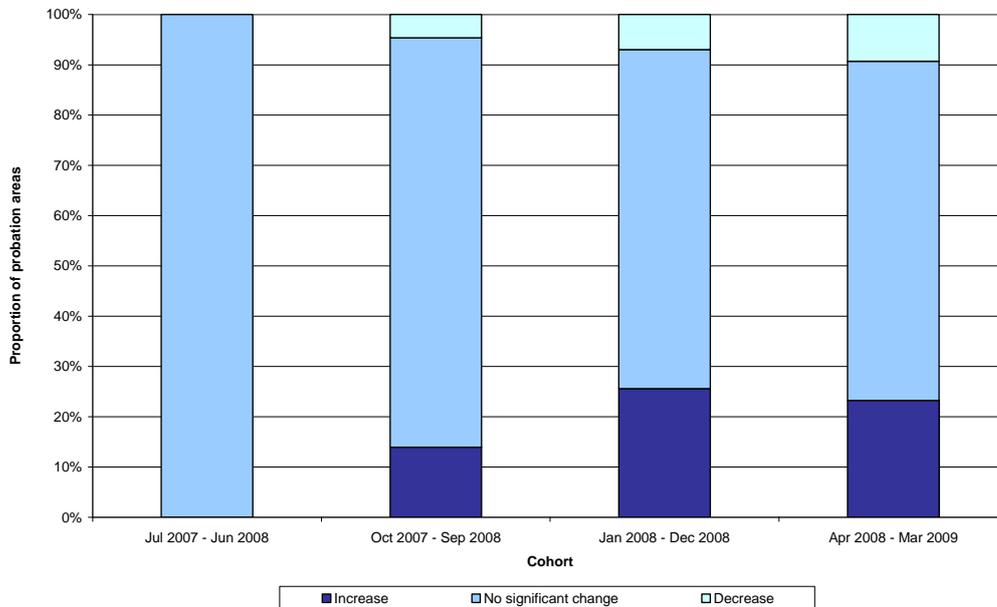
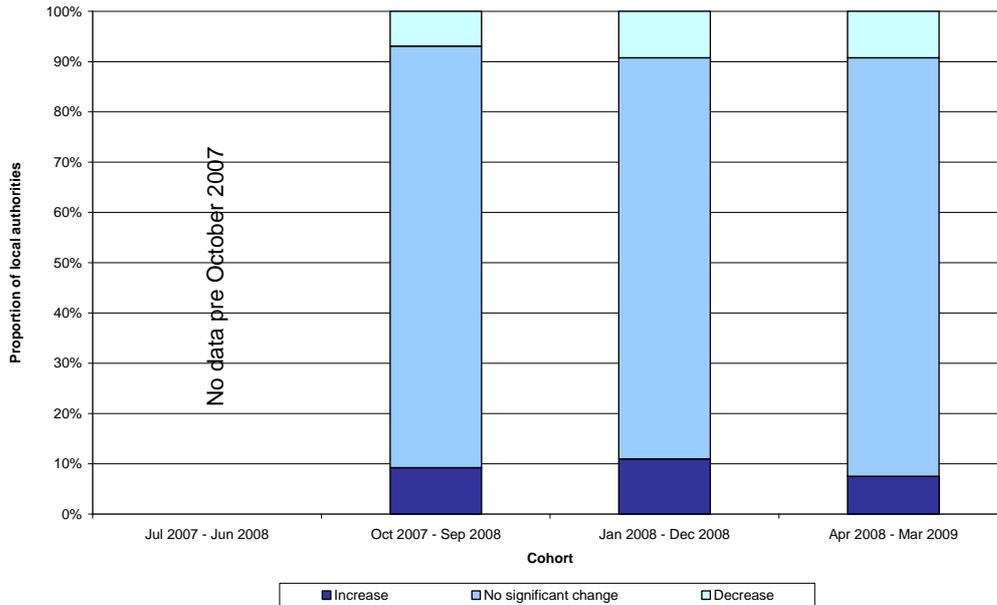


Chart 2 presents the same information for local authorities⁵. This shows that fewer than ten per cent of local authorities saw an increase in reoffending in 2008/09, with a similar proportion showing a fall in reoffending over the same period. The proportion of local authorities showing an increase in reoffending has actually fallen slightly since previous periods, while slightly more areas have seen a reduction in reoffending.

Chart 2: Proportion of local authorities with increases/decreases/no change in reoffending, July 2007 – March 2009



⁵ Data for periods prior to October 2007 cannot be broken down to the local authority level.

Comparing reoffending rates between areas

Comparing changes in the actual rates of reoffending between areas does not ensure a like for like comparison as the mix of offenders being dealt with may vary across areas and over time.

In comparing reductions in reoffending between areas, it is important that comparisons are made on the basis of the reduction in reoffending after controlling for changes in the characteristics of offenders on the caseload and taking into account the size of the caseload in each area⁶.

Future reports

This is the third of a series of quarterly reports which will monitor local adult reoffending. The previous report was published on 14 May 2009.

This measure is based on combining four quarters of data to give a rolling four quarter report. Each quarter, the latest quarter of data is added, and the oldest removed.

This report covers reoffending in the period 1 April 2008 to 31 March 2009. These results are compared to a baseline period which covered reoffending in the period 1 April 2007 to 31 March 2008.

The next report will be published in November 2009.

⁶ Column titled '% difference from baseline' in data tables in Appendix A.

