NATIONAL PROBATION SERVICE

Reconviction Analysis of Programme Data using Interim Accredited Programmes Software (IAPS)

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NOMS National Offender Management Service

Working together to reduce re-offending

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Foreword

I am delighted to present the results of this study. They provide some of the most encouraging indications hitherto of the potential impact of structured work with offenders in the community.

It is a key aim of the probation service to try to turn offenders away from crime. To this end, since 2001, the National Probation Service (NPS) has begun, on a national scale, to deliver ever increasing numbers of accredited offending behaviour programmes. These are courses that tackle the offender's lack of ability to plan and consider the consequences of his or her actions. They can be general courses, or courses specifically designed for violent offenders, sex offenders etc. There is a substantial evidence base that this is an effective way of reducing re-offending. Other interventions such as unpaid work and Drug Treatment and Testing Orders have been delivered in accordance with the best available evidence of what works.

Implementation of interventions has improved significantly in the National Probation Service since the introduction of the 'what works' agenda. This has been demonstrated by the increase in completion rates. For example, in 2002/03 just under 50% of offenders who started programmes completed them compared with 72% of offenders in 2006/07. The range of interventions available for use in NPS has also increased.

Key findings

The study was commissioned in order to compare the actual reconviction rates with the predicted rates of offenders under probation supervision in the community attending Offending Behaviour Programmes and on community sentences including Drug Testing and Treatment Orders, Community Punishment Orders (unpaid work) etc in 2004. This study has its limitations and there is still a need for well designed evaluation studies which in time will tell us with a greater degree of certainty what works in community to reduce re-offending.

The findings of the study for those sentenced to all programmes show that the actual re-offending rate was statistically significantly lower (-10.3%) than the predicted. For offenders who completed programmes the reduction in re-offending against the predicted rate was –25.8%. It is important to note the context of these findings. During the same year, the re-offending rate for all offenders on community orders was statistically significantly lower (-6.7%) than the predicted rate.

The findings of the study were not statistically significant for the Women's programme and the Domestic Violence Programmes. The less positive results may have been influenced by low numbers and more recent implementation of the Domestic Violence programmes.

IAPS and data quality

The Interim Accredited Programmes Software (IAPS) is now reasonably well established and sufficient time has elapsed from the initial implementation of most interventions to enable indicative analysis of reconviction rates. The data used in this report was drawn from IAPS and adult community sentences information then matched to the Ministry of Justice's copy of the Police National Computer. This enabled comparison between predicted and actual reconviction rates. It should be noted that the predicted rate comes from a model based on static factors and may not reflect the differences between offenders participating and not participating in programmes in for example motivation and capacity to change.

Although the report cannot conclude that the interventions directly caused the reductions in re-offending (owing to the lack of a comparison group) it provides an indication that the re-offending rates of offenders that took part in programmes and community sentences in 2004 were lower than expected. Unfortunately a substantial amount of IAPS data could not be used because records were not of sufficient quality. Record keeping can be a tedious task but it is vital in providing the raw material on which studies such as this one and day to day management data depend.

Credit and acknowledgement are due to all who have worked to design programmes and get them to a standard that enabled them to be independently accredited; to those who have undertaken the complex task of national implementation across all probation areas; and to NPS staff who have worked hard to deliver accredited programmes and community sentences and to record the outcomes. These findings provide helpful and positive information about re-offending rates and are an encouraging indicator that our evidence based practice approach is the best way forward.

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I am grateful for the contributions of Sinead Bloomfield of the Attitudes Thinking and Behaviour Team, Interventions and Substance Abuse Unit, NOMS, for the initial cleaning and extraction of the IAPS data, and Adele Russell and colleagues in the RDS NOMS Reconviction Analysis Team, for the further cleaning and matching of the data to the Ministry of Justice's copy of the Police National Computer and for their advice on the use of the predicted rate.

Reconviction Analysis of Interim Accredited Programmes Software (IAPS) data

Summary of findings

The actual re-offending rate was statistically significantly better (lower) than the predicted rate for offenders on all accredited programmes in 2004 except for the Women's programme and Domestic Violence programmes. For the Women's programme especially, the numbers in the sample to analyse were limited.

This is a positive indication that accredited programmes may be effective in reducing re-offending.

However, even those who did not start a programme and those who started but did not complete a programme showed an improvement in their actual re-offending rates (as compared to predicted rates, based on offenders starting orders in 2000). This may be because of improvements in supervision of all offenders by National Probation Service case managers or it could be because of limitations in the predicted rate. Although all offenders had lower actual re-offending rates than were predicted, this was noticeably better for those who completed a programme than for those who either did not start or who started but did not complete a programme. This finding was statistically significant.

Again, this is a positive indication that participation in programmes may reduce re-offending. However, the results may also be because the completers group were better motivated to change (and therefore might have improved regardless of participation in an accredited programme). The design employed in this analysis does not allow this to be determined.

This analysis was limited by the varying quality of the data available. It is essential, for future analysis, that data on programme participants are recorded as completely as possible, especially in terms of whether offenders started and completed programmes and the associated dates.

Overall, the reconviction analysis on the 2004 adult cohort results showed a statistically significant reduction in re-offending for those on community sentences of nearly 7%. However, analysis of offenders on the IAPS database showed a reduction of 10%. This may be due to programmes they had undertaken, but could also be due to other factors which were not controlled for.

Background

This analysis was commissioned by NOMS Interventions and Substance Abuse Unit (ISAU) and arose from a need for up-to-date information on interventions and the re-offending rates of programme participants, for offenders on community sentences. The project aimed to provide information on 19 accredited programmes. Previous connected work also examined the re-offending of offenders on Drug Testing and Treatment Orders (DTTOs) and unpaid work.

There is considerable evidence internationally to support the effectiveness of cognitive behavioural programmes in reducing re-offending[1]. These include programmes for general offenders, sex offenders and for substance-misusing offenders[2]. There is also strong evidence of the effectiveness of drug treatment in reducing drug-related crime and overall re-offending[3]. Programmes that attempt to augment the education, vocational and job skills of offenders have generally been shown to reduce re-offending[4]; however, the overall evidence remains tentative. Evaluations of anger management programmes designed specifically for violent offenders have also shown positive results in terms of reducing re-offending[5] but again, the evidence remains tentative.

The findings in this report will add to the current evidence base on interventions, particularly in the UK, where there is a paucity of robust evaluations. However, it is important to note that due to the analysis methods used, it is impossible to be certain that any observed effects are attributable to the programmes themselves, (see 'limitations of the project' below for more detail). More robust methods of testing the effectiveness of interventions are currently being employed by RDS NOMS. In particular the current RDS NOMS research programme includes: systematic reviews of the evidence on interventions for specific groups of offenders (including violent offenders and prolific offenders, reporting in autumn 2007); evaluations of individual UK programmes (including the anger management programmes CALM and ART, during winter 2007/8); and longitudinal cohort studies following offenders through custody and the supervision in the community, identifying offenders' characteristics and needs, what interventions/supervision they receive and the associated outcomes (reporting annually from 2007 onwards).

This paper reports on the analysis of actual and predicted offending rates of offenders on accredited programmes in 2004[6]. The paper also includes a summary of the information on those offenders on community sentences as a whole, including DTTOs and unpaid work (CPOs) in Appendix A[7]. Appendix B is a repeat of the analysis by gender, restricted to programme groups where numbers by gender were large enough for robust results. Appendix C presents the latest evidence on the effectiveness of NOMS adult interventions.

1 See Appendix C for the latest evidence on Interventions.

2 Washington State Institute for Public Policy, 2006 ; Wilson et al, 2005; McGuire, 2002; Pearson et al, 2002; Lipton et al, 1998.

