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Re-offending of adults: results from the 2002 cohort

25/05

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INTRODUCTION

This report analyses the two-year re-offending rates of adults (those aged 18 and over at date of sentence or on release from prison). It covers offenders who were released from prison or commenced a community penalty in the first quarter of 2002 (the 2002 cohort). It shows two types of re-offending:

Actual re-offending rates: the percentage of offenders who re-offended during a two-year follow-up period, and who were subsequently convicted in court.

Predicted re-offending rates: the estimated percentage of offenders who will re-offend, after changes in offender characteristics over time have been controlled for.

These two measures are necessary to calculate progress against the Home Office's Spending Review 2002 Public Service Agreement (PSA) target on reducing re-offending. The target specifies a reduction in re-offending of five per cent from the 2000 baseline, against the predicted rates, for the 2006 cohort.

SUMMARY

For the baseline cohort (2000), the actual two-year re-offending rate was 57.6 per cent. Re-offending means that the offender committed an offence within the two-year follow-up period and was subsequently convicted in court. In 2002, the actual rate increased to 58.5 per cent but the cohort of offenders in 2002 was, on balance, slightly more likely to re-offend. This resulted in a predicted rate of 58.6 per cent, which is higher than the actual rate. As the actual rate is lower than the predicted rate, there has been an improvement over the 2000 results, though the result itself is not statistically significant. A further 4.8 per cent is required to meet the target.

Table S1: Overall re-offending rates against the PSA target to reduce re-offending by five per cent

	Re-offending baseline (%)	Actual re-offending rate, 2002 (%)	Predicted re-offending rate, 2002 (%)	Progress against target (%)
Total	57.6	58.5	58.6	0.2

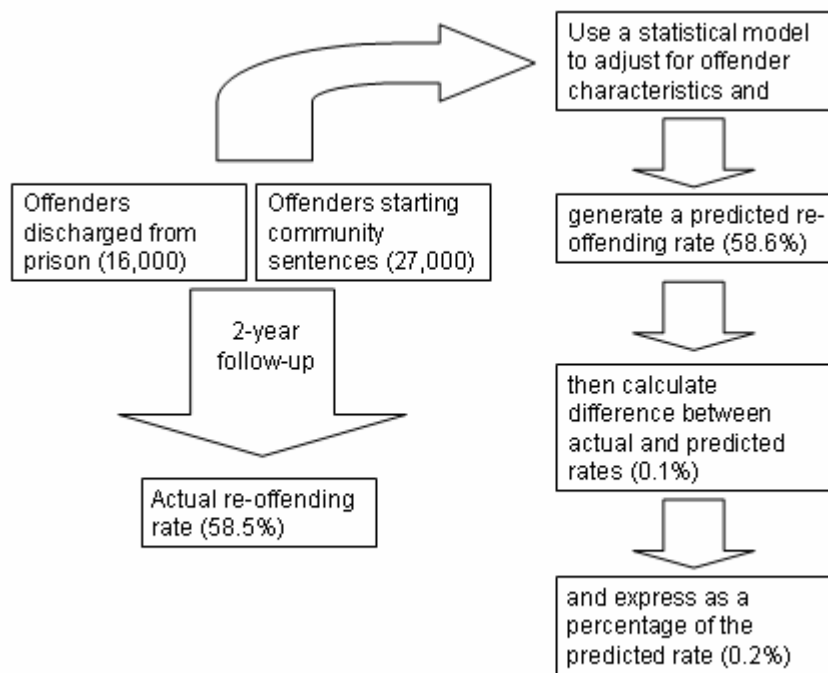
MEASURING RE-OFFENDING

Every known measure of re-offending has its drawbacks. Those associated with using official records of re-offending or reconviction have been particularly well documented (see Lloyd *et al.*, 1994, for example) and include the fact that they under-record actual offending behaviour and that they are partly determined by decisions on the part of criminal justice practitioners. However, other measures (e.g. self-report, re-arrest rates) also have disadvantages. For example, self-report studies rely upon respondents being honest about their offending behaviour.

The Home Office's Public Service Agreement (PSA) 5 specifies its re-offending targets in terms of a reduction in the re-offending rate, expressed as a percentage reduction against a predicted rate. The predicted rate is necessary as the outputs from the Criminal Justice System (CJS) depend in part on the characteristics of those coming into it, just as the examination pass rate in a school will be related to its intake. The predicted rate of re-offending offers a like-for-like comparison with the 2000 cohort.

In the Home Office's PSA target, the starting point is offenders discharged from a custodial sentence and offenders starting community sentences. Data are obtained to calculate whether they re-offended during a two-year follow-up period and were subsequently convicted for this offence. This produces the actual re-offending rate. Separately, the 'like-for-like' predicted rate is calculated through a statistical model of the 2000 cohort. This is then compared to the actual rate. When the actual rate is lower than the predicted rate, there has been an improvement from the baseline period. The target is for the actual rate to be lower than the predicted rate by five per cent by 2006. The diagram below describes this process.

Figure 1: Building like-for-like comparisons



The like-for-like comparison means that changes in the characteristics of offenders in subsequent years do not affect the measurement of re-offending rates. Compared with the 2000 cohort, there are more offenders in 2002 with characteristics that have a stronger association with re-offending and fewer offenders with characteristics with a weaker association with re-offending. The net result has been an increase in the predicted rate.

The measurement of re-offending for the 2002 cohort has undergone a change from previous years, owing to the availability of a more comprehensive data source. In previous years, the measurement of re-offending was restricted to the measurement of reconviction, that is where an offender both committed an offence and was convicted in court within two years. This has been a useful measure, but changes in the speed of securing convictions can result in

artificial changes to the reconviction rates. The availability of a more comprehensive database allows the measurement of re-offending within two years which then leads to conviction regardless of the two-year period. That is, offenders who re-offended within two years can now be counted, even if their conviction is secured beyond the two-year period. In so doing, the distorting effect of the speeding up or slowing down of securing convictions through the CJS is removed. The methodological annex gives further detail.

Wider influences on re-offending

The predicted re-offending rate offers good estimates of the likelihood of offenders re-offending, but it does not explicitly model the activities of the wider CJS. Other factors, such as the changing socio-economic situation over time, are also not modelled. It is difficult to explicitly model such activity, but it is equally clear that the activities of the wider CJS will impact on reconviction and re-offending rates. To take an extreme example, if the police were to secure no arrests or no convictions, the re-offending rate would be zero per cent.

The activity of the CJS and its relationship to re-offending is complex. From the British Crime Survey it is known that overall levels of crime are down, but it is also known that the number of persons sentenced in courts (for both indictable and summary offences) increased between 2001/2002 and 2003/2004. One expectation of changes in the CJS is an increase in the re-offending rate. If more offenders are being charged by the police, and more cases are proceeding to successful conviction in court, then a rise in the re-offending rate may well be a logical consequence of these activities.

It is difficult to account for this in a sound statistical way. The broad changes in the CJS affect all sentences (indictable and summary) and all offenders (both prolific and first time). Moreover, whilst offences brought to justice have increased in recent years, much of the increase relates to increases in cautions and fixed penalty notices. As such, the specific effect of CJS changes on this cohort of serious offenders is difficult to unpick. At this time, no attempt has been made to model the interplay between the CJS and re-offending, but the issue is under consideration.

RESULTS

This section presents more detailed results of the overall figures by different breakdowns of offenders and offences. Whilst these detailed breakdowns do not form part of the overall PSA target, they can provide useful additional information. Information is presented on the overall rate (p. 3), age breakdowns (p. 4), offence sentenced (p. 5), disposal (p. 7), previous criminal histories (p. 9) and ethnicity (p. 10). Where more detailed additional tables are available, these are shown in the statistical tables annex (p.12). The relevant tables are signposted at the start of each section.

