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Re-offending by offenders on Community Orders

Results from the Offender Management Community Cohort Study

Martin Wood, Jack Cattell, Gavin Hales, Chris Lord, Tom Kenny and Tricia Capes
NatCen Social Research and Get the Data

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1. Summary

This report is one of a series summarising findings from the Offender Management Community Cohort Study (OMCCS), a longitudinal cohort study of offenders aged 18 and over, who started Community Orders between October 2009 and December 2010. The report focuses on re-offending by these offenders, using a measure of proven re-offending. Proven re-offending is defined as any offence committed in the 12 months following the start of the Community Order that received a court conviction or caution in that 12 months or within a further six month waiting period.[1] It examines the factors associated with re-offending, such as offenders' needs, attitudes and their relationship with their Offender Manager. The report will help inform policy makers and providers about the key characteristics of this group of offenders and will be useful in the development of practice in the delivery of Community Orders and supervision in the community.

Preliminary findings on re-offending levels among offenders on Community Orders from the OMCCS were published in July 2013 (Wood *et al.*, 2013a) using incomplete re-offending data. This report presents updated analysis on levels of re-offending and therefore findings may vary from those previously published.

Background

In the 'Punishment and Reform' and 'Transforming Rehabilitation' consultations (MoJ, 2012a, 2012b, 2013a, 2013b) the Government outlined plans for making changes to the way offenders in the community, including offenders on Community Orders, are managed to reduce rates of re-offending. These proposals included ensuring there was a punitive element in all Community Orders and an increased focus on rehabilitation. There were also proposals to reform the provision of services in the community by opening up the market to a diverse range of new rehabilitation providers, incentivised through payment by results to reduce re-offending, putting in place a nationwide 'through the gate' rehabilitation service through newly designated resettlement prisons and extending statutory provision to short sentenced offenders released from custody. Under this approach a public sector National Probation Service will be created, which will carry out risk assessments of all offenders and

[1] Breaches are not included as re-offences. In addition to the 12 month follow-up period for re-offending, a six month waiting period is included to allow any prosecutions to reach a conclusion.

have responsibility for directly managing offenders who pose a high risk of serious harm to the public.[2]

Approach

The OMCCS uses four sources of data:

- A longitudinal survey of a representative sample of 2,919 offenders on Tiers 2 to 4.[3] Surveys were carried out around three months and again seven months after the start of the offender's Community Order, with a third survey following the expected end of the sentence. The third survey was not completed for all offenders.[4]
- Central administrative records for all offenders starting a Community Order between October 2009 and December 2010 (144,407 offenders).
- Local administrative records from 10 Probation Trusts (50,935 offenders).
- Police National Computer (PNC) data on cautions and convictions (126,673 offenders).[5]

Individual offenders' records have been linked across these four sources to form a 'Universal Dataset'. This report uses all four sources of data but focuses on the 1,496 offenders in the survey who responded to both the first ('baseline') survey and a subsequent survey (Wave 2, Wave 3, or both), who gave permission to link their survey responses to the administrative data sources and who were matched to PNC data.[6]

Key findings

Overview of re-offending

These findings are based on bivariate analysis which shows a simple view of the associations between factors with re-offending, without controlling (adjusting) for other factors.

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2 The National Probation Service will have responsibility for assessing the risk of harm posed by each offender, advising the courts (and Parole Boards), handling most breach cases, and directly managing offenders who present a high risk of harm including those subject to Multi-Agency Public Protection Arrangements (MAPPA).

3 Offenders are assigned to one of four 'tiers' during their management by the National Offender Management Service, based on a number of factors including their likelihood of re-offending, with the aim of directing appropriate resource towards them. Tier 1 is the lowest level, where the aim is largely punishment, whilst substantial management is required of Tier 4 offenders with the aim of controlling risk. The survey excluded offenders on Tier 1 as they had minimal levels of interventions in their sentence.

4 The Wave 3 survey was stopped before completion, due to concerns about high levels of attrition (see Section 1.2 for more details).

5 A PNC match was obtained for 90% of the full cohort.

Just over a third (34%) of the survey cohort re-offended within 12 months of starting their Community Order. Key findings on the offence and offender characteristics associated with re-offending were:

- Males were more likely to re-offend (36%) than females (27%).
- Younger offenders were more likely to re-offend than older offenders (39% of those aged 18 to 20 compared with 28% of those aged 40 and over).
- The rate of re-offending increased with the number of previous convictions, tier and likelihood of re-offending (measured by OGRS).[7] For example, 51% of offenders with more than 16 previous convictions re-offended, compared with 21% with one to five previous convictions.