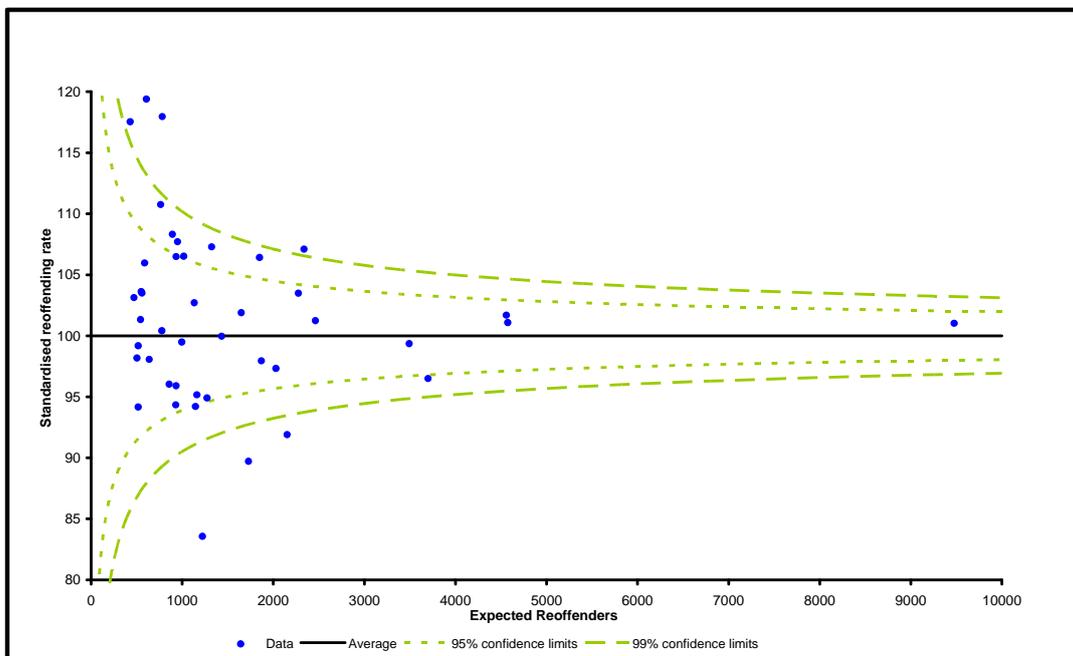
Reoffending rates by Probation Area

Changes in reoffending from the baseline can be illustrated by use of a funnel plot⁷.

The funnel plot below shows, for all probation areas, how many areas had shown a statistically significant increase in the rate of reoffending (data points above the “funnels”) and how many had shown a statistically significant reduction in the rate of reoffending (data points below the “funnels”).

Statistical significance in this report has been assessed at the 95 per cent level.

Figure A – Changes in reoffending at the Probation Area level



There are ten areas showing a statistically significant increase in reoffending from the baseline, and four areas showing a statistically significant reduction.

⁷ See Appendix C for more detail on funnel plots, statistical significance and the predicted rate.

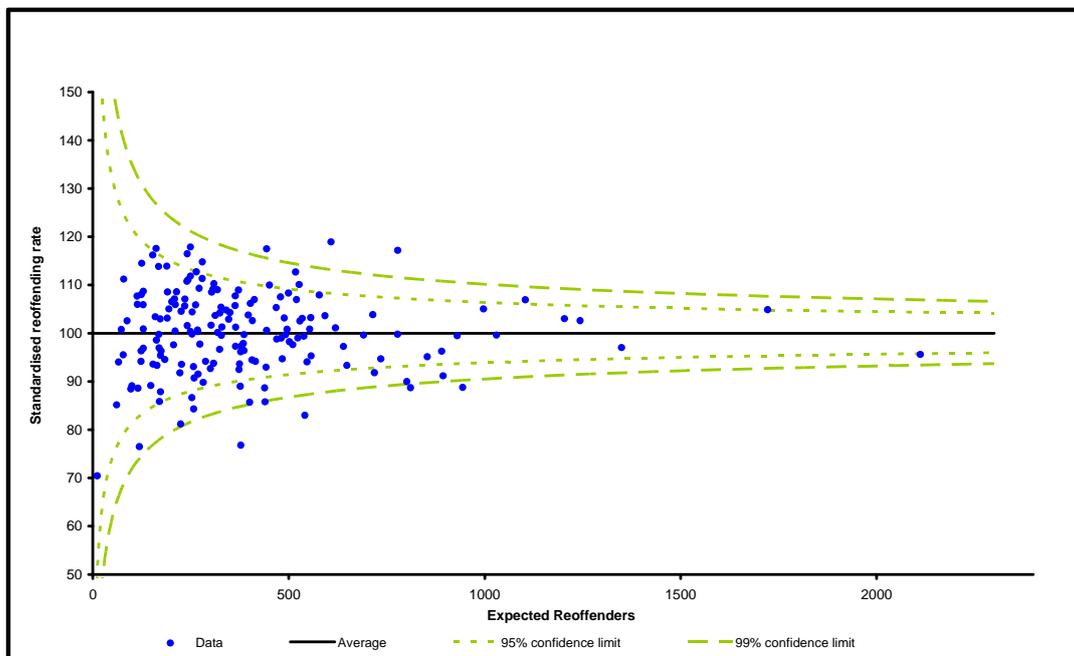
Reoffending rates by Local Area Agreement

Changes in reoffending from the baseline can be illustrated by use of a funnel plot⁸.

The funnel plot below shows, for all local authority areas, how many areas had shown a statistically significant increase in the rate of reoffending (data points above the “funnels”) and how many had shown a statistically significant reduction in the rate of reoffending (data points below the “funnels”).

Statistical significance in this report has been assessed at the 95 per cent level.

Figure B – Changes in reoffending at the local authority level



There are thirteen local authorities showing a statistically significant increase in reoffending from the baseline, and sixteen local authorities showing a statistically significant reduction⁹.

⁸ See appendix C for more detail on funnel plots, statistical significance and the predicted rate.

⁹The chart only has twelve data points showing a statistically significant increase. This is because the standardised reoffending rate for the Isles of Scilly was beyond the scale of the graph.

Explanatory notes

Which offenders are included in the analysis?

The local adult reoffending measure takes a snapshot of every offender, aged 18 or over, who is under probation supervision at the end of a quarter, and combines four such snapshots together.

This means that the measure includes offenders who have been under supervision in the community (either on licence after release from custody or on a court order) for a range of time from one day to a number of years. However, the measure does not include offenders aged 22 or over who have been released from a custodial sentence of less than one year (as they do not receive probation supervision on release).

This also means that some offenders will be included in the sample more than once by combining four snapshots, as offenders can remain under probation supervision for a number of quarters.

What is the baseline that reoffending is being compared to?

The baseline is the data for the financial year 2007/08. It covers reoffending in the four quarters from 1 April 2007 to 31 March 2008. This dataset was used to build the predictive rate model. For more information on the predictive rate model please see Appendix C.

Methodology for measuring reoffending

The local adult measure counts the proportion of offenders who reoffend in a three month period, and compares this to the proportion expected to reoffend given their characteristics. The results of four snapshots are then combined to form a rolling four quarter average. Each quarterly update will include the latest available quarter, and remove the oldest quarter.

What counts as a reoffence?

The local measure allows three months from each snapshot for reoffending to occur (with a further three months for offences to be proved by court conviction or caution).