Overall re-offending rate

As noted in the summary, the actual re-offending rate during the baseline year (2000) was 57.6 per cent. Re-offending means that the offender committed an offence within the two-year follow-up period and was subsequently convicted in court. In 2002, the actual rate increased to 58.5 per cent but the cohort of offenders in 2002 was, on balance, more likely to re-offend. This resulted in a predicted rate of 58.6 per cent, which is higher than the actual

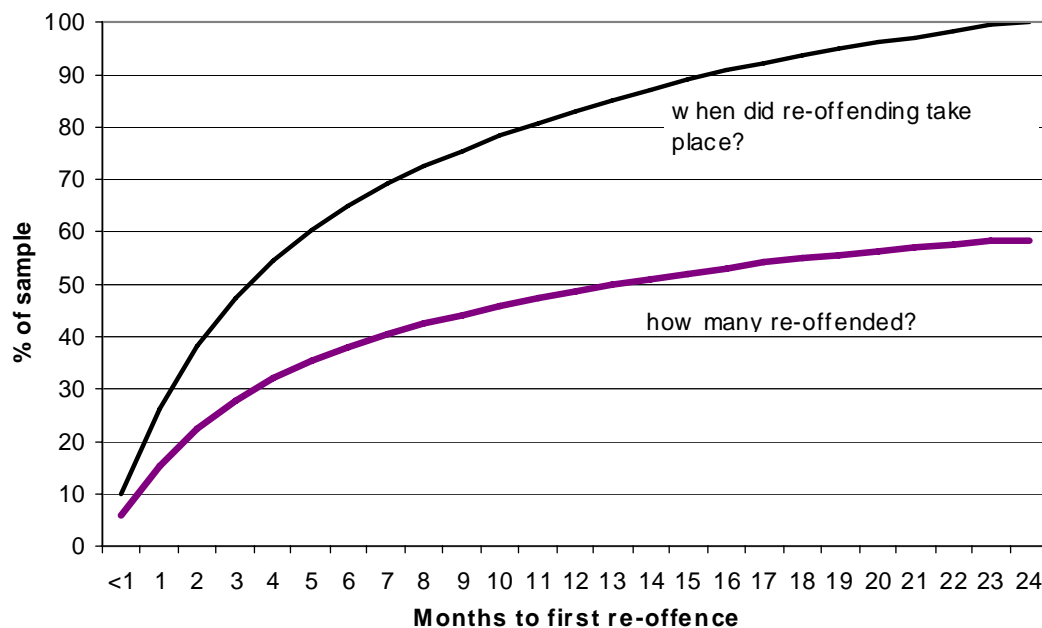
rate. As the actual rate is lower than the predicted rate, there has been an improvement over the 2000 results. A further 4.8 per cent is required to meet the target.

Table 1: Overall re-offending rates against the PSA target to reduce re-offending by five per cent

	Re-offending baseline (%)	Actual re-offending rate, 2002 (%)	Predicted re-offending rate, 2002 (%)	Progress against target (%)
Total	57.6	58.5	58.6	0.2

To give more background to the re-offending rate, the relationship between time and first re-offence can be examined. The following graph shows the percentage of the sample who first re-offended within one month, two months and so on, up to 24 months. It also shows when those who first re-offended in the two-year period did so. The rate of re-offending rises steeply. By the six-month mark 38 per cent of the sample had re-offended, and 65 per cent of those who re-offended within the two-year period had already done so. By the one-year mark 49 per cent of the sample had re-offended, and 83 per cent of those who re-offended within the two-year period had done so.

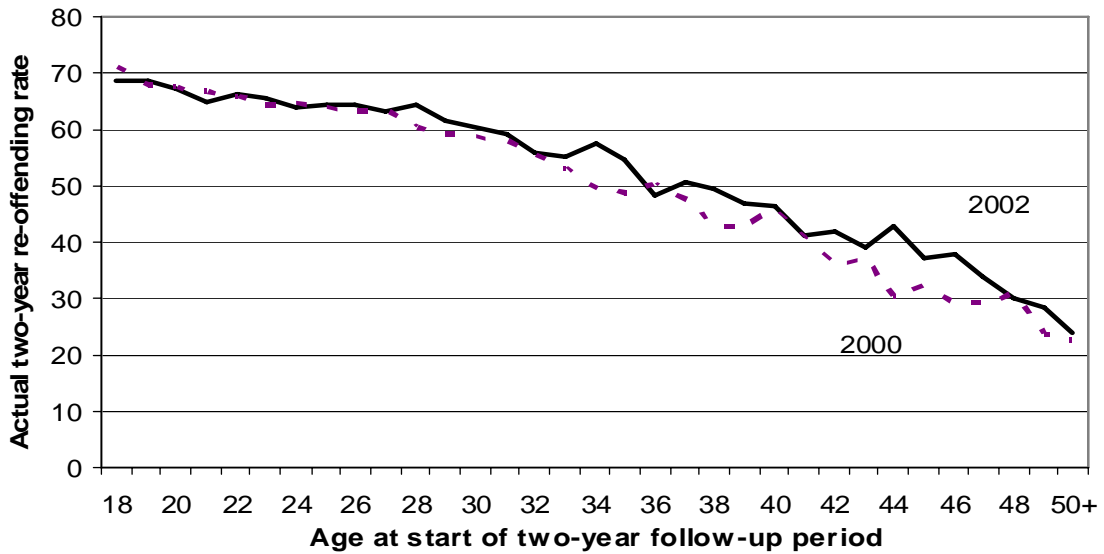
Figure 2: When re-offending took place for the 2002 cohort



Re-offending by age (table A1)

There is a clear change in the re-offending rates when they are compared by age, with the youngest offenders in the sample being considerably more likely to re-offend. This is a pattern that has not changed from 2000 to 2002. However, there has been a slight rise in the re-offending rates of those aged over 35 in 2002. As this is the first year in which the new data have become available, it is too early to see whether this represents an overall change in patterns of re-offending.

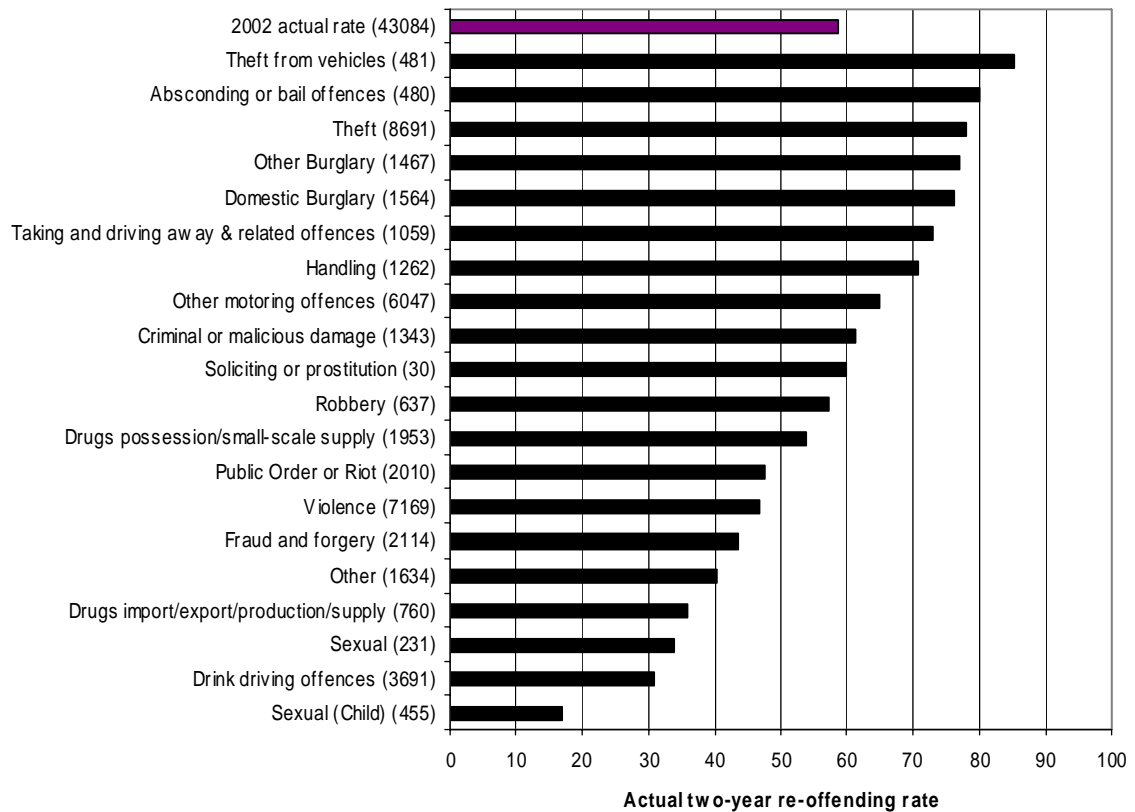
Figure 3: Actual two-year re-offending rates by age at the start of the two-year follow-up period for the 2000 and 2002 cohorts



Re-offending by offence sentenced (tables A2, A3 and A4)

The following graph shows the re-offending rates by offence sentenced. The graph shows that the actual re-offending rates vary considerably between the different types of offence.

Figure 4: Actual two-year re-offending rates by offence groupings for 2002 cohort



Whilst the differences in re-offending rates are interesting, additional analysis suggested that offenders, on the whole, do not specialise. Accordingly, these results should be treated with caution. Simply because someone was originally sentenced for theft, does not mean that they will be reconvicted of theft offences or had a history of theft offences (see box below).