3 Washington State Institute for Public Policy, 2006; Holloway et al, 2005; Bullock, 2003.

4 Washington State Institute for Public Policy, 2006; Hurry et al, 2006; Harper & Chitty, 2005.

5 Howells et al, 2002; Goldstein & Glick, 2001; Polaschek & Dixon, 2001; Sugg, 2000; Dowden et al, 1999; Bush, 1995

6 The actual proven re-offending rate is the percentage of offenders who re-offended during a 2 year follow-up period, and who were subsequently convicted in court. Predicted proven re-offending rate is the estimated percentage who will re-offend after changes in offender characters over time have been controlled for.

7 Taken from "Re-offending of adults: results from the 2004 cohort" available at http://www.homeoffice.gov.uk/rds/pdfs07/hosb0607.pdf This is a National Statistics publication, which denotes that the data quality is good. If the reader needs more detailed information regarding how the data were collected, how re-offending is defined, and any limitations to the data please see that report, particularly the methodological annex.

Methods

The IAPS data containing information about offenders in the community who were involved in an accredited programme in 2004 were cleansed[8]. Offenders in the IAPS dataset were matched to the Ministry of Justice's copy of the Police National Computer to provide re-offending information. Predicted and actual re-offending rates for these matched offenders were calculated. Both rates were needed to assess whether re-offending was more or less than would be expected taking recorded offenders' characteristics into account[9]. The analysis was based on an 'intention to treat' model[10]; therefore completers and non-completers were included. A sub-group analysis, exploring re-offending rates by programme status (i.e. completed, not completed, referred but never started etc.); and by programme groups, was also completed.

Limitations of the project

This project aimed to provide management information on the re-offending rates of offenders participating in National Probation Service interventions using the information available on the IAPS database. It therefore employed a low quality method for evaluating the effectiveness of interventions, comparing expected and actual re-offending rates (level 2 on the Scientific Methods Scale where level 1 is the lowest standard and level 5 the highest (Harper and Chitty, 2005)[11]). As there was no comparison group of offenders with similar characteristics who did not attend a programme, it was not possible to determine whether any observed impact was due to the programme or something else. However, the results provide useful information in terms of describing the re-offending rates of offenders who undertook programmes in 2004 and also allowed a determination of the quality of information which has been collected on programme participation.

Development of the project

After the cleansing and matching was completed, an attempt was made to identify the status of each offender (i.e. whether they started and completed a programme). This preliminary work highlighted a number of difficulties which were considered by the steering group before further work was undertaken.

1. Cleansing and matching data

20% of the original data was lost in the process of cleaning the data and matching it to the Ministry of Justice's copy of the Police National Computer data. This included duplicate cases, cases that did not include a programme in 2004, cases that could not be matched to the Ministry of Justice's copy of the Police National Computer data and cases where there were inconsistent programme dates.

Exclusion of a proportion of records in this way raises concerns about possible selection bias (e.g. this group of people may be of a particular type or may attend a particular programme). Most of these cases, however, were removed because they did not meet the sample inclusion criteria – i.e. involvement with a programme in 2004.

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8 Data cleansing is the act of detecting and correcting (or removing) inconsistent or inaccurate records from a data set.

9 It should be noted that the predicted rate is not designed to be used without taking into consideration a result or control group in the baseline year to which comparison over time could be made. The predicted rate is generally used to assess performance in re-offending against PSA (Public Service Agreements) targets.

10 An Intention to Treat (ITT) model is where data are analysed according to whether they were referred to the programme, regardless of whether the individuals did not did start or complete the course. This allows you to analyse the overall policy of providing a programme for offenders.

11 Harper & Chitty, 2005. Because we can compare this sample with all offenders on community orders, this could be regarded as level 3 on the scale (unmatched comparison group). However the data is not matched on offender characteristics and these are likely to be very different for those on accredited programmes compared to those on all community orders.

2. Data quality problems with date fields in IAPS data

A number of data quality problems were found in the original IAPS data. The owners of the IAPS database advised that the variable 'STATUS' (referred, commenced, abandoned, or completed) in the original dataset was not reliable. This was problematic because it was a central part of the project to analyse re-offending rates by programme status, i.e. non-starters, starters[12] and completers. 31% of the cleaned cases would have been lost if the analyses only considered cases where all dates provided were complete. This would have constituted 44% of the original sample.

In an attempt to resolve this problem use was made of the various date fields in the original dataset to derive programme status. However, this was not straightforward due to a large amount of missing data in the date fields and problems with data quality in terms of the consistency of dates; e.g. offenders abandoning before they commenced etc. A derived status variable was created with seven categories shown in Table 1.

In order to complete the analysis and include as many cases as possible a number of assumptions were made in grouping the cases into non-starters, starters and completers. All offenders were put into the three groups as shown in the final column of Table 1. The non-starters had only a 'referral' date; the starters included all offenders with 'abandoned' dates, and the completers were all offenders with 'completed' dates (including those with 'completed' and 'abandoned' dates (coded as 'other). In this case the IAPS owners advised that 'completed' date was more accurately recorded than 'abandoned' date.

The only offenders who were not included in the analysis were those with a commenced date only, this followed advice from the steering group that this group was unlikely to have been involved in any programmes.

Due to the need to rely on assumptions, it is possible that some offenders may have been analysed in an incorrect group (for example, an offender with no completed date would be considered to have abandoned the programme; however, it is possible that they actually completed but the completion date was not recorded). This reduces the accuracy and reliability of the results.

Table 1: Programme status in sample after initial cleansing and matching

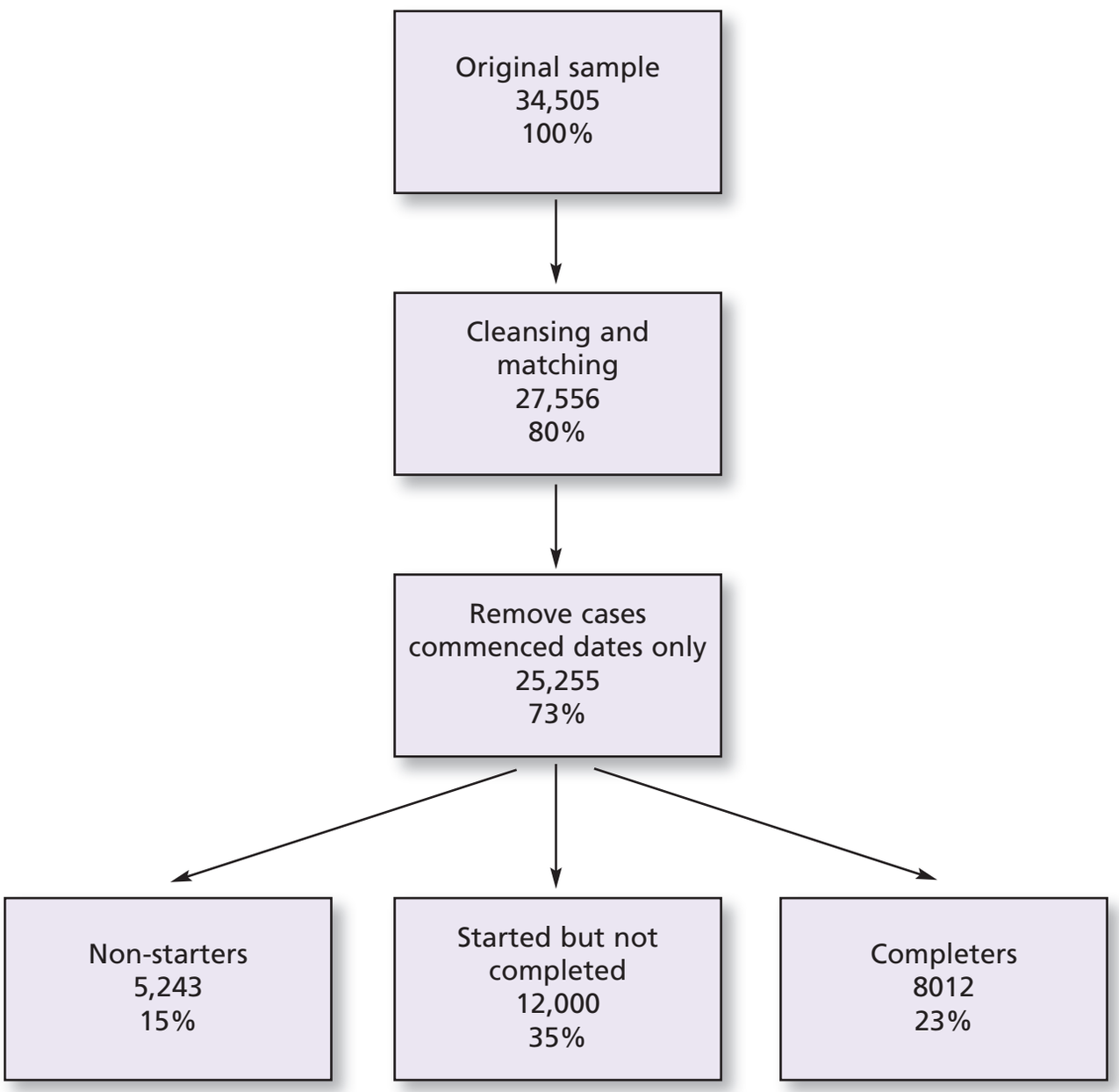
Status	Number	Per cent	Grouping	
0	Referral date only	5,243	19	Non-starters
1	Commenced (and ref) date only	2,311	8.4	Not analysed
2	Abandoned (with commence date)	3,843	13.9	Starters
3	Abandoned (no commence date)	8,157	29.6	Starters
4	Completed (with commence date)	7,664	27.8	Completers
5	Completed (no commence date)	95	0.3	Completers
99	Abandoned and completed	253	0.9	Completers
	Total	**27,566**	**100**	