The measure includes recordable offences, as entered on the Police National Computer (PNC), which are proven by either court convictions or cautions.

The predicted rate

The predicted rate is the proportion of offenders we would expect to reoffend given the known characteristics of the offenders in the snapshot and reoffending rates in the baseline period. More detail on the predicted rate, and the statistical model used to calculate it, is provided in Appendix C.

Explanatory notes (continued)

Assigning offenders to probation areas and local authorities

Offenders are assigned to a Probation Area based on where they are recorded on each area's Caseload Management System. In a small number of cases (less than 1 per cent), offenders cannot be assigned to an area as they are recorded under more than one Probation Area at the end of a quarter (and are therefore classified as having an unknown Probation Area, and only counted towards the England and Wales level data).

Offender postcode information is used to assign them to a local authority (98-99 per cent of offenders can be assigned to a local authority). Those offenders that do not have any relevant address information are not matched to a local authority.

A small proportion of offenders (roughly 1 per cent) have a postcode that is in a local authority area outside the Probation Area which supervises them.

Therefore it is not possible to exactly aggregate data from the local authority to the Probation Area level. Future reports will include information on offenders not assigned to a Probation Area or local authority.

Differences to the National Statistics on adult reoffending

This measure of local adult reoffending has been developed primarily as a more timely source of performance data on reoffending, and to provide information at the regional and local level.

As such, this measure is substantially different to the National Statistics approach. This reflects changes needed for more rapid reporting and to enable statistically robust analysis at the lower levels of disaggregation.

These differences are covered in detail in Appendix B.

Data sources and quality

The data presented in this bulletin are drawn from Probation Caseload Management systems and the Ministry of Justice extract of the PNC. Although care is taken when processing and analysing the returns, the detail collected is subject to the inaccuracies inherent in any large-scale recording system. While the figures shown have been checked as far as practicable, they should be regarded as approximate and therefore have been rounded to two decimal places.

This bulletin covers all offenders who are on the probation caseload. Offenders who are recorded as being in custody at the end of each quarter are excluded from the analysis. However, offenders who have entered custody during this three month follow up period cannot be identified in the dataset, and are therefore included in these figures.

Revisions policy

The local adult reoffending results are not subject to routine revisions.

Whilst the Police National Computer is a live system and the Ministry of Justice extract is updated on a weekly basis, the local adult reoffending results are produced using snapshots of this database at the end of each quarter. We do not, therefore, update the results to reflect later updates to the database.

Revisions will only be made in the case of methodological change (on which we would consult in advance) or errors in the dataset (which will be corrected at the first available opportunity). In both cases, any revisions would be clearly explained in the report and accompanying tables showing the old and revised data would be included.

Contact points for further information

Current and previous editions of this publication are available for download at www.justice.gov.uk/publications//local-adult-reoffending.htm. Spreadsheet files of the tables contained in this document are also available for download from this address.

Reports are published on a quarterly basis. The next report which will cover reoffending in the period 1 July 2008 to 30 June 2009 and will be published in November 2009.

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

Tel: 020 3334 3523

Other enquiries about these statistics should be directed to:

Ministry of Justice
Offender Management and Sentencing – Analytical Services
Reoffending and Criminal Careers
Floor 7/B
102 Petty France
London
SW1H 9AJ

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

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

Appendix A – Main results

Table 1: Reoffending rates, all offenders on the probation caseload in England and Wales^{10,11}

Reoffending period covered	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
April 1 2007 to March 31 2008 (<i>baseline period</i>)	685873	9.82%	9.82%	0.00%
July 1 2007 to June 30 2008	690049	9.84%	9.81%	0.31%
October 1 2007 to September 30 2008	692330	9.88%	9.83%	0.56%
January 1 2008 to December 31 2008	691588	9.95%	9.86%	0.91%
April 1 2008 to March 31 2009	691638	9.98%	9.92%	0.57%

¹⁰ The number of offenders is the sum of the number of offenders from the four snapshots who could be matched to PNC. Therefore many offenders will be included more than once. For the purposes of measuring reoffending, however, they are considered separately for each snapshot in which they are included. This number is not the number of offenders on the probation caseload at a point in time, as it reflects the aggregation of four quarters of data.

¹¹ Data in bold illustrates that the change in reoffending from the baseline is statistically significant.

Table 2: Reoffending rates – all offenders on licence under probation supervision, England and Wales^{12,13}

Reoffending period covered	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
April 1 2007 to March 31 2008 (<i>baseline period</i>)	102721	8.22%	8.22%	0.00%
July 1 2007 to June 30 2008	106840	8.37%	8.24%	1.51%
October 1 2007 to September 30 2008	111402	8.63%	8.28%	4.24%
January 1 2008 to December 31 2008	114614	8.69%	8.24%	5.45%
April 1 2008 to March 31 2009	118112	8.78%	8.24%	6.50%

¹² The number of offenders is the sum of the number of offenders from the four snapshots who could be matched to PNC. Therefore many offenders will be included more than once. For the purposes of measuring reoffending, however, they are considered separately for each snapshot in which they are included. This number is not the number of offenders on the probation caseload at a point in time, as it reflects the aggregation of four quarters of data.

¹³ Data in bold illustrates that the change in reoffending from the baseline is statistically significant.

Table 3: Reoffending rates – all offenders on court orders under probation supervision, England and Wales^{14,15}

Reoffending period covered	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
April 1 2007 to March 31 2008 (<i>baseline period</i>)	583152	10.10%	10.10%	0.00%
July 1 2007 to June 30 2008	583209	10.11%	10.10%	0.14%
October 1 2007 to September 30 2008	580928	10.12%	10.12%	-0.02%
January 1 2008 to December 31 2008	576974	10.20%	10.18%	0.18%
April 1 2008 to March 31 2009	573526	10.23%	10.27%	-0.41%

¹⁴ The number of offenders is the sum of the number of offenders from the four snapshots who could be matched to PNC. Therefore many offenders will be included more than once. For the purposes of measuring reoffending, however, they are considered separately for each snapshot in which they are included. This number is not the number of offenders on the probation caseload at a point in time, as it reflects the aggregation of four quarters of data.

¹⁵ Data in bold illustrates that the change in reoffending from the baseline is statistically significant.

Detailed tables

Hypothetical examples to illustrate how reoffending rates relate to numbers of reoffenders

For an area with a caseload of 10,000 offenders:

A 10 per cent reoffending rate means that 1,000 offenders (out of the 10,000) reoffended.