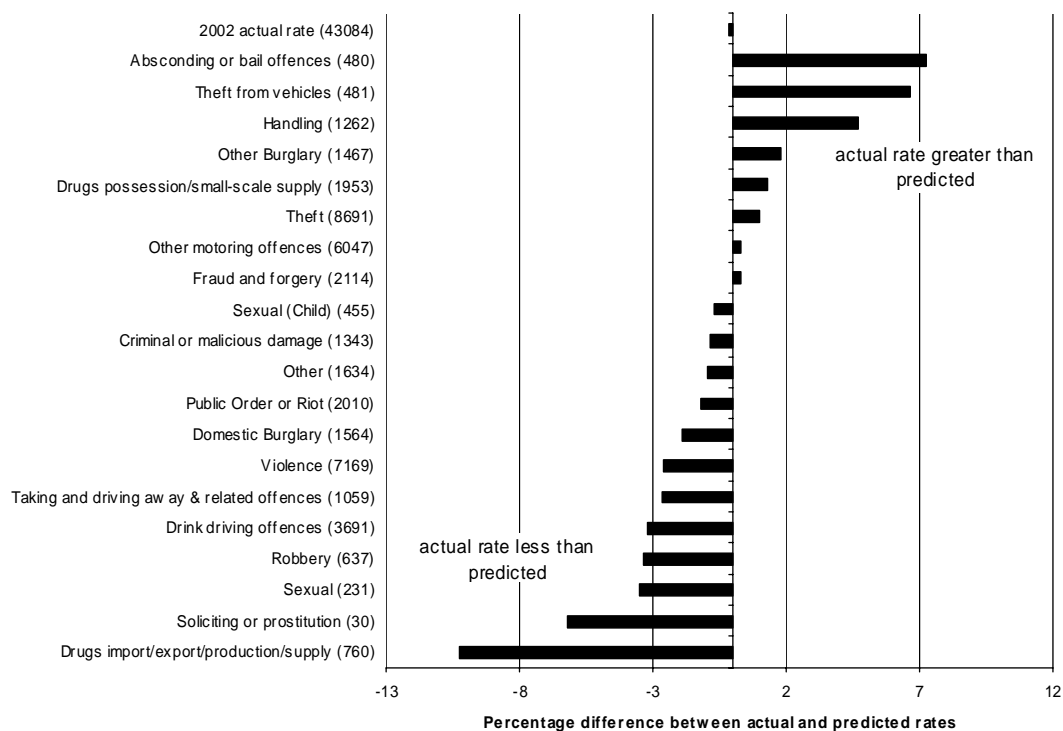
Offender profile – theft offences 2002

The majority of those sentenced were male (77%) and the average age was 27. On average, it had been eight years from their first conviction or caution. Most offenders (91%) had previous cautions or convictions (ten on average, with three cautions or convictions for theft) and the average number of previous custodial sentences was one. Thirty-seven per cent of the offenders sentenced for theft had no previous custodial sentences.

Sixty-five per cent of the offenders sentenced for theft in the 2002 sample were drawn from the community sentence dataset and 35 per cent from the custodial. Seventy-eight per cent of theft offenders re-offended within two years and 57 per cent of these re-offences were for another theft. For those who were reconvicted, 39 per cent were sentenced to immediate custody, 25 per cent were sentenced to community penalties, 16 per cent were sentenced to fines, and 13 per cent were discharged. The remainder of the sentences were small numbers of suspended sentences and other sentences (including compensation orders, disqualification from driving, confiscations orders and so on).

The graph below shows the difference between the actual and predicted rates for different offence groups. The range goes from the import, export, production and/or supply of drugs (where there is a lower actual re-offending rate than predicted) to absconding and/or bail offences (where there is a higher actual re-offending rate than predicted).

Figure 5: Differences between actual and expected rates for 2002 cohort



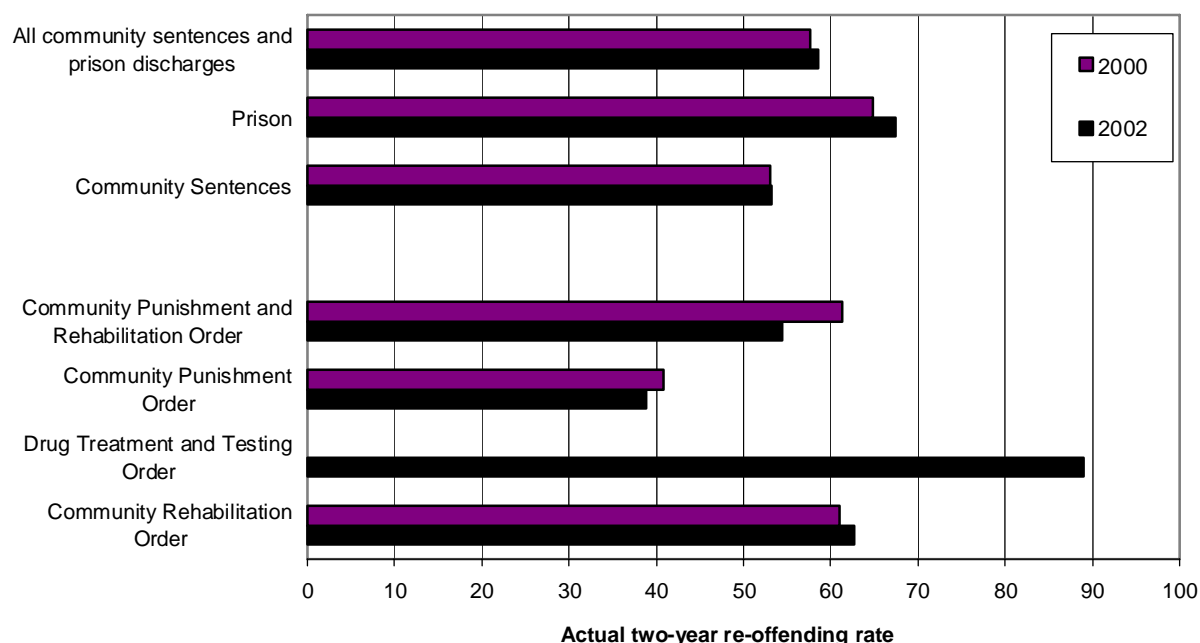
Some of the larger differences in the graph can be explained. For example, soliciting or prostitution has an actual rate which is lower than the predicted rate, but the numbers involved are small. However, some of the offences do show a reduction. Offences which relate to the import, export, production and/or supply of drugs had a predicted rate of 40 and an actual rate of 36, a difference of four percentage points. Translated into a percentage of the predicted rate, this difference is over ten per cent. Clearly, these data relate to the 2002 cohort and how these differences develop over time will need to be assessed as the final outturn figures for the 2006 cohort approach.

Re-offending by disposal (table A5)

Re-offending rates vary considerably by type of disposal, but it is reasonable to assume that the disposal given depends upon the characteristics of the offender which will also affect their chances of re-offending. The relationship between re-offending and disposal is a complex topic, and RDS-NOMS (2005) currently has a comprehensive research programme underway to understand this further.

Figure 6 shows the actual rates for each disposal for 2000 and 2002. The Drug Treatment and Testing Order was piloted in 2000 and the people involved in the pilot have not been included in the sample for 2000.

Figure 6: Actual two-year re-offending rates by disposal for 2000 and 2002 cohorts



For the 2002 cohort, offenders who were sentenced to drug treatment and testing orders had the highest actual re-offending rate at 89 per cent (this finding is in line with previous research (see Hough *et al.*, 2003¹). For those released from custody in 2002, the actual re-offending

¹ Although the overall re-offending rate for those given a DTTO was high, those who complete the order were found to have significantly lower re-offending rates than expected (53 %).

rate was 67 per cent, an increase of three percentage points on 2000 (65%); the discrepancy in the figures is caused by rounding.

Offender profile: offenders discharged from immediate custody

The majority of those discharged from immediate custody were male (92%) and the average age was 28. On average, it had been eight years from their first conviction or caution. Most offenders (93%) had previous cautions or convictions (nine on average) and most (68%) had previous custodial sentences (two on average).

The offences that resulted in immediate custody were reasonably diverse. The largest groups were theft (19%), other motoring offences (16%), violence (15%), and burglary (11%). Other motoring offences include dangerous driving and driving whilst disqualified.