1 Starters refers to those who started but did not complete a programme.

3. Final sample for IAPS project

The figure below shows the steps taken in arriving at the final sample. The final sample size was 25,255.

Figure 1: Attrition for the IAPS project, from original data to final dataset



Findings

4. Subgroup analysis of offenders on specific programmes

The final numbers in each of the programmes groups, after cleansing the data and removing the ineligible cases are shown in the table below. Sub-group analysis by programme was limited by small numbers except for the four groups, Think First, Addressing Substance Related Offending, Enhanced Thinking Skills and Drink Impaired Drivers. The steering group therefore agreed that programmes would be classified into seven larger groups and that re-offending rates would be calculated for offenders in each of these groups. Table 3 overleaf shows how the groups were determined.

Sample sizes were even smaller when broken down by both programme group and status (see table below). The smaller the sample size, the less likely it is that any real difference in actual and predicted re-offending rates will be detected. With a small sample size, it is possible that small impacts are occurring but these cannot be confirmed statistically as there is a larger possibility that they could have occurred by chance.

Table 2: Final IAPS sample by programme

Programme	Number	Percent
ART – Aggression Replacement Training	901	3.6
ASRO – Addressing Substance Related Offending	4,572	18.1
C-SOGP – Community Sex Offender Group Programme	329	1.3
CALM – Controlling Anger and Learning to Manage it.	247	1.0
CDVP – Community Domestic Violence Programme	236	0.9
CSB – Cognitive Skills Booster	362	1.4
DID – Drink Impaired Driver programme	4,101	16.2
Duluth DV – Duluth Domestic Violence programme	526	2.1
ETS – Enhanced Thinking Skills	4,480	17.7
i-SOTP – Internet Sex Offending Group Programme	2	0.0
IDAP – Integrated Domestic Abuse Programme	386	1.5
N-SOGP – Northumbria Sex Offender Group Programme	210	0.8
OTO – One to One programme	609	2.4
OSAP – Offender Substance Abuse Programme	509	2.0
R&R – Reasoning and Rehabilitation	113	0.4
The Women's Programme	62	0.2
Think First	7,360	29.1
TV-SOGP – Thames Valley Sex Offender Group Programme	229	0.9
WY-SOGP – West Yorkshire Sex Offender Group Programme	21	0.1
Total	**25,255**	**100.0**

Table 3: Programme groups	
Programme Group	**Programmes included in group**
The Women's programme	The Women's Programme
Anger management programmes	ART and CALM
Substance misuse programmes	ASRO and OSAP
Sex offender programmes	C-ASOTP, C-SOGP, I-SOTP, N-SOGP, TV-SOGP, WY-SOGP
Domestic Violence programmes	CDVP, IDAP, Duluth DV
General Offending Behaviour programmes	CSB, ETS, One to One, R&R, Think First
Drink Impaired Drivers programme	DID

Table 4: Programme groups by status				
Programme\Status	**Non-starters**	**Starters**	**Completers**	**All offenders**
The Women's programme	4	29	29	62
Anger management programmes	208	588	352	1,148
Substance misuse programmes	1,582	2,452	1,047	5,081
Sex offender programmes	196	188	407	791
Domestic Violence programmes	273	571	304	1,148
General Offending Behaviour programmes	2,431	6,773	3,720	12,924
Drink Impaired Drivers programme	549	1,399	2,153	4,101
All offenders	**5,243**	**12,000**	**8,012**	**25,255**

5. Results of the group by group analysis

Re-offending was counted from the offenders' 'referral' date as this was present for all the groups. Table 5 overleaf shows that actual re-offending rates were lower (better) than predicted rates for all offenders, but they were much better for those who had completed a programme than for either those who had not started a programme or those who had started but not completed a programme. It should be noted that the rates were better even for offenders who did not attend accredited programmes. This is likely to be because these offenders received some form of case management supervision or it could be because of limitations of the predicted rates[13]. The analysis showed an overall reduction of 10% in the re-offending for offenders in the programmes analysed. This compares with a 7% reduction for all offenders receiving a community order as shown in Appendix table A1.

13 The predicted rate is derived from known offender characteristics, and the model is blind to what is not measured. If there are differences between offenders sentenced to different sentence lengths beyond criminal history, age, sex etc then the predicted rate could be misleading.

Table 5: Overall re-offending rates by status

All Programmes	Number on programmes	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate[14]	Significant difference at the 5% level?[15]
Non-starters	5,243	60.9	64.6	-3.7	-5.7	Yes
Starters (started but not completed)	12,000	63.9	66.7	-2.8	-4.3	Yes
Completers	8,012	37.6	50.7	-13.1	-25.8	Yes
All offenders	**25,255**	**54.9**	**61.2**	**-6.3**	**-10.3**	**Yes**

The table below shows the differences by programmes. Differences for the Women's programme and the Domestic Violence programmes were not found to be statistically significant; however the numbers on the Women's programme were very small, so it is possible that larger numbers might have led to a statistically significant difference as discussed earlier.

Table 6: Overall re-offending rates by programme group

New Programme groups	Numbers in group	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate	Significant difference at the 5% level?
Women's programme	62	48.4	53.7	-5.3	-9.9	No
Anger management	1,148	52.7	61.4	-8.7	-14.2	Yes
Substance misuse	5,081	69.9	74.9	-5.0	-6.7	Yes
Sex offender programmes	791	11.5	18.5	-7.0	-37.7	Yes
Domestic violence	1,148	38.7	40.0	-1.3	-3.2	No
General offending behaviour	12,924	61.9	69.6	-7.7	-11.0	Yes
Drink impaired drivers	4,101	28.0	32.0	-4.0	-12.5	Yes
All offenders	**25,255**	**54.9**	**61.2**	**-6.3**	**-10.3**	**Yes**

14 Difference between actual and predicted re-offending rates as a percentage of predicted re-offending rate. This percentage provides a measure of change in re-offending rate.