An 11 per cent reoffending rate means that 1,100 offenders (out of the 10,000) reoffended.

An increase from the baseline of 10 per cent (assuming predicted rate of 10 per cent, and actual rate of 11 per cent) for a caseload of 10,000 would mean that there were 100 reoffenders more than was predicted.

For an area with a caseload of 5000 offenders:

A 10 per cent reoffending rate means that 500 offenders (out of the 5,000) reoffended.

A 9.5 per cent reoffending rate means that 475 offenders (out of the 5,000) reoffended.

A decrease from the baseline of 5 per cent (assuming predicted rate of 10 per cent, and actual rate of 9.5 per cent) for a caseload of 5000 would mean that there were 25 reoffenders fewer than predicted.

Table 4: Local adult reoffending rates for 1 April 2008 to 31 March 2009, at the government office, probation area and local authority level of disaggregation

Where data in the ‘% difference from baseline’ column is in bold, this indicates that the change is statistically significant at the 95 per cent level.

Data in this table has been formatted so that regional data is left aligned, Probation Area data centre aligned, and local authority data right aligned in each cell to assist users in viewing the data (this data is also available in excel format).

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
East Midlands			50387	9.16%	9.43%	-2.83%
	Derbyshire		11641	8.30%	7.66%	8.32%
		Derby	3953	8.20%	7.91%	3.68%
		Derbyshire	7637	8.17%	7.57%	7.94%
	Leicestershire		11090	8.07%	8.41%	-4.09%
		Leicester	6216	8.54%	8.96%	-4.70%
		Rutland	161	4.97%	7.05%	-29.56%
		Leicestershire	4824	7.65%	7.86%	-2.66%
	Lincolnshire		5734	10.10%	9.76%	3.50%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Lincolnshire	5736	10.01%	9.69%	3.24%
	Northamptonshire		7474	8.38%	8.54%	-1.94%
		Northamptonshire	7443	8.36%	8.59%	-2.74%
	Nottinghamshire		14448	10.74%	11.97%	-10.29%
		Nottingham	6760	10.64%	11.99%	-11.32%
		Nottinghamshire	7571	10.76%	11.81%	-8.86%
East of England			58924	9.22%	8.76%	5.23%
	Bedfordshire		5646	8.59%	8.33%	3.12%
		Luton	2522	8.84%	8.35%	5.94%
		Bedfordshire	3217	8.36%	8.31%	0.66%
	Cambridgeshire		9316	10.67%	10.02%	6.48%
		Peterborough	3421	11.46%	10.64%	7.74%
		Cambridgeshire	5653	9.59%	9.35%	2.52%
	Essex		20094	8.36%	8.21%	1.90%
		Southend-on-Sea	2805	9.52%	9.74%	-2.26%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Thurrock	2216	8.84%	8.58%	3.13%
		Essex	15133	8.19%	7.95%	3.01%
	Hertfordshire		10300	8.94%	7.58%	17.95%
		Hertfordshire	10184	8.96%	7.64%	17.17%
	Norfolk		7349	10.61%	10.57%	0.41%
		Norfolk	7365	10.54%	10.56%	-0.22%
	Suffolk		6219	9.17%	8.85%	3.62%
		Suffolk	6041	9.12%	8.85%	3.10%
London			110411	8.67%	8.58%	1.02%
		Barking and Dagenham	3041	8.09%	8.84%	-8.46%
		Barnet	3021	7.02%	7.50%	-6.46%
		Bexley	2318	7.64%	7.42%	2.97%
		Brent	3712	8.27%	8.14%	1.64%
		Bromley	3178	8.34%	7.99%	4.39%

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Camden	2465	10.22%	9.55%	7.08%
		<i>City of London</i> ¹⁶	37	18.92%	11.45%	65.21%
		Croydon	5080	9.70%	9.21%	5.33%
		Ealing	4010	7.21%	7.69%	-6.24%
		Enfield	4046	7.88%	7.87%	0.15%
		Greenwich	4429	8.83%	9.37%	-5.82%
		Hackney	4489	9.31%	9.08%	2.60%
		Hammersmith and Fulham	2507	11.13%	9.95%	11.84%
		Haringey	4224	8.38%	8.62%	-2.73%
		Harrow	2086	6.33%	7.10%	-10.84%
		Havering	2155	7.80%	7.81%	-0.24%
		Hillingdon	2933	6.21%	7.64%	-18.82%

¹⁶ Data for the City of London is based on only 37 offenders and has only been included for completeness in covering all Local Area Agreements. Any changes between actual and predicted should be treated with caution.