Needs, requirements and treatment

Offenders on Community Orders often had multiple, complex needs (Cattell *et al.*, 2013), such as problems with their accommodation, drug misuse, employment, training and education (ETE) needs, and relationship needs. Key findings on the needs of offenders and re-offending were:

- The rate of re-offending increased with the number of criminogenic needs identified in OASys.[8] It was especially high for those with an OASys-identified drug misuse need (55%), particularly if they also had an OASys-identified ETE need or accommodation need.
- Almost nine out of ten (86%) offenders with a drug misuse need had three or more other needs recorded in OASys, suggesting that they had complex problems.
- Nearly half (47%) of those with a survey-identified drug misuse need[9] at the first survey interview no longer had this need by their latest available interview. The rates of re-offending among offenders who had ever reported having a drug misuse need did not differ if they no longer had the need, or still had the need at the latest available survey interview. A similar picture was seen for offenders with an alcohol need.
- Those offenders who had an accommodation need or an ETE need identified at some point in the survey, but who had these needs resolved by their latest

6 Further details of the methodology are published in Cattell *et al.* (2013) and Wood and Hussey (2013).

7 The Offender Group Reconviction Scale (OGRS) uses static factors (such as age at sentence, gender, offence committed and criminal history) to predict the likelihood of proven re-offending within a given time.

8 The Offender Assessment System (OASys) is a risk assessment and management system used to help Offender Managers identify the risks and needs of an offender in order to ensure that resources are allocated effectively.

survey interview had a much lower rate of re-offending; 38% and 29% respectively. However, only a relatively small proportion (17%) of offenders with an ETE need no longer had that need at their latest survey interview.

- Re-offending was higher for offenders with pro-criminal attitudes (i.e. attitudes that made them susceptible to offending); for example 60% of those with the most pro-criminal attitudes re-offended, compared with 21% of those with the least pro-criminal attitudes. Changes in offenders' attitudes to re-offending over time appeared important for predicting re-offending; offenders whose attitudes improved over time were significantly less likely to re-offend than offenders whose attitudes stayed or became pro-criminal over time.

Meetings and relationships

- There were no significant differences between the number of meetings offenders attended with their Offender Manager and whether they re-offended, however, the number of missed appointments was associated with re-offending. Of those offenders who missed two or more appointments in the first month after their sentence started, 42% re-offended compared with 24% of offenders who missed no appointments.
- Breaches, warnings and missed appointments were associated with a higher rate of re-offending, particularly when they occurred early in the sentence.
- Offenders who reported that they had an 'excellent' relationship with their Offender Manager re-offended at a lower rate (30%) than those reporting that their relationship was 'okay' (40%). Similarly, the rate of re-offending was significantly lower for those who 'strongly agreed' that their Offender Manager understood their needs (30%) than for those who 'agreed' (36%) or those who 'disagreed/strongly disagreed' (45%).

Factors independently associated with re-offending

Multivariate analysis was carried out to test whether the associations between the factors identified above remained over the 12 month re-offending period when the influences of other factors (such as age, gender and ethnicity) were controlled for. This identified a number of factors associated with a higher probability of re-offending amongst offenders that:

- were male;

[9] Offenders who reported to the survey that they were using Class A drugs weekly or more, or injecting.

- had a higher likelihood of re-offending (measured by OGRS);[10]
- committed an acquisitive index offence, compared with violence;[11]
- had a drug misuse need in the early months of the Community Order;
- had an unstable accommodation need;
- had a pro-criminal attitude;
- disagreed[12] that their Offender Manager understood their needs;
- met with their Offender Managers for 10–19 minutes, compared with those meeting for an hour or more; and
- met with their Offender Managers less than once a month, compared with once a week, while those who met with their Offender Managers once a week were more likely to re-offend compared with those who met once every two or three weeks.

A number of factors were not statistically significantly associated with re-offending once the influence of other factors was taken into account.[13] These were:

- sentence length;
- having unpaid work, a curfew, a prohibited activity or an accredited programme requirement;
- starting drug, alcohol or mental health treatment as part of the Community Order (those starting treatment were slightly more likely to re-offend, but this was significant at the 10% level only); and
- missing meetings in first month of sentence.

Conclusions and implications

The main aims of this report were to investigate whether offenders' needs, attitudes, relationships with Offender Managers, and the way Community Orders are implemented can influence their risk of re-offending.

The findings show that re-offending is greatest in the first months of the Community Order and that offenders often have complex needs, some of which are related to their offending behaviour. The evidence reinforces the importance of a wide range of 'static' factors in predicting future offending, such as gender and index offence. It also demonstrates that

[10] The Offender Group Reconviction Scale (OGRS) uses static factors (such as age at sentence, gender, offence committed and criminal history) to predict the likelihood of proven re-offending within a given time.
[11] The main offence for which the offender was convicted, resulting in their Community Order.
[12] This measure includes those who 'disagreed' or 'strongly disagreed'.

‘dynamic’ factors such as the changing needs and attitudes of offenders can help to explain why someone re-offends and how addressing these may reduce re-offending.

Establishing causal links is beyond the scope of this report; nevertheless the results will be of interest to those involved in development of policy to reduce re-offending and for providers in the delivery of Community Orders and supervision in the community. The implications are considered below.