15 Significant difference at the 5% level means that there is only a 5% possibility that the differences detected could be due to chance.

Tables 7 and 8, show re-offending rates by status for the anger management and substance misuse programme groups. These show that the actual re-offending rates were lower than predicted rates for all groups however while the results were statistically significant overall, they were not when the subgroups were considered (again, this might be due to the smaller sample sizes in the subgroups).

Table 7: Re-offending rates for Anger management programme

Anger Management Programmes	Numbers in group	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate	Significant difference at the 5% level?
non-starters	208	51.4	60.2	-8.7	-14.5	No
starters	588	59.5	64.9	-5.4	-8.3	No
completers	352	42.0	56.4	-14.4	-25.5	Yes
All offenders	**1,148**	**52.7**	**61.4**	**-8.7**	**-14.2**	**Yes**

Table 8: Re-offending rates for the Substance misuse programmes

Substance misuse Programmes	Numbers in group	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate	Significant difference at the 5% level?
non-starters	1,582	72.0	75.3	-3.3	-4.3	Yes
starters	2,452	74.8	77.1	-2.4	-3.1	No
completers	1,047	55.5	69.3	-13.8	-19.9	Yes
All offenders	**5,081**	**69.9**	**74.9**	**-5.0**	**-6.7**	**Yes**

Table 9 overleaf shows that for offenders on sex offender programmes, the re-offending rates were better for all status groups. The results were statistically significant for all offenders, but were not statistically significant for all individual status groups. However, again the numbers are small so statistical significance might be obtained with a larger sample. Also, the two year re-offending measure might not be suitable for those on sex offenders programmes as sex offenders are known to re-offend much less frequently than general offenders.

Table 9: Re-offending rates for the sex offender programmes

Sexual offender Programmes	Numbers in group	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate	Significant difference at the 5% level?
non-starters	196	17.3	23.7	-6.4	-26.9	No
starters	188	18.6	23.0	-4.4	-19.1	No
completers	407	5.4	13.9	-8.4	-61.0	Yes
All offenders	**791**	**11.5**	**18.5**	**-7.0**	**-37.7**	**Yes**

Actual re-offending rates were better than predicted for all groups of offenders on General offending Behaviour programmes as shown in Table 10 below. The difference was much higher for completers than for either non-starters or starters.

Table 10: Re-offending rates for the General Offending

General Offending Behaviour Programmes	Numbers in group	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate	Significant difference at the 5% level?
non-starters	2,431	65.5	70.6	-5.2	-7.3	Yes
starters	6,773	68.6	72.1	-3.5	-4.8	Yes
completers	3,720	47.3	64.3	-17.0	-26.4	Yes
All offenders	**12,924**	**61.9**	**69.6**	**-7.7**	**-11.0**	**Yes**

For the Drink Impaired Drivers programme the actual re-offending rate of offenders who did not start a programme was higher than the predicted rate. The rates for starters and completers were both better, though only just for the starters groups. However, as with the offenders on sex offender programmes, the differences were statistically significant for completers and overall but not for the non-starters or the starters groups.

The possibility of analysing the re-offending results after one year was explored. However, the predicted re-offending rate is derived from known offender characteristics and the model is only set up to look at re-offending after a two year period. There is not a similar model for calculating predicted one year re-offending rates for the same baseline year. therefore it was not possible to compare actual and predicted re-offending rates after one year. However a model for a one year predicted rate is being developed for following up re-offending in the future.

Table 11: Re-offending rates for the Drink Impaired Drivers programme

Drink Impaired Drivers Programmes	Numbers in group	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate	Significant difference at the 5% level?
non-starters	549	37.5	35.9	1.6	4.6	No
starters	1,399	37.5	38.0	-0.6	-1.5	No
completers	2,153	19.5	27.2	-7.7	-28.3	Yes
All offenders	**4,101**	**28.0**	**32.0**	**-4.0**	**-12.5**	**Yes**

Conclusion

The actual re-offending rates were better (lower) than predicted rates for nearly all offenders including those who did not start on a programme or those who started but did not finish programmes. This was the case except for non-starters on Drink Impaired Drivers programmes. This may have been because of the case management supervision that all offenders would have received.

Overall the reconviction analysis on the 2004 adult cohort results showed a statistically significant reduction in re-offending for those on community sentences of nearly 7% when comparing the difference between actual and predicted rates to actual re-offending (see Appendix A). However, analysis of offenders on the IAPS database showed a reduction of 10%. This may be due to the programmes they had undertaken, but could also be due to other factors which were not controlled for.

Differences in rates were largest for offenders who had completed programmes. However, these results should be treated with caution because those who completed the programmes may have been those offenders with more positive attitudes to change and therefore who might have reduced their re-offending regardless of participation in a programme. However, this could not be tested in this analysis.

Therefore, while these results do not show that participating in programmes cause reductions in re-offending the indications are that those who completed a programme were more likely to have a statistically significantly lower actual re-offending rate than predicted for offenders on all programmes except for the Women's programme and Domestic Violence programmes, where the numbers in the sample to analyse were limited.

These findings add to the existing evidence base on interventions which supports the use of interventions in reducing re-offending. However particularly in a tight financial environment it is important that programmes be targeted appropriately and that scarce resources be deployed on the medium and high risk groups.

Appendix A: summary of reconviction analyses on all community orders (CRO, DTTO, CPO and CPRO) in undertaken in 2004[16] (analysis conducted by RDS NOMS Statistics and Analysis)

Summary of findings

Overall, the actual re-offending rates were better than the predicted rates for offenders on all community sentences.

For offenders on DTTOs the actual re-offending rate was higher than predicted rate. However, in 2004 this improved with actual rates being slightly lower than predicted.

The actual re-offending rates for offenders serving a CPO were significantly lower than the predicted rate for all cohorts 2000 to 2004.

Over the period 2000-2004 rates for CPOs were relatively unchanged.

Actual re-offending rates for all community sentences fell in 2004 compared to 2000. Actual rates for community sentences as a whole fell from 53.2 per cent in 2000 to 50.5 per cent in 2004, while the predicted rate for community sentences remained largely unchanged between 2000 and 2004, rising slightly overall. Community sentences as a whole had an associated reduction in re-offending when comparing the actual and predicted rates in 2004, which was statistically significant at the 5% level. The 2004 adult cohort results showed a significant reduction in re-offending for those on community sentences of nearly 7% as shown in the table below.

Table A1: All Community Orders (CRO, DTTO, CPO, CPRO)

Year received order	Numbers in group	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate	Significant difference at the 5% level?
2000	26522	53.2	53.2	0.0	0.0	No
2002	27194	53.3	53.6	-0.3	-0.6	No
2003	29773	53.4	54.6	-1.2	-2.2	Yes
2004	30698	50.5	54.1	-3.6	-6.7	Yes

16 These results are taken from "Re-offending of adults: results from the 2004 cohort" available at http://www.homeoffice.gov.uk/rds/pdfs07/hosb0607.pdf This is a National Statistics publication, which denotes that the data quality is good. If the reader needs more detailed information regarding how the data was collected, how re-offending is defined, and any limitations to the data please see that report, particularly the methodological annex.

Drug treatment and testing orders (DTTOs) were first reported in the 2002 cohort and since then had a higher re-offending than other disposals. However the type of offenders awarded a DTTO are also those most likely to re-offend: in 2002 the predicted rate for people beginning a DTTO was 83% with an actual rate of 89%: the cohort re-offended at 6 percentage points above the predicted. By 2004 the actual rate had fallen to 82% and the predicted rate to 83%: the actual rate therefore had fallen to 1 percentage point below the prediction.

Therefore DTTOs initially seemed to be associated with an increase in re-offending behaviour, but in 2004 this improved to show a very slight fall in re-offending behaviour.