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Hounslow	2957	8.08%	8.69%	-6.95%
		Islington	3251	10.30%	9.44%	9.12%
		Kensington and Chelsea	1435	9.48%	8.95%	5.89%
		Kingston upon Thames	1115	7.98%	8.96%	-10.91%
		Lambeth	5858	8.50%	8.71%	-2.39%
		Lewisham	5571	8.33%	8.43%	-1.21%
		Merton	1950	8.21%	8.33%	-1.45%
		Newham	5782	8.53%	8.68%	-1.75%
		Redbridge	3002	8.26%	7.82%	5.65%
		Richmond upon Thames	1020	7.25%	7.59%	-4.47%
		Southwark	5366	8.87%	8.96%	-1.04%
		Sutton	2076	9.97%	9.19%	8.55%
		Tower Hamlets	4049	10.18%	9.80%	3.78%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Waltham Forest	3723	9.16%	8.31%	10.28%
		Wandsworth	2981	8.49%	8.50%	-0.19%
		Westminster	1894	10.61%	10.87%	-2.41%
North East			43520	14.67%	14.96%	-1.96%
	Durham		9333	11.58%	12.29%	-5.79%
		Darlington	1957	11.19%	12.91%	-13.34%
		Durham	7330	11.69%	12.15%	-3.75%
	Northumbria		22397	15.50%	15.60%	-0.64%
		Gateshead	3364	13.61%	14.38%	-5.30%
		Newcastle-upon-Tyne	5381	17.19%	17.28%	-0.52%
		North Tyneside	3038	16.59%	16.08%	3.17%
		South Tyneside	2590	12.93%	14.53%	-10.99%
		Sunderland	4576	16.22%	15.61%	3.85%
		Northumberland	3458	14.17%	14.21%	-0.31%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
	Teesside		11790	15.53%	15.86%	-2.06%
		Hartlepool	1968	20.58%	18.89%	8.95%
		Middlesbrough	4018	15.06%	16.13%	-6.68%
		Redcar and Cleveland	2643	14.57%	14.61%	-0.29%
		Stockton-on-Tees	3096	13.28%	14.28%	-7.03%
North West			112000	10.22%	10.01%	2.09%
	Cheshire		11378	8.71%	8.76%	-0.52%
		Halton	1935	7.44%	7.95%	-6.42%
		Warrington	2511	9.40%	8.99%	4.54%
		Cheshire West and Chester	3891	9.18%	8.92%	2.90%
		Cheshire East	3260	8.31%	8.83%	-5.85%
	Cumbria		6652	12.39%	12.90%	-3.96%
		Cumbria	6611	12.28%	12.91%	-4.88%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
	Greater Manchester		45927	10.09%	9.93%	1.69%
		Bolton	4538	11.35%	10.55%	7.53%
		Bury	2937	8.00%	8.82%	-9.26%
		Manchester	12102	10.54%	10.28%	2.61%
		Oldham	3747	9.21%	9.96%	-7.51%
		Rochdale	3836	11.13%	10.48%	6.18%
		Salford	5041	9.92%	9.84%	0.81%
		Stockport	3416	10.10%	9.58%	5.40%
		Tameside	3317	10.76%	10.27%	4.81%
		Trafford	2865	9.39%	9.36%	0.33%
		Wigan	4235	8.29%	8.85%	-6.33%
	Lancashire		22546	11.06%	10.92%	1.23%
		Blackburn with Darwen	3192	9.81%	10.15%	-3.35%
		Blackpool	4024	9.67%	10.90%	-11.35%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Lancashire	15474	11.67%	11.13%	4.87%
	Merseyside		25497	9.82%	9.17%	7.09%
		Knowsley	2958	8.45%	8.42%	0.35%
		Liverpool	10717	9.77%	9.30%	5.03%
		St Helens	2684	11.10%	9.85%	12.72%
		Sefton	3342	9.84%	9.07%	8.49%
		Wirral	5467	10.66%	9.46%	12.69%
South East			77355	8.92%	8.98%	-0.64%
	Hampshire		19953	9.90%	10.17%	-2.68%
		Portsmouth	2987	12.45%	12.92%	-3.61%
		Southampton	4218	8.94%	10.42%	-14.22%
		Isle of Wight	1514	12.55%	10.67%	17.59%
		Hampshire	11052	9.28%	9.32%	-0.42%
	Kent		16802	8.45%	7.88%	7.28%
		Medway	2965	8.26%	8.14%	1.56%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Kent	13990	8.43%	7.89%	6.93%
	Surrey		6107	8.42%	8.49%	-0.83%
		Surrey	6288	8.51%	8.56%	-0.61%
	Sussex		14533	7.03%	8.41%	-16.43%
		Brighton and Hove	3475	8.00%	8.63%	-7.34%
		East Sussex	4602	6.30%	8.21%	-23.23%
		West Sussex	6374	7.04%	8.49%	-17.03%
	Thames Valley		19960	9.86%	9.27%	6.42%
		Bracknell Forest	946	9.30%	8.36%	11.22%
		West Berkshire	1145	10.57%	9.97%	5.99%
		Reading	2410	11.04%	9.97%	10.74%
		Slough	2492	8.95%	8.35%	7.11%
		Windsor and Maidenhead	1122	7.66%	8.67%	-11.56%
		Wokingham	851	7.29%	7.75%	-5.97%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Milton Keynes	2854	9.74%	9.20%	5.88%
		Buckinghamshire	3661	9.12%	9.01%	1.27%
		Oxfordshire	4493	11.04%	10.04%	9.97%
South West			42364	10.32%	9.63%	7.21%
	Avon & Somerset		14237	10.07%	10.08%	-0.03%
		Bath and N.E. Somerset	1204	10.13%	9.41%	7.71%
		City of Bristol	6240	11.03%	11.07%	-0.41%
		North Somerset	1799	9.34%	9.70%	-3.68%
		South Gloucestershire	1501	7.73%	8.21%	-5.84%
		Somerset	3379	10.27%	9.42%	9.01%
	Devon & Cornwall		11371	9.54%	8.96%	6.52%
		Plymouth	2786	11.16%	10.03%	11.33%
		Torbay	1307	9.10%	9.45%	-3.67%
		Cornwall	3334	8.10%	7.29%	11.06%

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Isles of Scilly ¹⁷	9	11.11%	5.99%	85.54%
		Devon	3818	10.06%	9.51%	5.72%
	Dorset		5792	10.77%	10.17%	5.96%
		Bournemouth	2438	12.18%	11.14%	9.31%
		Poole	1269	9.85%	10.17%	-3.11%
		Dorset	2156	9.97%	9.36%	6.54%
	Gloucestershire		5826	12.44%	10.42%	19.39%
		Gloucestershire	5834	12.39%	10.42%	18.95%
	Wiltshire		5138	9.81%	8.35%	17.53%
		Swindon	1797	10.63%	9.34%	13.81%
		Wiltshire	3223	9.12%	7.74%	17.87%
Wales			42626	11.15%	10.93%	1.95%

¹⁷ Data for the Isles of Scilly is based on only 9 offenders and has only been included for completeness in covering all Local Area Agreements. Any changes between actual and predicted should be treated with caution.