Implications

There are a number of practice implications suggested by the findings of this report:

- Offender management approaches may be more effective where they are tailored to offence type. Consideration should be given to varying rates of re-offending for different offence types.
- Implementing interventions intended to reduce re-offending as early as possible in sentences, particularly for acquisitive offenders, is likely to decrease re-offending levels.
- Consideration should be given to how providers might be incentivised to invest in addressing long-term and complex needs such as dependent drug use that are associated with a particularly high risk of re-offending.
- A formal review by Offender Managers of the initial offender assessment in the first months (when the risk of re-offending is highest), could ensure implementation of sentences is tailored to the changing attitudes and needs of the offender (i.e. additional support requirements and/or sentence flexibility).
- A focus on fewer, longer meetings between offenders and Offender Managers, monitored for their quality, may be beneficial. Closely monitoring missed appointments, breaches and warnings early in a sentence may help Offender Managers identify and better support offenders who are particularly likely to re-offend.

[13] A series of initial models were produced to establish which factors were most strongly associated with re-offending (summaries of these models are provided in Appendix B).

2. Introduction

This report presents findings from the Offender Management Community Cohort Study (OMCCS), a longitudinal cohort study of a representative sample of offenders aged 18 and over who started Community Orders between October 2009 and December 2010. The report focuses on re-offending amongst this group, examining the factors associated with re-offending, such as offenders' needs and attitudes, their relationships with Offender Managers and how these factors change over time. Implications are identified in relation to re-offending and pathways to desistance, offender management, and delivering some probation services through a payment by results model.

Preliminary findings on re-offending levels among offenders on Community Orders from the OMCCS were published in July 2013 (Wood *et al.*, 2013a) using incomplete re-offending data. This report presents updated analysis on levels of re-offending and therefore findings may vary from those previously published.

2.1 Background

Community Orders

Community Orders were introduced in England and Wales in 2005, for offenders aged 18 and over. The aim of these orders was to enable judges and magistrates to tailor sentences to the particular nature of the offence and offender. Community Orders originally comprised a 'menu' of 12 possible requirements, which can be imposed by the courts individually or in combination. This menu was extended to 13 by the Legal Aid, Sentencing and Punishment of Offenders Act 2012 (introduced after the OMCCS fieldwork had been completed).[14]

The type and number of requirements, as well as the sentence length (up to a maximum of 36 months), is decided upon by the court, and is tailored according to the seriousness of the offence, the risk of serious harm, the likelihood of re-offending, and the offender's individual circumstances (Sentencing Council Guidelines, 2011). The statutory purposes of sentencing as set out in the Criminal Justice Act 2003 are: the punishment of offenders, protection of the public, and reparations to those affected by the offence.

[14] At the time the OMCCS was carried out there were 12 requirements. This has been increased to 13 under the Legal Aid, Sentencing and Punishment of Offenders (LASPO) Act 2012, with the introduction of a foreign travel prohibition requirement. Requirements that have been added to statute but not yet enacted are: the electronic location monitoring requirement (Crime and Courts Act 2013) and the alcohol abstinence and monitoring requirement (LASPO 2012).

The management of the Community Order and the sentence requirements follow the National Offender Management Model (NOMM), implemented in 2006. The NOMM is described as 'an end to end' process of offender management which seeks to ensure that the requirements of the sentence are delivered to address offenders' criminogenic needs.[15] The implementation of Community Orders has changed since they were first introduced, and since the fieldwork was conducted for the OMCCS. In particular, the significance of the NOMM in determining standards of practice has declined since provisions in the Offender Management Act 2007 which devolved powers to newly created Probation Trusts.

Recent policy developments

There have been significant changes to policy relating to community sentences. The MoJ consultation 'Punishment and Reform: Effective Community Sentences' (MoJ, 2012a) and the response to the consultation (MoJ, 2012b) proposed that every Community Order should include an element designed to fulfil the purpose of punishment. These sentences should be delivered alongside other priorities, such as: getting offenders off drugs and alcohol, addressing offenders' mental health problems, getting offenders into work, and reducing barriers to resettlement. The provisions that give legislative effect to these proposals, including the compulsory punitive element to Community Orders, were set out in the Crime and Courts Act 2013.

Proposals have been made to reform the provision of services in the community by opening up the market to a diverse range of new rehabilitation providers, incentivised through payment by results to reduce re-offending.[16] Under these proposals, a minimum of 12 months' supervision will be extended to nearly all those leaving custody, including those who receive a sentence length of less than two years. Under this approach a new, public sector National Probation Service will be created, which will carry out risk assessments of all offenders and have responsibility for directly managing offenders who pose a high risk of serious harm to the public. Market-owned Community Rehabilitation Companies will manage low and medium risk offenders which are allocated to them. It is against this backdrop that the findings from this report will be helpful in the development of policy to reduce re-offending and the delivery of Community Orders and supervision in the community.

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[15] Needs that are associated with an individual's criminal behaviour and may be associated with their likelihood of re-offending (see Glossary and Abbreviations for more details).