Table A2: DTTOs

Year received order	Numbers in group	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate	Significant difference at the 5% level?
2000	n/a	n/a	n/a	n/a	n/a	n/a
2002	949	88.9	83.4	5.5	6.6	Yes
2003	1,308	86.3	83.2	3.1	3.7	Yes
2004	1,658	82.3	82.9	-0.6	-0.7	No

Although the use of DTTO has increased, the characteristics of offenders on DTTOs have changed little since their introduction. A similar proportion in 2002 and 2004 were female (18% and 19% respectively). The average age of offenders in both years was 28, the average number of previous convictions in 2004 was 16 (1 higher than in 2002) with 5 previous spells in custody (up from 4 in 2002). Very few offenders (less than 4 %) in either year had served a custodial sentence of over 4 years.

The offences that resulted in a DTTO in 2004 cohort were generally acquisitive crimes, most notably theft (45%), domestic burglary (13 %) and other burglary (8%). Drug possession accounted for 5 % of the cohort in 2004, with drugs supply (2%) lower than violence (3%).

Of those who re-offended, theft was by far the most common (49% of re-offenders in 2004) followed by other motoring offences (7%) and absconding/bail offences, violence and drugs possession (all 6%). Other motoring offences included dangerous driving and driving whilst disqualified.

For offenders serving a CPO the actual re-offending rates were significantly lower than the predicted rate for all cohorts 2000 to 2004. However it should be noted that this was related to the model, as the actual rate was already significantly lower than the predicted in 2000. Over the period 2000-2004 rates for CPOs were relatively unchanged.

Table A3: CPOs						
Year received order	Numbers in group	Actual rates	Predicted rates	Difference between actual and predicted	Change in re-offending using predicted rate	Significant difference at the 5% level?
2000	10,484	40.9	45.2	-4.3	-9.5	Yes
2002	10,582	38.9	43.0	-4.1	-9.5	Yes
2003	10,855	39.5	43.9	-4.4	-10.0	Yes
2004	11,548	37.9	43.5	-5.6	-12.9	Yes

Conclusion

Whilst the statistical evidence of both the actual and the predicted rates is interesting, it is not robust evidence that community sentence type affects re-offending rates. The predicted rate is derived from known offender characteristics, and the model is blind to what is not measured. If there are differences between offenders sentenced to different community sentences, then the predicted rate could be misleading. A robust analysis of the effectiveness of different sentence types would require an experimental technique – such as a randomised control trial – that would minimise the problem of unmeasurable characteristics affecting the results.

Appendix B: Reconviction Analysis of Interim Accredited Programmes Software (IAPS) data – Additional analysis by gender

Summary of findings

Eleven per cent of offenders recorded on IAPS in 2004 were female.

The proportion of female offenders who started and completed programmes was broadly similar to that of male offenders.

As with male offenders, actual re-offending rates were better (lower) than predicted rates for female offenders when considering all programmes together. This result was statistically significant and was the case regardless of whether offenders started or completed a programme. This may be because of improvements in the supervision of all offenders by National Probation Service case managers or it could be because of limitations in the predicted rate.

Although all female offenders, had lower actual re-offending rates than were predicted, this was noticeably better for those who completed a programme. This is a positive indication that participation in programmes may reduce re-offending. However, the results may also be in part because the completers group were better motivated to change (and therefore might have improved regardless of participation in an accredited programme).

The difference between offenders' actual and predicted rates was larger for female offenders than for male offenders (8% as opposed to 6%). This was statistically significant. The difference between offenders' actual and predicted rates was also statistically significantly larger for female offenders than for male offenders when assessing the re-offending rates following substance misuse programmes and general offending behaviour programmes. These results show that female offenders who were referred to programmes improved more significantly than male offenders.

However, when looking at those offenders who had completed programmes, despite females doing better than males, the differences were not statistically significant. This analysis, therefore, suggests that programme effectiveness is not related to gender. However, the small sample of female completers overall means that with larger numbers it is possible that the differences could reach statistical significance.

Findings

Subgroup analysis

The numbers of female offenders in the final cleansed dataset are shown in the table below. Of the final sample of 25,255 offenders, 11% (2,804) were female. The proportions of female offenders who started and completed programmes were broadly similar to those of male offenders.

Table B2 shows that nearly half of women were on general offending behaviour programmes (a similar proportion to male offenders) and about a third were on substance misuse programmes (about twice the proportion as male offenders). One anomaly in the data shows that three participants on 'The Women's Programme' were recorded as being male.

Table B1: Number of offenders by status and gender

	Women		Men		Gender not recorded – no.	All offenders
	Number	(%)	Number	(%)		
Non starters	665	(24)	4,576	(20.4)	2	5,243
Starters	1,353	(48)	10,646	(47.4)	1	12,000
Completers	786	(28)	7,224	(32.2)	2	8,012
All offenders	**2,804**	**(100)**	**22,446**	**(100)**	**5**	**25,255**

Table B2: Programme groups by gender

	Women		Men		All offenders*	
	Number	%	Number	%	Number	%
Women Programme	59	2	n/a	n/a	62	0
Anger management	71	3	1,077	5	1,148	5
Substance misuse	956	34	4,123	18	5,081	20
Sex offender programmes	1	0	789	4	791	3
Domestic violence programmes	0	0	1,147	5	1,148	5
General offending behaviour	1,343	48	11,580	52	12,924	51
Drink impaired drivers	374	13	3,727	17	4,101	16
All offenders	**2,804**	**100**	**22,446**	**100**	**25,255**	**100**

*** includes 5 offenders where gender was not recorded**

The analysis by gender was restricted to those offenders where gender was recorded. However, the results for 'all offenders' includes those where gender was not recorded. This was done so that these results were in line with the rest of the analysis and because the numbers of offenders for whom gender was not recoded was very small (5 out of 25,255) and therefore would not unduly affect the overall results.

Results of the group by group analysis

Tables B3 and B4 show that actual re-offending rates were better (lower) than predicted rates for both male and female offenders, but they were noticeably better for those who completed a programme than for either those who had not started a programme or those who started but did not complete a programme. It is important to note that this may be in part because the completers group were better motivated to change (and therefore might have improved regardless of participation in an accredited programme).

The difference between offenders' actual and predicted rates was larger for female offenders than for male offenders (8% as opposed to 6%). This result was statistically significant.

Table B3: Female re-offending rates by status

	Number	Actual	Predicted	Actual – Predicted	Change in re-offending using predicted rate	Significant at 5% level?
Non starters	665	57.6	64.3	-6.7	-10.4	Yes
Starters	1,353	61.7	66.5	-4.8	-7.2	Yes
Completers	786	33.0	48.4	-15.5	-32.0	Yes
All female offenders	**2,804**	**52.7**	**60.9**	**-8.2**	**-13.5**	**Yes**

Table B4: Male re-offending rates by status

	Number	Actual	Predicted	Actual – Predicted	Change in re-offending using predicted rate	Significant at 5% level?
Non starters	4,576	61.3	64.6	-3.3	-5.1	Yes
Starters	10,646	64.2	66.7	-2.6	-3.9	Yes
Completers	7,224	38.1	51.0	-12.8	-25.2	Yes
All male offenders	**22,446**	**55.2**	**61.2**	**-6.0**	**-9.9**	**Yes**

The programme group re-offending analysis was restricted to offenders on anger management, substance misuse, general offending behaviour and Drink Impaired Drivers programmes where the numbers by gender were large enough for robust results. Table B5 shows the numbers of male and female offenders included in each of these programme groups.

Table B5: Numbers in programme group by gender

	Women	Men	All offenders*
Anger management	71	1,077	1,148
Substance misuse	956	4,123	5,081
General offending behaviour	1,343	11,580	12,924
Drink impaired drivers	374	3,727	4,101
Total no. in these 4 programme groups	**2,744**	**20,507**	**23,251**

*** includes 5 offenders where gender was not recorded**

The differences between offenders' actual and predicted rates was larger for all female offenders than for all male offenders when assessing the re-offending rates for substance misuse programmes and general offending behaviour programmes (see Tables B6-B9). This finding was statistically significant. However, when looking only at those offenders that completed programmes, although female offenders did have a larger difference between their actual and predicted rates than male offenders, this difference was not statistically significant.