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
	Dyfed-Powys		4652	10.64%	10.84%	-1.81%
		Powys	1093	9.33%	10.53%	-11.40%
		Ceredigion	600	8.67%	10.18%	-14.85%
		Pembrokeshire	1177	11.38%	10.54%	8.04%
		Carmarthenshire	1828	11.54%	11.49%	0.43%
	Gwent		8434	10.40%	11.02%	-5.66%
		Caerphilly	2593	8.37%	9.93%	-15.68%
		Blaenau Gwent	1172	7.76%	10.15%	-23.52%
		Torfaen	1210	10.74%	10.65%	0.89%
		Monmouthshire	689	10.60%	10.52%	0.75%
		Newport	2728	13.38%	12.83%	4.29%
	North Wales		9302	11.00%	10.21%	7.71%
		Isle of Anglesey	848	10.61%	10.35%	2.58%
		Gwynedd	1458	11.32%	10.94%	3.41%
		Conwy	1327	10.55%	9.70%	8.71%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Denbighshire	1198	11.94%	10.43%	14.50%
		Flintshire	1841	8.31%	8.90%	-6.67%
		Wrexham	2531	12.68%	11.05%	14.80%
	South Wales		20238	11.64%	11.25%	3.48%
		Swansea	3792	13.74%	11.69%	17.49%
		Neath Port Talbot	1844	8.95%	9.38%	-4.64%
		Bridgend	1907	10.70%	10.19%	5.03%
		The Vale of Glamorgan	1635	13.15%	11.55%	13.90%
		Rhondda, Cynon, Taff	3859	9.74%	9.95%	-2.11%
		Merthyr Tydfil	1289	13.81%	11.88%	16.21%
		Cardiff	5868	11.86%	12.53%	-5.32%
West Midlands			79961	9.31%	9.27%	0.42%
	Staffordshire		12719	8.70%	9.15%	-4.84%
		Stoke-on-Trent	4217	10.58%	10.51%	0.59%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Staffordshire	8596	7.68%	8.36%	-8.18%
	Warwickshire		5168	10.66%	10.52%	1.33%
		Warwickshire	5324	10.48%	10.39%	0.85%
	West Mercia		11327	10.27%	10.00%	2.70%
		Herefordshire	1595	9.15%	10.66%	-14.15%
		Telford and Wrekin	1967	8.85%	9.36%	-5.45%
		Shropshire	2086	11.12%	10.24%	8.59%
		Worcestershire	6013	10.21%	9.85%	3.63%
	West Midlands		50747	9.11%	9.01%	1.08%
		Birmingham	23722	8.51%	8.90%	-4.39%
		Coventry	5740	10.10%	9.18%	10.09%
		Dudley	3567	9.48%	9.09%	4.19%
		Sandwell	4892	9.01%	8.43%	6.98%
		Solihull	2028	8.09%	8.34%	-3.04%
		Walsall	3830	9.48%	9.86%	-3.85%

Local Adult Reoffending – 1 April 2008 – 31 March 2009

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Wolverhampton	3923	9.41%	9.29%	1.25%
Yorkshire and Humberside			69457	10.95%	11.36%	-3.63%
	Humberside		11994	10.08%	10.62%	-5.10%
		Kingston upon Hull, City of	5026	10.23%	10.87%	-5.94%
		East Riding of Yorkshire	1923	7.90%	9.00%	-12.13%
		North East Lincolnshire	2739	11.94%	11.99%	-0.42%
		North Lincolnshire	2300	8.87%	9.66%	-8.23%
	North Yorkshire		6669	12.69%	11.45%	10.75%
		York	1972	14.25%	12.23%	16.47%
		North Yorkshire	4675	11.89%	11.12%	6.96%
	South Yorkshire		17870	11.07%	12.05%	-8.09%
		Barnsley	3348	11.47%	12.14%	-5.53%
		Doncaster	4211	12.30%	12.42%	-0.99%

Government Office region	Probation Area	Local authority	Cohort size (combining four quarters of probation caseload data)	Actual rate of reoffending	Predicted rate of reoffending	% difference from baseline
		Rotherham	3451	9.94%	11.60%	-14.30%
		Sheffield	6710	10.75%	11.94%	-10.02%
	West Yorkshire		32924	10.85%	11.24%	-3.50%
		Bradford	8388	9.99%	11.25%	-11.24%
		Calderdale	2713	9.33%	10.39%	-10.21%
		Kirklees	5719	10.95%	10.83%	1.09%
		Leeds	11652	11.23%	11.58%	-2.98%
		Wakefield	4336	12.48%	11.52%	8.34%

Appendix B – Differences between the Local Adult reoffending rate and the annual National Statistics

There are a number of differences between the local adult reoffending measure and the annual National Statistics:

- The sample of offenders
- The measure of reoffending
- The time allowed for reoffending
- The types of sentences which mean an offence is counted.

These differences reflect the different purposes of the outputs. The National Statistics on reoffending are the headline measure of reoffending in England and Wales, and are used to measure progress against government targets to reduce reoffending. The local adult measure has been developed as a more timely source of information on trends in reoffending, and to improve understanding of how progress in reducing reoffending is being made at the local level.

Which offenders are included in the analysis?

The local measure takes a snapshot of every offender under probation supervision at the end of each quarter, and combines four such snapshots together. Each quarter, the dataset moves on, with one new quarter added, and the oldest removed.

This means that the local measure considers offenders who may have been under supervision in the community (either on licence from custody or on a court order) for a range of time from one day to a number of years. However, the local measure will not include offenders aged 22 and over who have been released from a short custodial sentence (as they do not receive probation supervision).

The national measure includes every offender discharged from prison or commencing a court order under probation supervision in January to March of a year.

The national measure considers offenders from the first day of their at risk period in the community, and does include offenders released from short custodial sentences.

Main reason for difference – using the national approach would not provide large enough numbers of offenders to enable measurement at the local level.

Methodology for measuring reoffending

The local measure counts the proportion of offenders from each snapshot that is proven to reoffend in a three month period, and compares this to the proportion expected to reoffend given their characteristics.

The headline national measure (frequency of reoffending) counts the number of offences (per 100 offenders) committed in a one year period, with no comparison to expected rates. It also presents the proportion of offenders that reoffend and produces expected rates – however, these are not the headline measure.

Main reason for difference – using the national approach would not allow for fair comparisons between areas or across time (given the small numbers of offenders being measured in an area, and the lack of a predicted rate for the frequency of reoffending).

Time allowed for reoffending

The local measure allows three months (with a further three months for offences to be proved by court conviction or caution).

The national measure allows twelve months (with a further six months for offences to be proved by court conviction).

Analysis has shown that reoffending over three months is representative of reoffending over twelve months for most offences, but is not representative for more serious offences which take longer to work through the criminal justice system.

Main reason for difference – using the local measure allows for more timely data than is possible using the national method.

What counts as a reoffence?

The local measure considers offences proved by both court convictions and cautions when counting whether an offender reoffended.

The national measure considers only court convictions.

Main reason for difference – adding in cautions to the local measure allows for slightly more offences to be included. Having a higher number of reoffenders allows for more robust expected rates of reoffending – smaller numbers make this prediction more difficult.