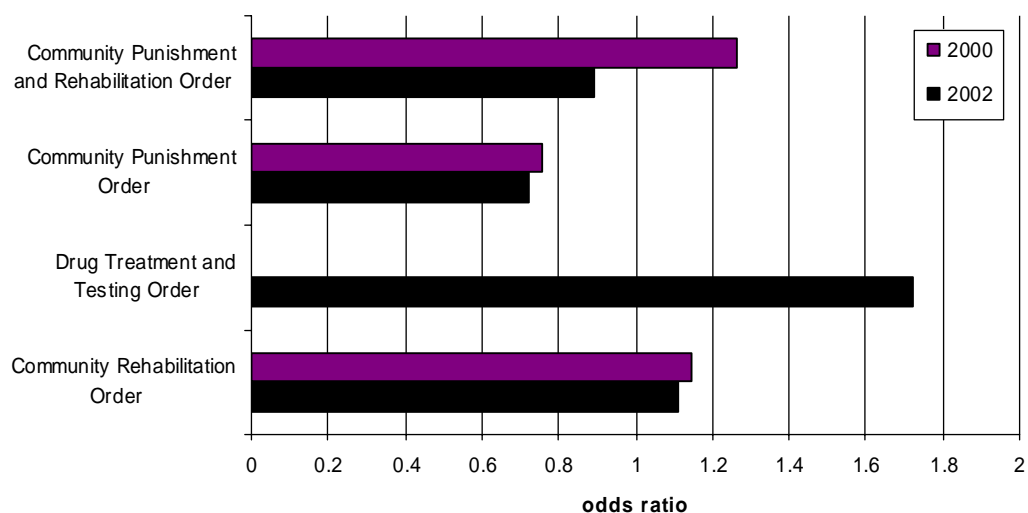
During the two-year follow-up period, 67 per cent of this group re-offended. The largest single offence was theft, which comprised 28 per cent of the re-offences. This was followed by motoring offences at 14 per cent and violence at nine per cent.

The most common sentence on reconviction was another custodial sentence (42%) and then, community penalties (22%), fines (20%) and discharges (10%). The fact that not all offenders received a custodial sentence for their first reconviction is interesting, but hides the fact that the subsequent offence might have been less serious and better disposed of by a more appropriate sentence.

Odds ratios of re-offending for disposals

As noted above, the relationship between disposal and re-offending is complex, and can only properly be handled by experimental designs that can control for the full range of differences between offenders. However, Figure 7 is of some interest.

Figure 7: Odds ratios of re-offending, compared with custody, 2000 and 2002 cohorts



Disposals are not included in the statistical model used to measure the PSA. The model is designed only to look at the characteristics of the offender and what happens to them post-sentence. However, a separate statistical model was built for the purposes of this section of the report to allow some limited understanding of the relationship between sentence and re-offending rates.

Figure 7 shows the results of adding disposals into the logistic model in the form of 'odds ratios'. If the odds ratio is above 1, then the offender given that disposal is more likely to re-offend than an offender who has been discharged from prison, as long as all of the other characteristics included in the model are identical (the technical annex provides further details). The opposite applies for figures fewer than 1. On the face of it, then, the 2002 CPRO and CPO disposals are associated with lower rates of re-offending than prison and DTTOs and CROs are associated with higher rates of re-offending than prison. Again, this is dependent on the other offender characteristics being identical.

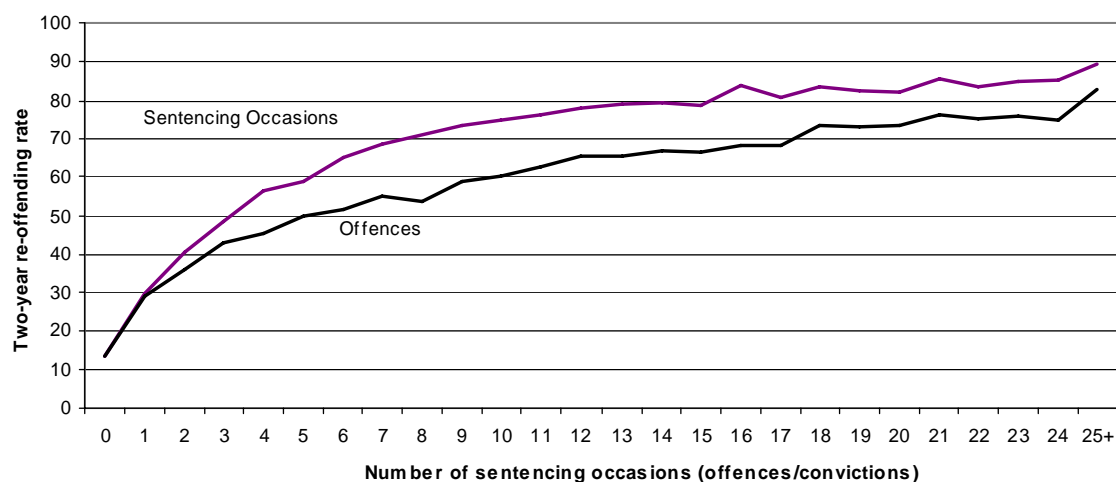
Whilst the graph is interesting, it should be treated with caution. The odds ratio for CPROs, for instance is below 1 for 2002 and above 1 for 2000. This might be due to the fact that offenders with drug problems who were previously given CPROs are now given DTTOs. Consequently, in 2002, offenders who were given CPROs were less likely to re-offend. Whilst some of the impact of offender characteristics can be controlled, there are factors outside of the data that influence re-offending and not all of these are controlled for. Such lack of control could result in changes to the results for disposals.

It is because of this that it would be unwise to conclude that CROs are working better than custodial or other discharges. The results are interesting, but not definitive. It is for this reason that RDS-NOMS has further programmes designed to evaluate the relative effectiveness of sentences that control for a wider range of factors than can be dealt with here.

Re-offending rates by offending history (table A6)

The re-offending rate increases rapidly as the number of previous offences and the number of previous sentencing occasions (the number of times the offender has gone to court or has received a caution) increase.

Figure 8: Re-offending by criminal history, 2002 cohort

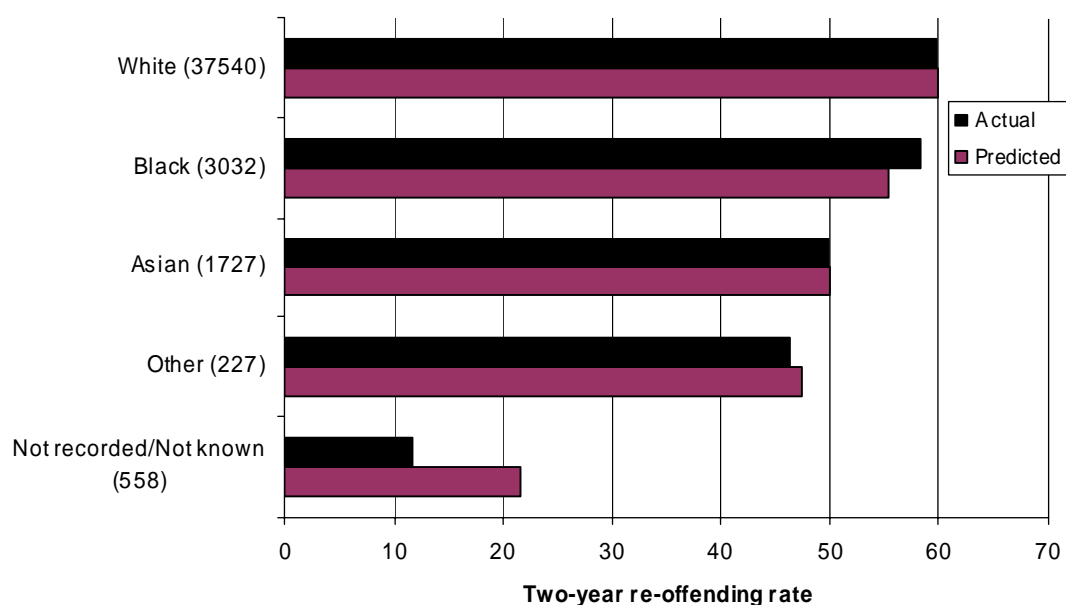


The actual rates for the 2002 cohort are similar to the predicted rate. The largest difference was for offenders with between seven and ten previous offences, where the actual rate was slightly higher (1%) than the predicted at 58 per cent.

Re-offending rates by ethnicity (table A7)

Information on ethnicity and re-offending is shown in Figure 9. It should be treated with caution. The ethnicity data are derived from an operational policing system and reflect the officer's view of the offender's ethnicity. There are advantages to this classification from an operational policing perspective. From a statistical point of view, it should be noted that the classification offers neither the level of detail of other ethnic classifications (e.g. the census) nor the opportunity for the offender to classify their own ethnic group.

Figure 9: Actual and predicted two-year re-offending rate by ethnicity, 2002 cohort



The rates show broad similarities in the actual rates between offenders classified as White and Black, with lower rates for offenders classified as Asian and Other. The numbers in both the not recorded/not known and the other category are low and are included for completeness only.

The predicted rates show some differences from the actual rates. Whilst the predicted rates for White and Asian offenders are broadly similar to the actual rate, the predicted rate for Black offenders is lower than the actual rate. This indicates that Black offenders within this cohort are more likely to re-offend, after controlling for criminal histories. As with the other analysis reported here, there remain other factors which are not controlled for. These are early findings and should be treated with caution as they may well represent an unusual pattern in this cohort. Further data will be available in due course.