[16] See *Transforming Rehabilitation*: *A revolution in the way we manage offenders* (MoJ, 2013a) and the response to the consultation (MoJ, 2013b).

Offender management approaches

Approaches to the management of offenders have evolved over time and the concept of individual risk has developed significantly, with systematic risk assessment tools supplementing individual professional judgement.[17] Models of risk have been developed that are based on historical data and look at 'static' factors that are not considered to be changeable, such as previous offending history and subsequent offending. These models do not allow for changes in 'dynamic' (changeable) risk factors, such as pro-criminal attitudes and substance misuse, which could be influenced by interventions. Consequently, dynamic 'risk-need' tools such as the Offender Assessment System (OASys)[18] were developed to systematically measure factors that can change over time and also have an important bearing on offending behaviour.[19]

A further refinement to offender management introduced 'responsivity'; cognitive-social learning processes based on positive professional–client relationships that seek to steer offenders towards positive outcomes. The Risk-Need-Responsivity (RNR) model (e.g. Bonta and Andrews, 2007) has become the dominant approach within the overarching NOMM for addressing offender behaviour. Other work has shifted emphasis away from formal identification of criminogenic needs and risks towards a 'strengths-based' outlook centred on the offender's story about their life and behaviour. The Good Lives Model (GLM) of rehabilitation (Maruna, 2001; Ward and Maruna, 2007) emphasises the importance of identifying and reinforcing positive characteristics of individual offenders to support them to lead 'good' lives desisting from crime.

2.2 Aims and approach

Aims

The OMCCS followed a cohort of offenders who started Community Orders between October 2009 and December 2010 in England and Wales to identify how Community Orders operated and to assess their effectiveness. This report aims to investigate whether and how offenders' needs and attitudes, their relationships with Offender Managers, and the way Community Orders are implemented may influence the risk of re-offending.

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17 For a more detailed discussion see Bonta and Andrews (2007).

18 OASys is a national system used to help Offender Managers identify the risks and needs of an offender in order to ensure that resources are allocated effectively.

19 The literature also distinguishes between stable (learned behaviours and personal skills) and acute (lasting only hours or days) dynamic risks (Hanson *et al.*, 2007; see also McNaughton Nicholls *et al.*, 2010).

In particular, the report aims to go beyond the administrative data available on 'static' risk factors measured through OGRS[20] and 'dynamic' factors captured by OASys (including needs found to be predictive of re-offending, such as drug misuse). The OMCCS uses a survey of offenders to provide insight into their experiences of Community Orders and includes local management data on implementation of sentences; these measures are a particular focus for this report and associations with re-offending are explored using both bivariate (two-factor) and multivariate analysis.

The OMCCS was not intended to evaluate the impact of Community Orders relative to alternative approaches, or to provide a baseline against which comparable interventions can be measured. It cannot establish causal relationships between re-offending and any given factor.

Approach

The OMCCS uses a dataset based on a cohort of offenders, aged 18 and over, drawing on four sources:

1. A longitudinal survey of a representative sample of 2,919 offenders, drawn from 10 Probation Trusts, that provides information on their needs, perceptions and experiences of Community Orders. The first wave of the survey (Wave 1) was carried out around three months after the start of the offender's Community Order, with a subsequent survey (Wave 2) on average at seven months and a third survey following the expected end of the sentence (Wave 3; this wave was not completed for all offenders). Those offenders who were classified as Tier 1 were excluded from the survey.[21]
2. Central administrative records for all offenders (including those who responded to the survey) starting a Community Order during the period (144,407 offenders) describing the sentence received, offences and the risks and needs of offenders as assessed by practitioners.
3. Local administrative records from the 10 Probation Trusts selected for the survey (covering 50,935 offenders, again including those who responded to the survey), looking at how offender management operates and how offenders complete or breach their sentences.

[20] The Offender Group Reconviction Scale (OGRS) uses static factors (such as age at sentence, gender, offence committed and criminal history) to predict the likelihood of proven re-offending within a given time.

[21] Offenders are assigned to one of four 'tiers' during their management by the National Offender Management Service, based on a number of factors including their likelihood of re-offending, with the aim of directing appropriate resource towards them. Tier 1 is the lowest level, where the aim is largely punishment, whilst substantial management is required of Tier 4 offenders with the aim of controlling risk.

4. Police National Computer (PNC) data on cautions and convictions after the start of offenders' Community Orders. This data was matched onto the full cohort of offenders in the administrative data, including survey respondents, and provides the measure of re-offending used in this report. A PNC match was obtained for 126,673 offenders (90% of the full cohort).

Individual offenders' records have been linked across these four sources to form a 'Universal Dataset'.[22] This report uses all sources of data but focuses on the 1,496 offenders in the survey who responded to both the first survey and a subsequent survey (either Wave 2, Wave 3 or both), who gave permission to link their survey responses to the administrative data sources and who were linked to PNC data. These offenders are referred to as the 'survey cohort'[23] while the term 'full cohort of offenders' is used where the data presented covers all offenders in the administrative data sources linked to the PNC data.