Appendix C – Explanation of the Predicted Rate, Statistical Significance, and Funnel Plots

Introduction to the predicted rate

The characteristics of offenders are likely to be systematically different over time, and the Criminal Justice System aims to target particular sentences to offenders most likely to benefit most from that type. It is therefore, important to note that one can neither reach firm conclusions about changes in rates over time, nor about the relative effectiveness of different sentence types, from actual reoffending rates.

The Ministry of Justice has used as a basis for this local reoffending predicted model the work done for the National Statistics on reoffending (see Appendix E in the latest adult reoffending report - www.justice.gov.uk/publications/reoffendingofadults.htm).

Predicted or expected (yes/no) rates (see Lloyd et al., 1994, for a discussion) are used to take account of some of the differences in characteristics of offenders. Accordingly they can give a more meaningful measure of the change that has occurred in the rate of reoffending than can be obtained using the actual (yes/no) rates. If the composition of the groups of offenders being compared differs significantly over a time period, so that the type of offenders in one rolling four quarter dataset is inherently more (or less) likely to reoffend, this may result in a spurious rise or fall in the actual (yes/no) rates even when there may be no 'real' difference for similar offenders over that time. Hence the actual (yes/no) rates should be compared with the expected rates using a model based on data from an earlier period (baseline). Changes in reoffending rates should be measured by comparing the actual rate with the rate that would be expected given this group of offenders.

Statistical model

The local adult reoffending statistical model is an adaption of the 2005 logistic regression model as outlined above and includes a range of offender characteristics available in the Police National Computer (PNC), such as age, gender, offence group and criminal history. However, research has shown that other factors, for which data on these samples are not available, such as drug and alcohol use, employment, accommodation and marital background are likely to be significantly related to reoffending (see, for example, May, 1999).

The logistic regression model behind the local adult reoffending predicted rate provides a probability of reoffending for each offender and identifies the statistically significant set of variables that are related to reoffending. Aggregated predicted (yes/no) rates are also only valid for terms included in the final model. Any predicted rates for groups of offenders that have a common characteristic that is not in the final model (e.g., employment status or substance misuse) can suffer from statistical biases and are, therefore, unreliable.

For the local adult reoffending model additional developments were included to ensure that the predicted rate model was more robust against changes in the number of offenders, and that interaction terms and non-linear terms were included where appropriate. The final decision for inclusion or exclusion of particular variables was heavily influenced by their statistical significance (typically $p < 0.01$). The model coefficients, their exponents and significance values can be found in table 7.

The model has been peer reviewed by an academic statistician.

Model assessment

The model is assessed by calculating the level of discrimination between the offenders that reoffended and offenders that did not. The adult logistic regression model achieved a 68.9 per cent overall discrimination level on the latest dataset (Table 6). A level of discrimination of around 70 per cent was deemed to be acceptable and the model should predict results accurately enough for the predicted rate to be used. The discrimination can also be evaluated by calculating the Area Under Curve (AUC) for the Receiver Operating Characteristic curve. Again, the value for the model was 0.77, which means a good to excellent level of discrimination (Hosmer and Lemeshow, 2000, p.162).

Table 5: Classification table for the logistic regression model comparing latest dataset prediction with observed values

		Predicted to reoffend within one year?		%
		No	Yes	
Reoffended within one year?	No	427,550	195,076	68.7%
	Yes	20,001	49,011	71.0%

Table 6 shows the assessment for the logistic regression model for the available datasets. All cohorts show a discriminative power of 68-69 per cent and an AUC for the Receiver Operating Characteristic curve of around 0.77. This means that we can be confident of the predictive power of the logistic regression model over the time period measured.

Table 6: Classification table for the logistic regression model comparing prediction with observed values, all cohorts to date

	Number of Offenders	Area Under the Curve for the ROC	Classification Table
April 1 2007 to March 31 2008	685,873	0.76	68.1%
July 1 2007 to June 30 2008	690,049	0.77	68.4%
October 1 2007 to September 30 2008	692,330	0.77	68.7%
January 1 2008 to December 31 2008	691,588	0.77	68.9%
April 1 2008 to March 31 2009	691,638	0.77	68.9%

Table 7: List of variables in the logistic regression model applied to the 2007/08 data and their respective coefficients

Variables	Logistic coefficient	Exponent of coefficient	Significance
Constant	-1.340	0.085	<0.001
Age band			
18 - 20		<i>Reference category</i>	
21 - 24	-0.555	0.574	<0.001
25 - 29	-0.883	0.414	<0.001
30 - 34	-1.065	0.345	<0.001
35 - 39	-1.079	0.340	<0.001
40 - 49	-1.267	0.282	<0.001
50+	-1.429	0.239	<0.001
Gender			
Male		<i>Reference category</i>	
Female	-0.068	0.935	<0.001
General criminal career variables			
Time on caseload (days)	0.000	1.000	0.380
Time on caseload (inverse)	0.143	1.154	<0.001
Copas rate	0.854	2.349	<0.001
Copas rate (exponential)	-0.543	0.581	<0.001
Previous offences (linear)	-0.004	0.996	<0.001
Previous offences (log)	0.147	1.159	<0.001
Previous custodial sentences (linear)	0.019	1.019	<0.001
Previous custodial sentences (log)	0.198	1.219	<0.001
One or more previous serious offences	-0.082	0.922	<0.001
Length of criminal career			
Less than 1 year		<i>Reference category</i>	
1 year	0.109	1.115	0.001
2 years	0.105	1.111	0.011
3 years	0.082	1.086	0.013
4 years	0.080	1.084	0.314
5 years	0.033	1.033	0.283
6-10 years	0.032	1.033	0.998
11-15 years	0.000	1.000	0.156
16-20 years	-0.053	0.948	0.002
21-25 years	-0.128	0.880	0.001
26-30 years	-0.147	0.863	<0.001
30+ years	-0.298	0.742	<0.001
Index offence			
Violence (non serious)		<i>Reference category</i>	
Violence (serious)	-0.464	0.629	0.004
Robbery	-0.113	0.893	<0.001
Public Order	0.131	1.140	<0.001
Sexual	-0.206	0.814	<0.001
Sexual Child	-0.608	0.545	<0.001
Domestic Burglary	0.185	1.204	<0.001
Other Burglary	0.278	1.320	<0.001
Theft	0.508	1.661	<0.001
Handling	0.193	1.213	<0.001
Fraud/Forgery	-0.116	0.890	<0.001
Absconding Bail Offence	0.258	1.294	<0.001
Taking and Driving Away	0.187	1.206	<0.001
Theft from Vehicles	0.369	1.446	0.042
Motoring Offence	0.040	1.041	<0.001
Drink Driving	-0.141	0.868	<0.001
Criminal Malicious Damage	0.172	1.188	<0.001
Drugs Import/Export/Supply	-0.237	0.789	0.305
Drugs possession/Small Scale Supply	0.022	1.022	<0.001
Other	0.166	1.181	<0.001
Breach	0.244	1.277	<0.001
Ethnicity			
White		<i>Reference category</i>	
Not Recorded	-0.329	0.720	<0.001
Black	0.060	1.061	0.874
Asian	0.004	1.004	0.531
Other	0.038	1.038	<0.001
Appearances in previous cohorts			
No previous appearances		<i>Reference category</i>	
One previous appearance	-0.026	0.974	<0.001
Two previous appearances	-0.154	0.858	<0.001
Three previous appearances	-0.224	0.799	<0.001
Reoffences in previous cohorts			
No reoffences		<i>Reference category</i>	
One reoffence	0.448	1.566	<0.001
Two reoffences	0.736	2.088	<0.001
Three reoffences	0.973	2.647	<0.001
Reoffended in most recent cohort	0.225	1.253	0.001