1997 PERFORMANCE

The previous Home Office Spending Review (in 2000) specified a target (PSA 10) for reducing re-offending by five per cent between 1997 and 2004.

The actual re-offending rate (for adults) in 1997 was 53.1 per cent; this compares with a predicted rate of 52.5 per cent. This represents a 1.1 per cent reduction between 1997 and 2000. Overall between 1997 and 2002 there has been a reduction of 1.3 per cent².

Owing to the change from the counting of re-conviction to re-offending, the PSA 10 figures should be seen as provisional and cannot accurately be compared with the figures in the rest of the report. Further work is required to assess the comparability with the original 1997 baseline figures on reconviction with the 2000 baseline figures on re-offending.

CONCLUSION

For the 2002 cohort, the two-year re-offending rate for adults is 0.2 per cent below the predicted rate calculated from the 2000 baseline.

There is no significant difference between the actual and predicted rates for most of the groups.

Further data are being collected and work is ongoing to assess the statistical relevance of the differences. For the most part, however, it would be wise to assume that there are few statistically significant differences between the actual rates in 2002 and the rate predicted from the 2000 baseline.

² The reduction between 1997 and 2002 is calculated as follows: $1.011 \times 1.002 = 1.013$

STATISTICAL TABLE: A1

Actual and predicted re-offending rates by age and sex, 2002 cohort

	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
Actual 1 year	47.7	50.7	47.0	28.7	42.9	58.0	55.1	50.5	33.5	48.7	56.9	54.6	50.1	32.8	48.0
Actual 2 year	57.0	59.0	55.6	35.0	51.0	69.5	66.1	61.9	43.2	59.6	68.2	65.2	61.1	42.0	58.5
Predicted	58.3	59.3	55.4	32.4	50.5	70.3	67.9	61.8	41.8	59.8	69.1	66.8	61.0	40.5	58.6
Difference ¹	-1.3	-0.3	0.2	2.6	0.5	-0.8	-1.8	0.1	1.4	-0.2	-0.9	-1.6	0.1	1.5	-0.1
Difference ²	-2.2%	-0.5%	0.3%	8.0%	1.0%	-1.2%	-2.6%	0.1%	3.2%	-0.3%	-1.2%	-2.4%	0.2%	3.8%	-0.2%
Number	826	1149	2087	1487	5549	6919	8177	13242	9197	37535	7745	9326	15329	10684	43084

¹ Actual - predicted

² Actual - predicted as a percentage of predicted rate

STATISTICAL TABLE: A2

Actual two-year re-offending rate by offence group, age and sex, 2002 cohort

	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
Violence	40.7	42.4	41.1	36.6	40.2	60.4	52.0	46.4	36.4	47.6	58.1	51.1	45.9	36.5	46.9
Robbery	33.3	61.1	41.2	16.7	44.0	64.3	60.5	60.8	39.1	58.4	62.7	60.6	58.9	37.6	57.3
Public Order or Riot	57.1	42.9	41.2	44.7	45.6	54.2	47.0	49.1	38.5	47.7	54.3	46.8	48.6	39.1	47.6
Sexual	*	*	*	*	*	53.3	57.7	32.8	26.0	33.2	*	*	*	*	*
Sexual (Child)	*	*	*	*	16.7	34.4	35.5	25.6	10.7	16.9	*	*	*	*	16.9
Soliciting or prostitution	*	*	*	*	71.4	*	*	*	*	56.5	*	*	*	*	60.0
Domestic Burglary	65.0	65.2	63.2	54.6	63.0	76.8	80.8	77.2	68.0	76.9	76.1	79.9	76.7	67.3	76.2
Other Burglary	57.1	50.0	85.7	42.9	58.8	77.7	76.8	78.8	74.5	77.5	76.9	76.4	78.9	73.3	77.0
Theft	69.4	74.8	76.0	56.3	70.7	80.5	82.6	83.1	71.9	80.3	77.8	80.7	81.5	68.4	78.1
Handling	75.5	60.9	67.7	62.8	66.7	76.9	74.1	73.2	59.7	71.7	76.6	71.2	72.0	60.3	70.7
Fraud and forgery	49.3	43.9	38.3	22.2	35.0	63.4	58.8	51.6	28.1	47.2	59.9	54.3	47.3	26.2	43.4
Absconding or bail offences	75.0	88.9	83.3	56.3	77.1	82.8	89.4	80.7	66.2	80.7	81.9	89.3	81.0	64.3	80.2
Taking and driving away & related offences	55.0	20.0	76.9	100.0	59.0	75.4	72.9	73.4	65.7	73.6	74.5	71.9	73.6	66.2	73.1
Theft from vehicles	*	*	*	*	75.0	86.6	84.7	86.8	72.0	85.3	86.6	84.3	86.9	72.0	85.2
Other motoring offences	53.9	61.2	53.1	39.4	51.0	75.6	69.6	64.0	53.4	65.5	75.3	69.3	63.4	52.6	64.9
Drink driving offences	23.1	24.2	20.0	9.6	14.7	51.7	42.1	34.9	24.4	32.5	50.4	40.9	33.7	22.8	30.9
Criminal or malicious damage	60.0	50.0	65.0	40.6	54.7	69.6	67.0	60.0	50.0	61.7	69.1	66.0	60.5	49.0	61.1
Drugs import/export/production/supply	22.2	26.7	20.8	29.0	24.4	51.9	49.5	41.3	26.6	38.2	47.6	44.4	37.7	26.9	35.9
Drugs possession/small scale supply	28.2	52.9	48.2	48.2	46.0	60.4	56.4	55.6	47.0	55.0	56.7	56.0	54.6	47.1	53.8
Other	58.3	35.3	22.8	11.4	21.3	64.9	68.7	50.5	27.6	46.4	64.0	61.9	43.6	23.1	40.3

* Data removed as extremely low numbers make the identification of individual offenders possible

Italics mean less than 50 offenders - treat the data with caution

STATISTICAL TABLE: A3

Predicted two-year re-offending rate by offence group, age and sex, 2002 cohort

	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
Violence	46.0	44.6	41.5	26.8	39.7	61.2	57.0	48.4	34.9	49.1	59.4	55.8	47.7	34.2	48.1
Robbery	56.7	61.3	53.5	41.8	55.5	62.7	63.2	59.4	46.6	59.6	62.4	63.1	58.8	46.3	59.3
Public Order or Riot	51.6	41.9	41.1	26.5	38.3	56.2	50.8	49.4	36.4	48.8	56.0	50.4	48.9	35.5	48.2
Sexual	*	*	*	*	*	54.1	52.3	39.3	27.2	35.1	*	*	*	*	*
Sexual (Child)	*	*	*	*	13.7	40.4	34.2	24.8	10.6	17.1	*	*	*	*	17.0
Soliciting or prostitution	*	*	*	*	67.3	*	*	*	*	63.0	*	*	*	*	64.0
Domestic Burglary	68.1	66.2	68.1	56.2	65.7	79.6	80.1	78.7	70.8	78.3	78.9	79.3	78.4	70.0	77.7
Other Burglary	64.3	50.6	68.1	36.2	56.9	76.7	78.1	76.8	69.2	76.1	76.2	77.7	76.7	68.0	75.7
Theft	69.8	74.3	74.8	55.4	70.0	83.0	83.0	80.8	70.9	79.5	79.7	80.8	79.4	67.4	77.3
Handling	64.2	59.4	61.8	45.0	58.9	77.0	74.5	70.5	53.4	69.8	74.4	71.2	68.7	51.8	67.5
Fraud and forgery	49.4	44.4	36.9	20.5	34.1	62.6	60.1	50.2	30.0	47.4	59.3	55.3	46.0	27.0	43.3
Absconding or bail offences	68.6	78.0	74.7	64.6	72.2	82.0	77.3	74.4	64.9	75.2	80.5	77.4	74.4	64.8	74.8
Taking and driving away & related offences	50.6	56.2	69.2	61.4	57.8	77.2	77.1	74.5	64.7	75.8	76.1	76.7	74.2	64.6	75.1
Theft from vehicles	*	*	*	*	73.1	80.3	81.3	80.6	66.7	80.0	80.3	81.1	80.7	66.7	79.9
Other motoring offences	49.8	59.7	56.4	39.2	52.0	73.4	71.4	65.5	49.5	65.3	73.2	71.0	65.0	48.9	64.7
Drink driving offences	34.7	25.7	21.1	10.1	15.9	56.1	47.9	36.8	22.7	33.5	55.1	46.4	35.5	21.3	31.9
Criminal or malicious damage	59.0	57.5	53.3	37.8	50.2	72.2	68.0	61.3	48.3	62.6	71.5	67.3	60.6	47.2	61.6
Drugs import/export/production/supply	25.5	39.8	33.4	24.6	32.2	52.3	47.5	46.4	31.4	41.6	48.5	45.8	44.1	30.6	40.0
Drugs possession/small scale supply	43.3	50.6	52.9	34.8	47.1	62.3	57.4	53.6	43.4	54.0	60.1	56.6	53.5	42.1	53.1
Other	52.1	37.5	26.5	14.8	24.0	71.6	65.3	48.4	27.7	46.0	68.9	59.7	42.9	24.1	40.7