The response rate for the Wave 1 (baseline) survey was 44%, representing 2,919 offender interviews. Those who were interviewed at Wave 1 and who agreed to be contacted again were issued for fieldwork at Wave 2 and Wave 3. Of the cases issued for Wave 2 fieldwork, the response rate was 67% (1,827 interviews), and for Wave 3 it was 57% (440 interviews). The Wave 3 survey was stopped before completion, due to concerns about high levels of attrition. Attrition such as this is common in longitudinal surveys; however this may impact on how representative the later survey samples are compared with the original sample and the general population of offenders on Community Orders during the period. The data were weighted to take account of this and selection bias.[24]

The majority of the analysis in this report focuses on Wave 1, or compares Wave 1 and Wave 2 survey responses. For some analysis the 'latest available' survey response is used; this is the Wave 3 survey response for those offenders who were interviewed at this point, while the Wave 2 survey response is used for those offenders who did not complete the Wave 3 survey. Longitudinal analysis presented throughout this report looks at associations between factors and re-offending, however these associations cannot be considered causal as other variables may be influencing the findings.

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22 Further details of the methodology and the questionnaire are published in Cattell *et al.* (2013) and Wood and Hussey (2014).

23 Referred to as 'Wave 2/3 survey respondents' in the tables and figures in this report.

24 Further details on the Wave 2 and Wave 3 surveys are published in Wood and Hussey (2014).

The majority of the analysis in this report refers to Tier 2 to 4 offenders (as recorded at the start of the Community Order). Consequently the findings will be different to official MoJ statistics on Community Orders. Tier 1 offenders (who will almost exclusively be, on current plans, managed outside of the Probation Service under the Transforming Rehabilitation Proposals), were excluded from the OMCCS survey due to the minimal levels of contact these offenders had with Offender Managers. These offenders are included in the administrative data collected for the Universal Dataset and some analysis is presented for this 'full cohort' of offenders where relevant.[25]

Finally, the OMCCS covered offenders on Community Orders only, and did not include those on Suspended Sentence Orders or those released from prison on licence, although many of the same interventions are available for these offenders.

Further details of the methodology are published in Cattell *et al.* (2013), Wood *et al.* (2013b) and Wood and Hussey (2014).

Definition of re-offending

In this report a binary measure of proven re-offending is used, based on PNC records linked to the OMCCS survey and administrative datasets. A match was obtained for 90% of the full cohort.

For adult offenders, proven re-offending is defined as any offence committed in the 12 months since the Community Order started that receives a court conviction or caution in that 12 months or within a further six month waiting period.[26] This measure excludes breach offences which are not necessarily proceeded with and recorded in the same way as re-offences.[27] Where possible, findings about the frequency and type of re-offences are also included in this report.

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[25] Further tables are provided in Appendix A.

[26] In addition to the 12 month follow-up period for re-offending, a 6-month waiting period is included to allow any prosecutions to have concluded (MoJ, 2012c). For most analysis, including the survival analysis, the 12 month re-offending reference period starts from the start of the sentence. However, where the relationship between re-offending and change over time in the survey measures is discussed, the 12 month period starts from the time of the first survey interview to avoid including re-offences that happened prior to the first survey. Similarly, where the association between re-offending and accredited programmes and specified activities is considered, the 12-month period begins from the date of the programme/activity start.

[27] If the Community Order is breached, the court can amend the Community Order by making it more onerous, or it can revoke and resentence, which may mean custody, even where the original offence was not punishable by imprisonment.

Bivariate analysis

This report includes bivariate analysis which shows a simple view of the associations between factors with re-offending. This type of analysis does not take into account associations between these factors and other factors with re-offending. In reality there will be a number of factors that are potential predictors of re-offending. For example, the effect of drug use on re-offending may be different when age and gender are taken into account.

Survival analysis

Survival analysis is a set of statistical techniques that takes into consideration the duration of time it takes for events to occur, known as the rate of 'survival', and identifies the factors independently associated with their occurrence. It can help identify whether particular circumstances or characteristics increase or decrease the probability of 'survival' over time. For example, survival analysis can show what proportion of offenders who attended a treatment programme 'survived' from committing a further re-offence.

Survival curves are presented in this report; these plot the rate at which offenders on Community Orders re-offended after the start of their sentence.

Multivariate analysis

Hazard modelling was used to examine the variation in probabilities of re-offending over the 12 month re-offending period in relation to a number of factors simultaneously. In the present research, the survival analysis uses 'hazard ratios' to provide the probability of first re-offence at any given point compared with another category of offenders. Hazard ratios are expressed by comparing the probability of an event occurring for one group, known as the 'hazard rate',[28] with the probability of the event occurring for another. This makes it possible to compare, for instance, whether males are more likely to commit a re-offence at a given time, than females, while controlling for other factors in the model. Hazard models demonstrate associations between factors, but are not able to determine cause and effect.[29]

[28] The hazard rate describes the chance of a re-offence happening at a specific point, while controlling for other factors.