Variables	Logistic coefficient	Exponent of coefficient	Significance
Previous offences			
Total number of previous violence offences	-0.006	0.994	<0.001
Total number of previous public order offences	0.033	1.033	<0.001
Total number of previous theft offences	0.011	1.011	<0.001
Total number of previous handling offences	-0.012	0.988	<0.001
Total number of previous absconding offences	0.016	1.016	0.015
Total number of previous theft from vehicle offences	0.007	1.007	0.039
Total number of previous drink driving offences	0.026	1.026	<0.001
Total number of previous criminal damage offences	0.009	1.009	<0.001
Total number of previous drugs (possession/small-scale supply) offences	0.010	1.010	<0.001
One or more previous sexual offences	0.121	1.129	<0.001
Area			
London		<i>Reference category</i>	
Avon and Somerset	-0.092	0.912	0.006
Bedfordshire	-0.144	0.866	0.439
Cambridgeshire	-0.030	0.970	0.010
Cheshire	-0.097	0.908	<0.001
Teesside	0.191	1.211	0.098
Cumbria	0.070	1.072	<0.001
Derbyshire	-0.233	0.792	<0.001
Devon and Cornwall	-0.153	0.858	0.006
Dorset	-0.132	0.877	0.135
Durham	0.055	1.057	0.007
Essex	-0.080	0.923	0.104
Gloucestershire	-0.080	0.923	0.166
Hampshire	-0.040	0.961	0.005
West Mercia	-0.100	0.904	<0.001
Hertfordshire	-0.163	0.849	0.079
Humberside	-0.061	0.941	<0.001
Kent	-0.151	0.860	0.378
Lancashire	-0.023	0.977	<0.001
Leicestershire	-0.242	0.785	0.019
Lincolnshire	-0.111	0.895	<0.001
Greater Manchester	-0.175	0.840	<0.001
Merseyside	-0.163	0.849	0.618
Norfolk	-0.021	0.979	0.007
Northamptonshire	-0.125	0.882	<0.001
Northumbria	0.120	1.128	0.021
Nottinghamshire	0.069	1.071	0.007
Thames Valley	-0.077	0.926	0.001
Staffordshire	-0.112	0.894	0.019
Suffolk	-0.116	0.891	0.004
Surrey	-0.146	0.864	<0.001
Sussex	-0.165	0.848	0.469
Warwickshire	-0.037	0.964	<0.001
West Midlands	-0.095	0.909	<0.001
Wiltshire	-0.217	0.805	0.162
North Yorkshire	-0.060	0.942	0.165
South Yorkshire	0.038	1.039	0.016
West Yorkshire	-0.056	0.946	0.154
Dyfed-Powys	-0.074	0.929	0.323
Gwent	-0.038	0.962	0.359
North Wales	0.036	1.037	0.590
South Wales	-0.015	0.985	0.439
Unknown area	0.037	1.037	<0.001
Type of sentence			
Licence		<i>Reference category</i>	
Community order	0.273	1.314	<0.001
Interactions between sentence type and age			
Community order and aged 18-20		<i>Reference category</i>	
Community order and aged 21 - 24	0.279	1.322	<0.001
Community order and aged 25 - 29	0.488	1.630	<0.001
Community order and aged 30 - 34	0.649	1.913	<0.001
Community order and aged 35 - 39	0.621	1.861	<0.001
Community order and aged 40 - 49	0.795	2.214	<0.001
Community order and aged 50+	0.835	2.306	0.002
Interactions between sentence type and criminal career variables			
Community order * Time on caseload (inverse)	0.603	1.827	<0.001
Community order * previous drink driving offences	-0.053	0.949	<0.001
Community order * previous custodial sentences (log)	-0.159	0.853	<0.001
Interactions between sentence type and appearances in previous cohorts			
Community order and one previous appearance	-0.213	0.809	<0.001
Community order and two previous appearances	-0.281	0.755	<0.001
Community order and three previous appearances	-0.327	0.721	<0.001
Community order and reoffended in most recent cohort	0.188	1.207	<0.001

Statistical significance

Testing for statistical significance allows us to determine whether a change between two datasets is likely to be due to a real change in performance, or is just due to random volatility in the data.

For the local reoffending measure we test for statistical significance such that we are 95 per cent confident that any change we observe that meets our test for statistical significance is 'real'. Lines which show where the 99 per cent level of confidence would lie are also included on the funnel plots.

Funnel plots¹⁸

The funnel plot shows how many areas have results which are statistically significantly better or worse than the baseline.

The standardised reoffending ratio is calculated as:

$$(A/P)*100$$

where A is the proportion of offenders reoffending (Actual rate)
and P is the proportion of offenders we predict will reoffend (Predicted rate).

When the actual rate is higher than the predicted rate (more offenders reoffending than predicted), the ratio will be greater than 100. The ratio will be lower than 100 when the actual rate is lower than the predicted rate (fewer offenders reoffending than predicted).

The x-axis shows the predicted number of reoffenders (and is therefore an indication of the size of the caseload in each area).

The 'funnel' has two dotted lines which show the boundaries of statistical significance (based on 95 per cent and 99 per cent confidence that the result represents a real change in performance).

¹⁸ For further details on the construction of funnel plots and how they may be used, see Spiegelhalter, 2005.

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