* Data removed as extremely low numbers make the identification of individual offenders possible

Italics mean less than 50 offenders - treat the data with caution

STATISTICAL TABLE: A4

Offender numbers by offence group, age and sex, 2002 cohort

	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
Violence	167	151	248	172	738	1235	1377	2093	1726	6431	1402	1528	2341	1898	7169
Robbery	9	18	17	6	50	157	185	158	87	587	166	203	175	93	637
Public Order or Riot	21	21	34	38	114	465	468	579	384	1896	486	489	613	422	2010
Sexual	*	*	*	*	*	15	26	61	127	229	*	*	*	*	*
Sexual (Child)	*	*	*	*	6	32	31	86	300	449	*	*	*	*	455
Soliciting or prostitution	*	*	*	*	7	*	*	*	*	23	*	*	*	*	30
Domestic Burglary	20	23	19	11	73	323	400	574	194	1491	343	423	593	205	1564
Other Burglary	14	6	7	7	34	332	380	533	188	1433	346	386	540	195	1467
Theft	324	480	813	405	2022	981	1492	2807	1389	6669	1305	1972	3620	1794	8691
Handling	53	69	99	43	264	208	247	362	181	998	261	316	461	224	1262
Fraud and forgery	67	123	243	221	654	205	277	516	462	1460	272	400	759	683	2114
Absconding or bail offences	12	18	24	16	70	93	94	155	68	410	105	112	179	84	480
Taking and driving away & related offences	20	5	13	1	39	455	280	218	67	1020	475	285	231	68	1059
Theft from vehicles	*	*	*	*	4	157	144	151	25	477	157	146	153	25	481
Other motoring offences	13	49	128	71	261	1151	1393	2088	1154	5786	1164	1442	2216	1225	6047
Drink driving offences	13	33	100	188	334	267	458	1114	1518	3357	280	491	1214	1706	3691
Criminal or malicious damage	20	14	40	32	106	339	224	400	274	1237	359	238	440	306	1343
Drugs import/export/production/supply	9	30	53	31	123	54	103	247	233	637	63	133	300	264	760
Drugs possession/small scale supply	39	51	108	54	252	298	397	676	330	1701	337	448	784	384	1953
Other	24	51	136	184	395	151	201	412	475	1239	175	252	548	659	1634

* Data removed as extremely low numbers make the identification of individual offenders possible
Italics mean less than 50 offenders - treat the data with caution

STATISTICAL TABLE: A5

Actual two-year re-offending rate by sentence, age and sex, 2002 cohort

ACTUAL RATE	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
Community Sentences	54.3	54.7	50.7	33.0	47.2	65.7	60.4	55.7	37.7	54.5	64.3	59.5	54.8	36.9	53.3
Community Rehabilitation Order	62.9	65.8	59.8	45.0	57.9	76.1	72.4	65.9	46.2	63.9	73.6	70.9	64.6	46.0	62.6
Drug Treatment and Testing Order	88.5	85.3	87.4	85.0	86.8	91.0	91.2	89.0	86.7	89.4	90.3	90.3	88.7	86.5	88.9
Community Punishment Order	29.8	26.2	26.1	13.4	22.4	54.5	44.4	40.5	25.7	41.1	52.6	42.7	38.7	23.8	38.9
Community Punishment and Rehabilitation Order	51.7	41.4	36.6	27.5	37.4	71.3	66.0	49.1	36.8	56.3	69.9	64.1	47.8	35.5	54.4
Prison	70.1	72.4	71.0	43.2	64.6	78.4	74.6	70.3	51.4	67.7	77.9	74.5	70.4	50.8	67.4

NUMBER OF OFFENDERS	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
Community Sentences	682	870	1579	1195	4326	4827	4909	7617	5515	22868	5509	5779	9196	6710	27194
Community Rehabilitation Order	418	553	959	649	2579	1788	1942	3452	2561	9743	2206	2495	4411	3210	12322
Drug Treatment and Testing Order	26	34	87	20	167	67	192	410	113	782	93	226	497	133	949
Community Punishment Order	178	225	421	424	1248	2193	2080	2820	2241	9334	2371	2305	3241	2665	10582
Community Punishment and Rehabilitation Order	60	58	112	102	332	779	695	935	600	3009	839	753	1047	702	3341
Prison	144	279	507	292	1222	2092	3268	5624	3681	14665	2236	3547	6131	3973	15887

Italics mean less than 50 offenders - treat the data with caution

STATISTICAL TABLE: A6

Predicted two-year re-offending rate by criminal history, age and sex, 2002 cohort

ACTUAL RATE	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
No previous offences	14.2	13.7	7.2	4.6	8.1	28.3	19.7	12.8	7.2	15.3	26.0	18.3	11.2	6.5	13.5
Between 1 and 2 offences	44.9	33.6	32.2	25.2	33.7	48.9	33.9	26.7	15.4	31.8	48.4	33.9	27.6	17.0	32.1
Between 3 and 6 offences	62.9	55.5	50.3	35.2	50.2	66.6	51.7	40.5	23.0	46.8	66.2	52.2	42.1	25.1	47.3
Between 7 and 10 offences	67.6	66.2	55.2	42.2	57.8	77.8	65.7	49.1	30.3	56.8	76.7	65.8	50.0	31.9	56.9
Greater than 10 offences	84.3	87.2	82.6	67.3	80.2	89.0	85.1	77.9	63.9	77.3	88.6	85.3	78.3	64.2	77.6

PREDICTED RATE	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
No previous offences	19.3	15.9	13.0	7.5	12.1	25.6	17.4	11.5	7.0	13.9	24.6	17.1	11.9	7.1	13.5
Between 1 and 2 offences	42.9	35.8	29.4	15.9	30.7	50.7	37.9	24.2	13.8	32.1	49.7	37.6	25.0	14.2	31.9
Between 3 and 6 offences	60.7	55.4	45.7	25.7	45.9	68.8	56.2	38.2	20.6	47.3	67.9	56.1	39.4	21.5	47.1
Between 7 and 10 offences	72.4	68.6	57.8	38.3	59.5	79.1	69.4	50.8	28.1	58.1	78.4	69.3	51.9	29.5	58.3
Greater than 10 offences	86.2	85.6	81.4	64.6	78.9	89.6	85.8	78.4	62.6	77.5	89.3	85.8	78.7	62.7	77.6

NUMBER OF OFFENDERS	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
No previous offences	155	205	387	503	1250	817	733	951	1423	3924	972	938	1338	1926	5174
Between 1 and 2 offences	158	149	227	163	697	1073	864	1116	881	3934	1231	1013	1343	1044	4631
Between 3 and 6 offences	170	200	304	216	890	1420	1345	1572	1048	5385	1590	1545	1876	1264	6275
Between 7 and 10 offences	108	142	212	109	571	923	953	1162	719	3757	1031	1095	1374	828	4328
Greater than 10 offences	235	453	957	496	2141	2686	4282	8441	5126	20535	2921	4735	9398	5622	22676

STATISTICAL TABLE: A7

Actual and predicted two-year re-offending rate by ethnicity, age and sex, 2002 cohort

PREDICTED RATE	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
Asian	42.5	36.3	47.2	30.8	39.4	59.3	56.9	49.1	27.5	50.7	58.6	55.5	49.0	27.8	50.0
Black	46.3	49.5	45.8	44.0	46.3	66.1	63.2	55.5	47.0	56.6	64.1	61.2	54.2	46.6	55.3
Other	*	*	*	*	48.9	63.9	51.8	45.2	40.0	47.2	63.5	50.4	46.0	40.5	47.4
White	59.7	61.9	57.4	33.4	52.4	71.6	69.3	63.3	42.4	61.0	70.3	68.4	62.5	41.1	59.9
Not recorded/Not known	*	*	18.4	8.9	14.2	44.5	31.8	24.1	18.5	25.1	44.5	28.7	21.7	15.2	21.6