[29] All significant variables were included in a hazard model to identify those factors independently associated with re-offending over time. The final model retained basic background characteristics of offenders covering their age, gender and ethnicity, as well as their main sentenced offence (also called 'index offence') and sentence length.

Report conventions

All differences highlighted in the text are statistically significant (at the 5% level) unless otherwise stated.

All analysis of the OMCCS survey data was conducted using weighted data. Unweighted bases (the number of respondents who answered each question) are shown in the tables and figures. Numbers of missing cases are not provided in tables except where the numbers are large enough to affect the interpretation of the analysis.

Percentages within the tables may not sum to 100% due to rounding. In some cases multiple responses to the OMCCS survey questions were possible (this is noted in the footnotes to the table or figure). In these situations the percentages within the tables will not sum to 100%.

In some circumstances, statistically significant associations of particular factors with re-offending found in the bivariate analysis were not found to be statistically significant in the hazard modelling. In these instances, there is no evidence that a real association exists.

2.3 Structure of the report

Chapter 2 presents the overall re-offending rate and identifies factors associated with re-offending. Chapter 3 draws together the report's findings into a short discussion before presenting a number of key policy implications arising from this analysis.

3. Factors associated with re-offending

This chapter describes the factors associated with re-offending, looking first at associations with static factors such as gender, age and offending history, and then exploring the relationship with dynamic factors such as needs and relationships with Offender Managers. The chapter begins by examining bivariate (two-factor) associations of these factors with re-offending, The results of the multivariate analysis are then presented, to identify those factors independently associated with re-offending taking into consideration the time it takes for re-offending to occur.

3.1 Level and type of re-offending

Within the full cohort of offenders in the administrative data, 35% re-offended within 12 months of the start of their Community Order (Appendix Table A.1). The main types of re-offences were acquisitive (theft, burglary or fraud) (36% of offenders who re-offended committed an acquisitive re-offence), followed by violent crimes (20%) (Appendix Table A.3).

Among the survey cohort, 34% re-offended (Appendix Table A.1). As the survey excluded offenders who started their sentence in Tier 1,[30] the rate and nature of re-offending would be expected to be different to that of the full cohort.[31] The remainder of this report focuses on the survey cohort; however the results for the full cohort are included in tables in Appendix A to provide the full picture of re-offending including Tier 1 offenders.

Acquisitive offences were the most common re-offence type. Of the offenders who re-offended during the 12 months after the start of their Community Order, the first offence for just over one-third (35%) was acquisitive (theft, burglary or fraud), while almost one-fifth (18%) committed a violent crime (Table 3.1).

Where offenders re-offended, the offence was more likely to be in the same category as the index offence[32] than in another offence category. For example, among those who re-offended, over half (54%) of those originally convicted for an acquisitive offence went on

[30] Tier 1 offenders were included in the administrative data collected for the OMCCS and accounted for 39% of those on Community Orders. 24% of Tier 1 offenders re-offended within 12 months. Under the new approach the majority of these offenders will be managed by providers outside the National Probation Service.

[31] Tier 1 offenders are more likely to represent a lower risk of re-offending (see Cattell *et al.,* 2013). Tier 1 offenders were excluded from the OMCCS survey, but were included in the administrative data collected for the study. The level of re-offending among Tiers 2 to 4 in the full cohort of offenders (42%) was higher than for the comparable group of surveyed offenders (36%). This is likely to be the result of response bias in the longitudinal surveys that has not been fully accounted for in the approach to weighting the data and the incomplete matching to PNC data.

to commit a further acquisitive offence[33] compared with 17% of those who had originally committed a violent offence who went on to commit an acquisitive offence.[34] Similarly, over one-third (37%) of those who originally committed a violent index offence went on to commit another violent offence. This compares with 6% who committed a violent re-offence of those whose index offence was acquisitive.

Table 3.1: Type of first re-offence among those who re-offended in the 12 months since their Community Order started

	% of offenders
Theft, burglary or fraud	35
Violence against the person	18
Public order offences	15
Drugs offences	10
Arson and criminal damage	10
Motoring offences	6
Sexual offences	1
Other offences	6
Unweighted base	*470*

Base: Offenders who re-offended in the 12 months after sentence start, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: PNC data