This may be because of the small number of female offenders completing these programmes. With small sample sizes, it is possible that small impacts are actually occurring but these cannot be confirmed statistically as there is a larger possibility that they could have occurred due to chance. Larger numbers might have shown the differences to be statistically significant.

Table B6: Female offenders on Substance misuse programmes

	Number	Actual	Predicted	Actual – Predicted	Change in re-offending using predicted rate	Significant at 5% level?
Non starters	322	70.2	74.2	-4.0	-5.4	No
Starters	454	70.9	76.0	-5.1	-6.7	No
Completers	180	47.8	66.6	-18.8	-28.3	Yes
All offenders	**956**	**66.3**	**73.7**	**-7.3**	**-10.0**	**Yes**

Table B7: Male offenders on Substance misuse programmes						
	Number	Actual	Predicted	Actual – Predicted	Change in re-offending using predicted rate	Significant at 5% level?
Non starters	1,259	72.4	75.5	-3.1	-4.1	No
Starters	1,998	75.6	77.4	-1.7	-2.2	No
Completers	866	57.2	69.8	-12.7	-18.2	Yes
All offenders	**4,123**	**70.8**	**75.2**	**-4.4**	**-5.9**	**Yes**

Table B8: Female offenders on General Offending Behaviour programmes						
	Number	Actual	Predicted	Actual – Predicted	Change in re-offending using predicted rate	Significant at 5% level?
Non starters	268	52.2	62.8	-10.5	-16.8	Yes
Starters	732	61.9	67.6	-5.7	-8.4	Yes
Completers	343	38.8	59.0	-20.2	-34.2	Yes
All offenders	**1,343**	**54.1**	**64.4**	**-10.3**	**-16.1**	**Yes**

Table B9: Male offenders on General Offending Behaviour programmes						
	Number	Actual	Predicted	Actual – Predicted	Change in re-offending using predicted rate	Significant at 5% level?
Non starters	2,163	67.1	71.6	-4.5	-6.3	Yes
Starters	6,040	69.4	72.6	-3.2	-4.4	Yes
Completers	3,377	48.2	64.8	-16.7	-25.7	Yes
All offenders	**11,580**	**62.8**	**70.2**	**-7.4**	**-10.5**	**Yes**

The differences between actual and predicted rates following anger management and Drink Impaired Drivers programmes were larger for female offenders than for male offenders (see Tables 11-14) but these differences were not statistically significant. As with completers on the previously discussed programmes, this may be because of the small number of female offenders on these programmes.

Conclusion

The proportion of female offenders who started and completed programmes was broadly similar to that of male offenders.

As with male offenders, actual re-offending rates were better (lower) than predicted rates for female offenders when considering all programmes together. This result was statistically significant and was the case regardless of whether offenders started or completed a programme. This may be because of improvements in the supervision of all offenders by National Probation Service case managers or it could be because of limitations in the predicted rate.

Although all female offenders, had lower actual re-offending rates than were predicted, this was noticeably better for those who completed a programme. This is a positive indication that participation in programmes may reduce re-offending. However, the results may also be in part because the completers group were better motivated to change (and therefore might have improved regardless of participation in an accredited programme).

The difference between offenders' actual and predicted rates was larger for female offenders than for male offenders (8% as opposed to 6%). This was statistically significant. The difference between offenders' actual and predicted rates was also statistically significantly larger for female offenders than for male offenders when assessing the re-offending rates following substance misuse programmes and general offending behaviour programmes. These results show that female offenders who were referred to programmes improved more significantly than male offenders.

However, when looking at those offenders who had completed programmes, despite females doing better than males, the differences were not statistically significant. This analysis, therefore, suggests that programme effectiveness is not related to gender. However, the small sample of female completers overall means that with larger numbers it is possible that the differences could reach statistical significance.

Appendix C: Research evidence on the effectiveness of NOMS adult interventions

SUMMARY

Evidence base to support reducing re-offending

What works

- There is considerable evidence to support the effectiveness of cognitive behavioural programmes (also referred to as offending behaviour programmes) in reducing re-offending. These programmes include cognitive behavioural programmes for general offenders, sex offenders and for substance-misusing offenders.
- The most effective interventions to reduce drug-related crime seemed to be therapeutic communities and drug courts.
- For certain types of community based drug treatments the cost of the treatment represents a cost savings when compared to the associated costs of crime to the victim and the demands on the Criminal Justice System.

What's promising

- Programmes that attempt to augment the educational, vocational, and job skills of adult offenders in both prison and community settings have generally been shown to reduce re-offending, however the evidence remains tentative.
- Anger management programmes or programmes designed specifically for violent offenders have shown positive indications that these programmes are effective but the evidence remains tentative.
- There is also some evidence of the effectiveness of other drug treatment in reducing drug-related crime and overall re-offending. These interventions include methadone treatment, heroin treatment, therapeutic communities, psycho-social approaches.

What doesn't work

- Evaluations of adult 'boot camps' (intensive regimes of training, drilling, and some treatment) have found that these fail to reduce re-offending.

- Programmes like 'Scared Straight' involve organized visits to prison facilities by juvenile delinquents or children at risk for becoming delinquent are designed to deter participants from future offending. Research evidence indicates that not only does this type of intervention fail to deter crime but it actually leads to more offending behaviour.

Increasing the evidence base (current and future work of RDS NOMS)

- Despite having strong international evidence on the effectiveness of interventions, research in the UK to date has been limited. More robust research evidence is still required to give greater confidence to NOMS that effective and cost-effective interventions are being delivered to offenders.
- The current RDS NOMS research programme includes research on the effectiveness of interventions aimed at reducing re-offending and protecting the public. This includes:
  - reviews of the evidence on interventions specific groups of offenders (e.g. violent offenders, prolific offenders);
  - evaluations of individual UK programmes (e.g. CALM and P-ASRO); and
  - three longitudinal cohort studies following offenders through the youth justice system, custody and the community, identifying offenders' characteristics and needs, what interventions/supervision they receive, and associated outcomes (including re-offending).

Introduction

A number of interventions are provided in custody and the community to support the rehabilitation of offenders and in turn to reduce re-offending and help protect the public. These include offending behaviour programmes, drug treatment and education and employment programmes. The best available evidence of effectiveness to date relates to cognitive behavioural programmes (including cognitive behavioural programmes for sex offenders) and drug treatment. More robust research evidence is still required across all NOMS interventions to give greater confidence to the correctional services that they are delivering effective interventions to offenders.

Interventions delivered in the community

There is some evidence[1] that community-based programmes, in general, produce more positive results compared with prison-based interventions, and that better-designed services are of maximum benefit when provided in a non-custodial setting.

However, a more recent meta-analysis (a statistical technique for amalgamating previous research) found that the treatment setting was not related to treatment effects. Offenders treated in prison (generally close to the end of their sentences) showed recidivism decreases comparable to those of offenders treated in the community[2].

There is evidence that some offenders perceive community sentences to be useful and to help them stay out of trouble[3] and that many welcome the opportunity to learn new skills[4].

Offending behaviour/cognitive behavioural programmes (general)

International evidence

There is considerable international evidence, from various systematic reviews and meta-analyses analysing a large number of offending behaviour/cognitive behavioural programmes, to **support the effectiveness of these programmes in reducing re-offending**[5,6,7,8].

A recent international review found that, on average, cognitive behavioural programmes for general offenders reduced recidivism by four percentage points[9].