ACTUAL RATE	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
Asian	38.9	18.2	36.4	37.5	31.5	56.6	56.3	49.9	33.8	51.1	55.8	53.9	49.1	34.1	49.9
Black	50.9	44.6	46.0	44.3	45.9	67.5	63.8	59.5	53.1	60.1	65.8	61.0	57.7	52.1	58.3
Other	*	*	*	*	45.8	65.4	42.1	46.1	41.3	46.3	64.3	40.9	45.5	43.3	46.3
White	58.3	62.7	58.2	36.8	53.6	70.9	67.4	63.1	43.3	60.6	69.5	66.8	62.4	42.5	59.7
Not recorded/Not known	*	*	5.7	1.9	5.0	29.1	14.9	15.8	10.6	14.9	27.9	14.9	11.6	7.6	11.7

NUMBER OF OFFENDERS	2002 Females					2002 Males					2002 All offenders				
	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total	18 - 20	21 - 24	25 - 34	35+	Total
Asian	18	33	33	24	108	371	474	549	225	1619	389	507	582	249	1727
Black	55	92	137	97	381	486	536	887	742	2651	541	628	1024	839	3032
Other	*	*	*	*	24	26	38	76	63	203	28	44	88	67	227
White	745	998	1852	1259	4854	5981	7082	11654	7969	32686	6726	8080	13506	9228	37540
Not recorded/Not known	*	*	53	103	182	55	47	76	198	376	61	67	129	301	558

* Data removed as extremely low numbers make the identification of individual offenders possible

Italics mean less than 50 offenders - treat the data with caution

PSA QUALITY STATEMENT

Measuring re-offending

The measurement of re-offending is complex. There are a variety of different ways in which re-offending can be measured, and the Home Office is actively exploring additional approaches. These include measuring the frequency and seriousness of offending, different start dates for community penalties and prison sentences and different statistical models. It is possible that more comprehensive measures may emerge as the final outturn for 2006 data approaches.

PSA data quality statement on limitations of data – summary statement

Whilst there remain areas of uncertainty, the data underpinning the results are felt to be broadly robust. Further work will be undertaken in the next 12 months to further validate the internal processing of the data and to determine whether the process used to match offender records is without bias.

PSA data quality statement on risks to data quality

The National Audit Office (NAO) has identified six risk factors in its review of the reporting of PSA targets (NAO, 2005). The following commentary addresses these.

Complexity of data collection. The data required for the PSA target involve a range of data sources (prison data, community sentence data, and the criminal records) from a range of agencies (individual prisons and probation areas, and different police forces). As with any administrative data system, there are risks that the quality of the data entered in each of these systems is variable and occasionally inaccurate. However, the systems are operational systems used for day-to-day management and it is felt that it is unlikely that there are large-scale systematic errors in the data.

Complexity of data processing. The data processing involved for the PSA target is complex, and requires the extraction of criminal histories that can span a number of decades, and the subsequent matching of these histories against the community sentence caseload files and prison discharges in order to generate a statistical model. The components are:

- Matching offender records. This process uses automated matching routines that look at offenders' surnames, initials, and dates of birth, using direct name matching along with a variety of 'sounds like' algorithms. The matching algorithms appear to give good results, and additional security is offered by ensuring that offence dates from prison and community sentence data are within seven days of the criminal records database. However, not all offenders are matched and a thorough analysis of bias in the matching system has yet to be undertaken.
- The counting rules for choosing which prison discharges to include offer a variety of choices. For instance, it makes little sense to include offenders discharged for

deportation or because they have died. These counting rules were enumerated and discussed to ensure accurate and comprehensive counting.

- The extraction of the criminal histories. This is complex, and involves substantial programming effort in SQL. However, the end outcomes are reasonably transparent and are amenable to dip sampling of offender records for accuracy. The range and diversity of criminal history prohibits large-scale checking of offender records but the sampling undertaken allowed basic validation of the outputs of the SQL programme.
- The construction of the statistical model. This offers a variety of choices including the characteristics and methodology of statistical model, and the approach taken in identifying and entering variables into the model. The method used for the construction of the statistical model for producing predicted rates is robust and fit for purpose. Further development work could identify more parsimonious models and improved techniques, including those that allow the multi-level nature of the data to be handled. Further details on model fit and discrimination are available in the methodological annex.

Level of subjectivity. There is relatively little subjectivity in the system. Occasional judgements are required (e.g. where to classify an offence) but these will not significantly influence the results.

Maturity and stability of the data system. The system is relatively new, and there have been significant staff changes. However, considerable effort has been expended on documentation and system checking (see complexity of data processing, above) as the new system has developed.

Expertise of those who operate the system. The PNC, prison and community sentence datafeeds have not been fully and recently audited, though, and as noted above, these systems are operational systems and large-scale systematic errors are not believed to exist. The internal processing of the results within the Home Office has been subject to dip sampling of criminal histories and the statistical model has been extensively tested.

Use of data to manage and reward performance. The data are not currently used to manage the performance of individuals or teams.

METHODOLOGICAL ANNEX: DATA SOURCES

Offenders in the cohorts

The offenders in the cohort are those starting community sentences or discharged from prison during the first quarter of 2000 (for the baseline year) and 2002 (for the current results). The use of the sample arises from the administrative effort required to match criminal records.

The persons starting community sentences are extracted from the community sentence data held by RDS-NOMS. Details of the offenders discharged from prison were taken from the Inmate Information System (IIS) held by the Prison Service. Both these datasets are managed centrally by RDS-NOMS Offender Management and Analysis Section and grateful acknowledgement is made to Rachel Councill, Jonathan Barbour and Gary Renshaw for their assistance in supplying these data.

Criminal history and re-offending: changes to the source data

The criminal histories of offenders, and their subsequent re-offending, are obtained from the Home Office Police National Computer (HOPNC). The HOPNC is a system that became operational in the Home Office early in 2005, and has been delivered through cooperation with the Police Information Technology Organisation (PITO) and XANSA, both of whose contributions to this work are gratefully acknowledged.

In previous re-offending reports, the source of criminal histories has been the Offenders Index (OI) which is a useful data source and will continue to offer advantages over HOPNC for certain analyses. The OI has three main limitations. Firstly, it only contains data on 'standard list' offences (those offences that are indictable only, triable either way, and some of the more serious summary offences). Secondly, it is restricted to convictions, and contains no information on cautions, reprimands and final warnings. Finally, it does not contain the date of offence for each conviction.

These limitations can be problematic. In particular, lacking the date of offence means that changes in the CJS affect the analysis. For instance, if offenders are convicted more quickly in later years than they are in earlier baseline years, then the conviction rate will increase purely as a result of this. The converse is true; a slowing down of the criminal justice system will result in a lower re-offending rate. There are additional issues as well, including problems with 'pseudo-re-convictions': cases that result in convictions that relate to offences that occurred before the community sentence commencement or prison discharge.

Whilst the OI has allowed us good insights into criminal histories and re-offending, the richer data available through HOPNC offers a broader and more complete picture of re-offending. As a consequence of this, the use of the OI has been replaced with the HOPNC.

Despite the changes in the source data and the move to counting re-offending, sufficient time is needed to allow offences committed in the two-year window to result in conviction. The follow-up period for the 2000 cohort was over 5.5 years, and the 2002 cohort was over 3.5 years. The vast majority of offences result in court within a reasonably short time-frame and it is not anticipated that a bias was introduced into the final result as a consequence of the different follow-up periods. Further work will address and quantify this.

METHODOLOGICAL ANNEX: MATCHING RATES

For each year, the sample used consists of adults (those aged 18 or over) who are discharged from custody or commence a community penalty in the first quarter (January – March) of that year. All actual and predicted rates refer to this sample.

TABLE M1: MATCHING RATES FOR 2002

Community sentence commencements	
Number in community sentence dataset (includes all offenders, including those aged under 18 and those included for breach offences)	36,625
Number matched to HOPNC criminal database (includes duplicate matches for common names)	32,326
Number without duplicates	31,958
Prison discharges	
Number discharged from prison (includes automatic discharges, and other relevant categories)	19,215
Number matched to HOPNC criminal database (includes duplicate matches for common names)	17,830
Number without duplicates	17,830
Community sentence and prison combined with duplicates	
Community sentence and prison combined without duplicates	49,663
Final dataset	
Number with a court date for the beginning of their community or custodial sentence which matched the court date on the HOPNC within seven days, and where the offence was dealt with by a HO police force and with a court conviction	45,893
Final number, as above but with all those aged 18 only and excluding those with breach index offences	43,084

METHODOLOGICAL ANNEX: STATISTICAL MODELLING

Introduction

Because the characteristics of offenders are likely to be systematically different over time, and because the CJS aims to target particular sentences to offenders most likely to benefit most from that type, it is important to note that one cannot reach firm conclusions about changes in rates over time, nor about the relative effectiveness of different sentence types from actual re-offending rates.