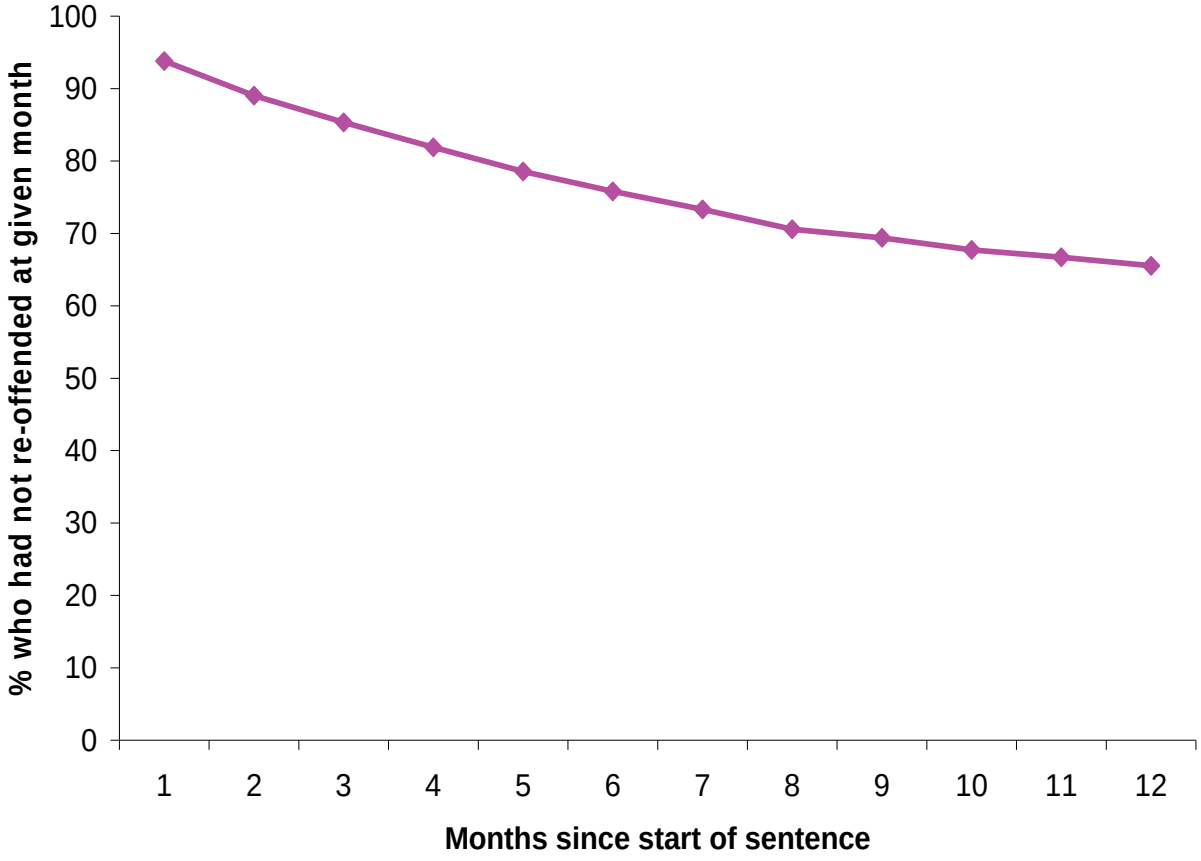
Among those who were convicted for any re-offence, nearly two-fifths (39%) committed a single re-offence in the 12 month period and a further one-fifth (20%) were convicted of two re-offences.[35] One in eight offenders (13%) were convicted of six or more re-offences.

Survival analysis: time taken to re-offend

For the OMCCS survey cohort the probability of re-offending was greatest in the first months of the offenders' sentences, so in many cases offenders would have re-offended before planned interventions had been fully implemented. Figure 3.1 shows the survival curve of re-offending; each point on the curve shows the percentage of offenders who have *not* re-offended by that point in time after the sentence started. At the first month after the sentence started, 94% had 'survived' (i.e. not re-offended), falling to 66% by the twelfth month.

[32] The main offence for which the offender was convicted, resulting in their Community Order.
[33] Unweighted base: 221.
[34] Unweighted base: 123.
[35] Unweighted base: 471.

Figure 3.1: Survival curve showing percentage of offenders who had not re-offended at a given month in the 12 months since their Community Order started