A recent meta-analysis has suggested that positive effects of cognitive behavioural programmes are associated with treatment of higher risk offenders, high quality treatment implementation, and a cognitive behavioural therapy (CBT) programme that includes anger control and interpersonal problem solving but not victim impact or behaviour modification components[2].

UK evidence

The evidence from research in England and Wales on the effectiveness of offending behaviour programmes is mixed[10,11,12].However, these findings may be due to implementation failure or the research designs used which makes it difficult to attribute the outcomes directly to the impact of the intervention[13].

Interventions for violent offenders/anger management

International evidence

There have been a number of international evaluations of anger management programmes or programmes designed specifically for violent offenders. These have shown mainly positive **effects but the results are inconclusive**, often due to the methodological quality of the evaluation[14,15,16,17,18]. More robust research is required to increase confidence in these findings.

UK evidence

One anger management programme has been evaluated in England. This was a small-scale study of Aggression Replacement Training[19] which found a reduction in the reconviction rates of the treatment group versus a matched comparison group. However, due to the sample size and research design, this result needs to be interpreted cautiously. The overall evidence on this type of programme in the UK remains tentative.

Domestic violence interventions

International evidence

A recent international systematic review and meta-analysis of evidence-based adult corrections programmes reviewed nine rigorous evaluations of domestic violence treatment programmes and concluded that, on average, they **have yet to demonstrate reductions in recidivism**[9].

UK evidence

One small-scale study, conducted in Scotland, has evaluated two programmes for domestically violent men. This reported inconclusive but encouraging findings of reduced violence and reduced frequency of violence according to partners' self reports[20].

Substance Misuse/Drug Interventions

International evidence

Many evaluations of drug treatment to date have been of residential in-prison treatment (usually therapeutic communities). These have shown that prisoners who complete their treatment are less likely than untreated offenders to use drugs or to re-offend after release[21].

Recent systematic reviews analysing large numbers of evaluations of drug treatment programmes have concluded that, **on average, drug treatment programmes reduce re-offending**[9,22].

Drug interventions shown to be effective included: methadone treatment, heroin treatment, therapeutic communities, psycho-social approaches and drug courts. The most effective interventions to reduce drug-related crime seemed to be therapeutic communities and drug courts. More intensive interventions were more likely to bring about reductions in criminal behaviour than less intensive programmes. Also, reductions in re-offending was more likely among men compared with women and young compared with old[22].

One of the most consistent findings from the drug treatment literature is that outcomes for prisoners are most favourable for offenders who participate in, and complete aftercare[23,24].

UK evidence

The evaluations to date of drug treatment programmes in the UK is limited and often not very robust, but suggest that these programmes can reduce re-offending[25,26].

In the UK, prisoners who completed the 12-step RAPt programme had significantly lower rates of reconviction after two years than a comparison group (40% versus 50%)[25] – although there might be selection bias here.

There is also **some evidence that Drug Treatment and Testing Orders (DTTOs) are effective in reducing re-offending**[27] and that those offenders who completed their orders had a lower reconviction rate than those whose orders were revoked. However the evidence is limited due to the design and size of the study and the fact that the study was carried out during the pilot stages of DTTOs. (Research comparing demonstration projects with practical implementation suggests that effects seen at the pilot stage are not always replicated in national roll-out). We don't yet have anything comparable for DRRs (Drug Rehabilitation Requirements).

Further research has found that clients that stay longer than 90 days in treatment had better outcomes: they were five times less likely to use heroin, three times less likely to use stimulants, showed a reduction in crime, in injecting use and a reduction in drug selling[28].

A community-based research study, NTORS (National Treatment Outcome Research Study) showed that, **for every additional £1 spent on drug treatment, there was a return of more at least £9.50 in the cost savings associated with victim costs of crime and reduced demands being made on the CJS**[29]. However, that figure is not specific to one form of drug treatment and refers to community–based treatment only.

As yet little is known about the effectiveness of interventions/programmes schemes in reducing alcohol-related crime. The evidence base here is very limited which reflects the fact that the government's main focus to date in the area of substance abuse has been on illegal drug use and not alcohol.

However the United Kingdom Alcohol Treatment Trial (UKATT) found that **for every £1 spent on treating problem drinkers** (social behaviour and network therapy and motivational enhancement therapy) **£5 is saved on costs to health, social and criminal justice services**. This is likely to be an underestimate as it does not include loss of productivity or measure the full social costs of either alcohol related violence or the effects of alcohol problems on family and friends.

Programmes for Sex Offenders

International evidence

A recent systematic review of 18 rigorous evaluations of evidence-based treatment programmes for adult sex offenders[9] found that **cognitive-behavioural treatments for sex offenders in both prison and community settings were, on average, effective at reducing offending**. Other approaches (psychotherapy, counselling and behavioural treatment of sex offenders) failed to show reductions in recidivism.

Another systematic review and meta-analysis conducted by researchers at the University of Erlangan, Germany, analysed 69 studies of sexual offender treatment. This study found that despite a wide range of positive and negative effect sizes, the majority confirmed the benefits of treatment. The recidivism rate for treated offenders was on average 6 percentage points lower than that for comparison offenders. Effects for violent and general recidivism, were in a similar range. Among psychological programmes, cognitive-behavioural approaches revealed the most robust effect. Non-behavioural treatment did not demonstrate a significant impact[30]. It should be remembered that the methodological quality of the included studies was moderate thus conclusions remain cautious.

UK evidence

Participants in the UK Sex Offender Treatment Programme (SOTP) in prison and probation have demonstrated a statistically significant (highly unlikely to be due to chance) reduction in sexual and/or violent reconviction within two years of release, in comparison to offenders who have not undergone the programme[31,32]. However, the small sample size in the probation-based study[32] means that the findings should be viewed with caution.

Education, Training and Employment

International evidence

A recent systematic review from the US of evidence-based adult corrections programmes examined 30 rigorous evaluations of programmes that attempted to augment the educational, vocational, and job skills of adult offenders in both prison and community settings. **On average, these programmes reduced re-offending**[9].

UK evidence

The evidence of the effectiveness of employment and education schemes in prisons in England and Wales is mixed. There is recognition of the role of employment agencies and employers in helping to secure employment for ex-prisoners. The emerging evidence on basic skills training in prison suggests that these courses can improve prisoners' skills but the extent to which these can be improved sufficiently to have a positive impact on employment prospects by prison training alone is still in doubt[33].

A recent review by the Department for Education and Skills (DfES) examined seven prison-based employment interventions and found that in six of the programmes offenders in the treatment group were significantly more likely to be employed at least six months after completion than those in comparison groups. The report

concluded that prison-based employment interventions were effective in helping offenders gain and retain employment.

Electronic Monitoring

International evidence

Current evidence suggests that **electronic monitoring does not reduce re-offending**[9]. However, international research does suggest that **it can be effective in helping to ensure compliance with other, more rehabilitative, community penalties**[34].

UK evidence

Home Office research findings also suggest that sentencers see electronic monitoring as a way of improving sentence compliance. Criminal justice practitioners often favoured the use of curfew orders alongside other community sentences to increase offender compliance and support the requirements of the sentence[35].

Interventions causing harm/what doesn't work

Programmes like 'Scared Straight,' which involve organized visits to prison facilities by juvenile delinquents or children at risk for becoming delinquent are designed to deter participants from future offending by providing first-hand observations of prison life and interaction with adult inmates. Research evidence indicates that **not only does this type of intervention fail to deter crime but it actually leads to more offending behaviour**[36].

There is also some evidence that **putting low risk offenders on interventions can actually increase rather than reduce their offending**[37].

Generating new evidence: current and future RDS NOMS research on interventions

The current RDS NOMS (Research, Development and Statistics – National Offender Management Service) research programme includes further research on the effectiveness of a wide range of interventions aimed at reducing re-offending.