Predicted 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 re-offending than can be obtained using the actual 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 year is inherently more (or less) likely to re-offend, this may result in a spurious rise or fall in the actual rates even when there may be no 'real' difference for similar offenders over that time. Hence the actual rates should be compared with the predicted rates using a model based on data from an earlier year, and change in re-offending rates measured by comparing the actual rate with the rate that would be predicted given this group of offenders.

The predicted rates model can only take account of a limited set of factors for which data are available, such as age, gender, offence type 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 significantly related to re-offending (see, for example, May, 1999).

Statistical method

To calculate the predicted rates to allow for like-for-like comparison, the statistical technique of logistic regression is applied (Hosmer and Lemeshow, 2000). This method allows the probability of one of two possible outcomes to be estimated based on a range of factors. In this instance the outcome is whether the offender re-offended or not, and the estimates are calculated from factors known to be related to re-offending.

A range of factors are entered into the model to identify factors which best predict re-offending. The model that has been developed contains an extensive array of factors, and more parsimonious models and equally valid models may emerge in due course. There are also issues about whether other techniques such as multi-level models might offer additional accuracy and insight, or similar levels of accuracy but with simpler models, using fewer factors.

The following notes provide some further detail on the model and show the relative impacts of different variables when holding all other variables constant. The coefficients follow the description:

Age and sex. Various combinations of age and sex were investigated. These include entering age as a continuous variable and as a categorical variable. The approach in the final model separated out males and females into seven age bands. This approach is derived from

work in progress by Lancaster University. Their advice and support, along with that of Philip Howard from the Home Office's ODEAT team, is gratefully acknowledged. Generally, for both males and females, older offenders are less likely to offend than younger offenders.

Previous custodial sentences. A number of approaches to counting previous custodial sentences were explored. These included: the total number of previous custodial sentences; the number of custodial sentences where the offender was less than 18 years of age or 21 years of age; and the number of custodial sentences with a sentence length of over four years. The best fit with these data emerged with number of previous custodial sentences, though work is in progress to identify whether various transformation or classifications might yield better fits.

Copas rate: The Copas rate (Copas and Marshall, 1998) controls for the rate at which an offender has built up convictions throughout their criminal career. The higher the rate the more convictions an offender has in a given amount of time, and the more likely it is that an offender will re-offend. The Copas rate was originally derived from convictions data from the OI. The recent work by Lancaster University (acknowledged above) has suggested that a recasting of the rate provides a better fit for HOPNC data for the prediction of re-offending. A variety of different approaches were undertaken for the prediction of re-offending that subsequently leads to conviction, but the revised Copas rate offered by Lancaster University had the best level of discrimination.

The revised formula is:

$$\text{Log}_e = \frac{\text{Number of court appearances or cautions}}{\text{Length of criminal career in years} + 10}$$

Criminal career. The length of criminal career proved to add a degree of extra discrimination to the original models. Whilst the length of criminal career is related to the COPAS rate it is not so co-linear to merit exclusion. Offenders with longer criminal careers are less likely to re-offend.

Index offence. Index offences were classified into 20 broad categories, based on the similarity of re-offending rates within these offence bands. The classification adopted owes much to original work done by Taylor (1999), and enhancements developed by Lancaster University for the aforementioned project on predicting re-offending. Offenders convicted for the range of theft offences (theft, handling, theft from vehicles, taking and driving away), the burglary offences, absconding and bail offences, motoring offences, criminal and malicious damage, all increased the chances of re-offending when compared to those sentenced for violence. Those convicted of soliciting and prostitution had the highest increased chance of re-offending, again when compared with those offenders sentenced for violence. Some figures should be treated with caution as they relate to a small number of offenders. Notably decreased likelihood of re-offending was seen for sexual offences against children, drink driving offences, robbery, and drugs import and export offences when these offences are compared with the reference category of violence.

Total number of previous offences. Offenders convicted of larger numbers of previous offences were more likely to re-offend when compared to offenders with little or no previous offending. The previous offending categories counted cautions and convictions.

Counts of previous offending. The number of previous offences were included in the model, under the same classification shown above, and added a small amount of additional discrimination to the final output. The number of previous offences was an improvement over simple 'yes or no' variables for recording the presence of prior offences in the relevant categories.

Does the statistical model work?

The appropriateness of a logistic model needs to be reviewed both by checking that a statistical model fits, and whether it offers sufficient discrimination.

Model fit. The fit of a model is assessed by calculating whether the difference between the observed and expected values is significant, when the data are collapsed into groups. If it is not significant, the model offers an acceptable degree of fit overall. The fit of the model was checked through conducting a Hosmer and Lemeshow test (Hosmer and Lemeshow, 2000, p. 147) which showed a chi-square value of 11.473 with eight degrees of freedom. The test shows that there is not a statistically significant difference between the observed and expected values ($p = 0.176$), and that the logistic regression model is valid.

Model discrimination. The discrimination of the test refers to the fact that the model should predict results accurately. The discrimination was tested by calculating the Area Under Curve (AUC) for the Receiver Operator Characteristics curve. The AUC can be interpreted as the proportion of all re-offender/non re-offender pairs which have a higher predicted probability for the re-offender when compared to the non re-offender. The AUC for the final model on the 2000 data was 0.832. This means that the model offers an excellent level of discrimination (Hosmer and Lemeshow, 2000, p. 162). The model generalises well to the 2002 dataset, and returns a similar AUC figure.

METHODOLOGICAL ANNEX: COEFFICIENTS OF THE STATISTICAL MODEL FOR THE 2000 BASELINE COHORT

The following table shows the parameter estimates for the various components of the logistic model. Exp (B) relates to the odds of re-offending.

	B	Sig.	Exp(B)			
Constant	0.48	<0.001	1.61			
Criminal Career variables						
Copas	0.73	<0.001	2.08			
Length of criminal career	-0.02	<0.001	0.98			
Age and sex categories						
(reference) Male and aged 18 to 20						
Male and aged 21 to 24	-0.45	<0.001	0.64			
Male and aged 25 to 29	-0.84	<0.001	0.43			
Male and aged 30 to 34	-1.05	<0.001	0.35			
Male and aged 35 to 39	-1.21	<0.001	0.30			
Male and aged 40 to 49	-1.37	<0.001	0.25			
Male and aged 50+	-1.67	<0.001	0.19			
Female and aged 18 to 20	-0.48	<0.001	0.62			
Female and aged 21 to 24	-0.67	<0.001	0.51			
Female and aged 25 to 29	-0.70	<0.001	0.49			
Female and aged 30 to 34	-0.97	<0.001	0.38			
Female and aged 35 to 39	-1.15	<0.001	0.32			
Female and aged 40 to 49	-1.58	<0.001	0.21			
Female and aged 50+	-1.77	<0.001	0.17			
Previous offence categories						
(reference) No previous offences						
Between 1 and 2 offences	0.64	<0.001	1.90			
Between 3 and 6 offences	0.99	<0.001	2.70			
Between 7 and 11 offences	1.20	<0.001	3.33			
More than 11 offences	1.38	<0.001	3.96			
Number of previous custodial sentences						
Previous custodial sentences	0.05	<0.001	1.05			
	Index offences			Count of previous offences		
	B	Sig.	Exp(B)	B	Sig.	Exp(B)
Offence categories						
Violence (reference)				0.01	0.24	1.01
Robbery	-0.09	0.34	0.92	0.04	0.10	1.04
Public Order	-0.16	0.01	0.86	0.07	<0.001	1.07
Sexual	0.03	0.87	1.03	-0.03	0.28	0.97
Sexual (Child)	-0.28	0.05	0.75	-0.02	0.67	0.98
Soliciting and prostitution	0.85	0.08	2.34	-0.02	<0.001	0.98
Domestic burglary	0.49	<0.001	1.63	0.01	0.03	1.01
Other burglary	0.35	<0.001	1.42	-0.01	0.20	0.99
Theft	0.67	<0.001	1.95	0.03	<0.001	1.03
Handling	0.27	<0.001	1.31	0.00	0.63	1.00
Fraud and forgery	0.11	0.06	1.12	-0.01	0.06	0.99
Absconding and bail offences	0.38	0.01	1.47	0.07	<0.001	1.08
Taking and driving away	0.52	<0.001	1.69	-0.01	0.14	0.99
Theft from vehicles	0.39	<0.001	1.48	0.00	0.66	1.00
Motoring offences (not including drink driving)	0.19	<0.001	1.21	0.01	0.01	1.01
Drink driving	-0.12	0.02	0.89	-0.03	0.10	0.97
Criminal and malicious damage	0.20	<0.001	1.22	0.01	0.16	1.01
Drugs (import /export /production /supply)	-0.21	0.01	0.81	0.06	0.07	1.06
Drugs (possess / small-scale supply)	-0.01	0.87	0.99	0.04	<0.001	1.04
Other	-0.02	0.77	0.98	0.03	0.08	1.03

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