Short term evidence: systematic reviews/rapid evidence assessments

RDS NOMS is conducting a number of systematic reviews and rapid evidence assessments reporting in 2007/08 using the latest and most robust evidence from the UK and internationally. These are examining the effectiveness of interventions for female offenders, juvenile offenders, violent offenders and persistent offenders; and also the effectiveness of mentoring interventions.

Evidence on offending behaviour/cognitive behavioural programmes

RDS NOMS is also conducting research specifically on offending behaviour/cognitive behavioural programmes. The 'Treatment Change Project' seeks to determine the short-term changes in offenders' attitudes and behaviour after attending an offending behaviour programme and to examine in detail which offenders benefit from treatment and under what conditions. RDS NOMS are also planning future evaluations of an anger management programme – Controlling Anger and Learning to Manage it (CALM), a prison-based drug programme (P-ASRO) and a resettlement programme – F.O.R….A Change, and are developing evaluation strategies for the Sex Offender Treatment Programme and a new cognitive skills programme for general offenders.

Large-scale research

By end 2007 RDS NOMS will have findings from the resettlement survey reconviction analysis. This will examine the extent to which prisoners' characteristics and needs such as employment, education, drug and alcohol problems, as well as interventions delivered in prison, are associated with subsequent reconviction.

RDS NOMS is also undertaking four large cohort studies:

1) a courts survey (to increase understanding of current sentencing practice and analyse factors associated with sentencing and the effectiveness of different sentences in terms of reconviction and compliance);
2) a longitudinal study focusing on prisoners;
3) a longitudinal study focusing on offenders in the community; and
4) a longitudinal study focusing on juvenile offenders. These latter three will provide information on the characteristics and needs of offenders who receive interventions, what combinations of interventions they currently receive, and which types of offenders might benefit most from particular types of intervention.

Interventions and Offender Management Team
RDS NOMS Research and Evaluation
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Q&A on the report findings from Reconviction Analysis of Interim Accredited Programmes Software (IAPS) data

Q. *What does the analysis cover?*
A. The analysis examined offenders who attended accredited programmes in the community during 2004. It explored their actual re-offending rates in 2006 with those predicted on the basis of the information available about them in 2004.

Q. *What is an accredited programme?*
A. An accredited programme is a programme for offenders that target their offending behaviour. Programmes are based on international research and use methods likely to reduce re-offending. Programmes are rigorously assessed and accredited by an expert panel to safeguard and promote standards of design and delivery to ensure suitability for addressing the risk and need of the offender.

Q. *Does the report show that accredited programmes are effective in reducing re-offending?*
A. The findings showed that the actual re-offending rate was statistically significantly better (lower) than the predicted rate for offenders on all accredited programmes in 2004 except for the Women's Programme and Domestic Violence programmes. For the Women's Programme especially, the numbers in the sample were too limited to provide robust analysis. The roll out of domestic violence programmes to all probation areas was not completed until 2006.

All offenders (even those who did not undertake programmes) showed an improvement in actual re-offending rates (as compared to predicted rates). However, programme completers did statistically significantly better than those who did not start or who dropped-out of programmes. This may be due to the impact of the programme, however it could also be because those that completed programmes were better motivated to change (and therefore might have improved regardless of participation in an accredited programme). The design employed in this analysis did not allow this to be determined.

The findings provide a helpful and positive indication that accredited programmes may be effective in reducing re-offending, however, they do not allow us to say that the programme caused the difference between the actual and predicted re-offending rates as there was no comparison group (i.e. we do not know what would have happened to these offenders if they had not completed the programme).

Q. *So, what can we say about the effectiveness of interventions from this research?*
A. There is significant international evidence that programmes reduce re-offending. Evidence in the UK to date has been limited and mixed. The findings from this analysis add to the evidence base, providing a positive indication that programmes may have a positive effect on re-offending. However, they do not provide evidence of cause and effect.

Q. *Why was the predicted rate better than actual even for those not on an accredited programme?*
A. Even those offenders who did not start a programme and those who started but did not complete a programme showed an improvement in their actual re-offending rates (as compared to predicted rates). This may be because of improvements in supervision of all offenders by National Probation Service case managers or it

could be because of limitations in the predicted rate.

Q. *Can we compare outcomes of those on accredited programmes with the outcomes from offenders on all community orders?*

A. The reconviction analysis on the 2004 adult cohort, results produced by the RDS NOMS Reconviction Analysis team, showed a statistically significant reduction in re-offending for all those on community sentences of nearly 7%. The findings from this analysis of offenders on the IAPS database showed a reduction of 10% for those referred to accredited programmes. This may be due to programmes undertaken by the offenders, but could also be due to other factors which were not controlled for (as it is very likely that the characteristics of offenders on accredited programmes are significantly different from the characteristics of offenders on community orders as a whole – although offenders who attend programmes are not a low risk group – programmes are targeted at those who are at medium and high risk of re-offending).

Q. *What is the quality of this analysis?*

A. This analysis is very good quality in terms of its primary objective to provide management information on the re-offending rates of offenders participating in National Probation Service interventions using the information available on the IAPS database. The results provide useful information in terms of describing the re-offending rates of offenders who undertook programmes in 2004 and also allowed an assessment of the quality of information which has been collected to date on programme participation. However, in terms of its use in determining the effectiveness of interventions, this analysis was limited by the varying quality of the data available, by the fact that the analysis did not include a matched sample of offenders who did not receive the intervention and because the model used for calculating the predicted re-offending rate did not include interventions as one of its reference variables. Therefore, the findings can only be considered as indicative of the effects of accredited programmes and do not provide evidence of cause and effect.

Q. *Are the predicted re-offending rates directly applicable for assessing interventions?*

A. The predictive rate methodology is used to take into account changes in offenders characteristics (such as age/gender/criminal history) over time to enable a like for like comparison of re-offending. The statistical model used to generate predictive rates was built on the 2000 adult re-offending dataset, which included over 43,000 offenders who were either discharged from prison or commenced a community sentence in the 1st quarter of 2000. It included adult offenders both male and female, with a range of different offence types and criminal histories. It predicts well over the sample as a whole but not for some individual disposals which were not included when the predicted rate model was developed. This means that the model is not well suited to being used for comparisons of re-offending rates of those offenders on specific disposals who undertake interventions.

Q. *When will we have better quality evidence on the effectiveness of interventions in the UK?*

A. The current RDS NOMS (Research, Development and Statistics – National Offender Management Service) research programme includes further research on the effectiveness of a wide range of interventions aimed at reducing re-offending. This includes systematic reviews and rapid evidence assessments, using the latest and most robust evidence from the UK and internationally, on the effectiveness of

interventions for female offenders, juvenile offenders, violent offenders and persistent offenders. These should all be published by the end of 2007. RDS NOMS is also conducting research specifically on offending behaviour/ cognitive behavioural programmes. The 'Treatment Change Project' seeks to determine the short-term changes in offenders' attitudes and behaviour after attending an offending behaviour programme and to examine in detail which offenders benefit from treatment and under what conditions (publication expected in December 2007). RDS NOMS is also planning future evaluations of two anger management programmes – Controlling Anger and Learning to Manage it (CALM) and Aggression Replacement Training (ART), a prison-based drug programme (P-ASRO) and a resettlement programme – F.O.R….A Change.

RDS NOMS is also undertaking four large cohort studies:

1) a courts survey (to increase understanding of current sentencing practice and analyse factors associated with sentencing and the effectiveness of different sentences in terms of reconviction and compliance);
2) a longitudinal study focusing on prisoners;
3) a longitudinal study focusing on offenders in the community; and
4) a longitudinal study focusing on juvenile offenders. These latter three will provide information on the characteristics and needs of offenders who receive interventions, what combinations of interventions they currently receive, and which types of offenders might benefit most from particular types of intervention.

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Reconviction Analysis of Programme Data using Interim Accredited Programmes Software (IAPS)