Unweighted base: 1,496

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

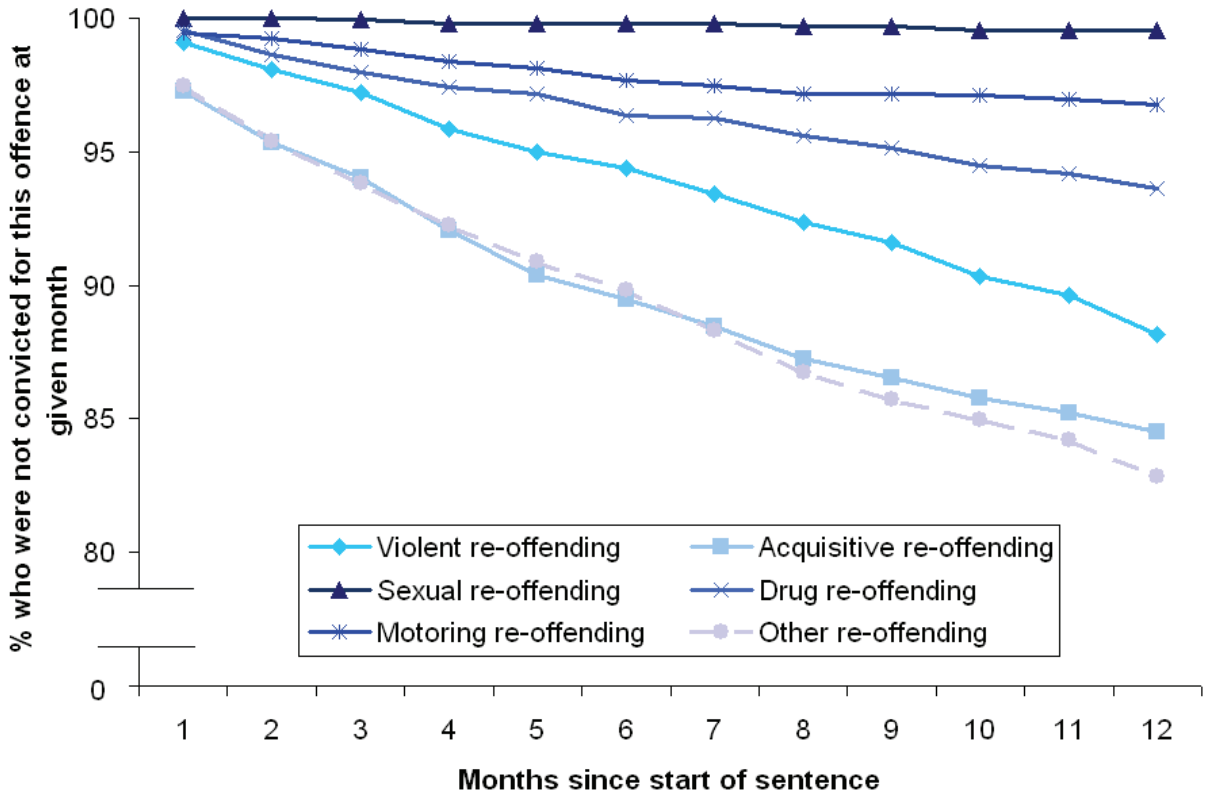
Source: PNC data

The probability of re-offending within a specific month for the group who had not re-offended up to that point is known as the 'hazard rate'. The 'hazard rate' was highest in the first month of the Community Order when there was a 7% probability of re-offending. This gradually fell to 2% by the twelfth month.

Figure 3.2 shows survival curves for each type of re-offence. Each curve shows the percentage of the OMCCS survey cohort who had *not* been convicted of that type of re-offence by that month after their sentences started. The extent of 'survival' in relation to acquisitive re-offending was lower over the period compared with violent re-offending, that is, a higher proportion of offenders committed acquisitive re-offences over the 12 months after their Community Order started. Survival in relation to sexual re-offending was very high; after

12 months, less than 1% had been convicted of sexual re-offences, compared with 12% violent re-offences and 15% acquisitive re-offences.[36]

Figure 3.2: Survival curves showing the percentage of offenders who had not re-offended for specified re-offences by a given month in the 12 months since their Community Order started



Unweighted base: 1,496

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

3.2 Offender and offence characteristics

'Static' factors, such as previous offending history and age, are known to help explain re-offending rates (Howard *et al*., 2009). This section presents findings on the relationship between re-offending and offender and offence characteristics, including offending history, the current sentence length and Probation Trust.

Offender characteristics

The rate of re-offending by a number of offender characteristics can be found in Appendix Tables A.1 and A.2. Specific results are:

- Men (36%) were more likely to re-offend than women (27%).

[36] These findings support Howard (2011), which looked at a large sample of offenders, including those on

- Younger offenders (e.g. 39% of those aged 18 to 20 re-offended) were more likely to re-offend than older offenders (28% of those aged 40 or over re-offended).
- White offenders had a higher rate of re-offending than Black and Minority Ethnic offenders (35% compared with 30%).

Offending history

An offender's previous offence history, including number of previous offences, age at first offence and the type of offence, was associated with re-offending. For example, 51% of offenders with more than 16 previous offences re-offended, compared with 21% of offenders with 1 to 5 previous offences and 4% of those with no previous offences (Appendix Table A.2).

The rate of re-offending varied by index offence type. Fifty-six per cent of offenders convicted of theft, burglary or fraud, 34% convicted of 'other' offences, and 29% convicted of drug offences re-offended. This compares with offenders convicted of motoring offences (16%) and sexual offences (10%) who re-offended at a lower rate (Figure 3.3).[37] Offenders convicted of acquisitive or 'other' offences re-offended at a higher rate than the survey cohort overall (34%). These differences in re-offending rates reflect the diverse nature of offending behaviour, the variation in detection, recording and prosecution practices, as well as other underlying factors.

Examining 'dynamic' factors helps to explain why these differences in re-offending by index offence type exist (see Appendix Tables A.4 and A.5). Offenders convicted of acquisitive offences (theft, burglary or fraud) were more likely to:

- Have attitudes associated with re-offending;[38]
- Have a drug misuse need (both OASys-identified need and survey-identified measures of need); and
- Have a more chaotic lifestyle (OASys-identified need).[39]

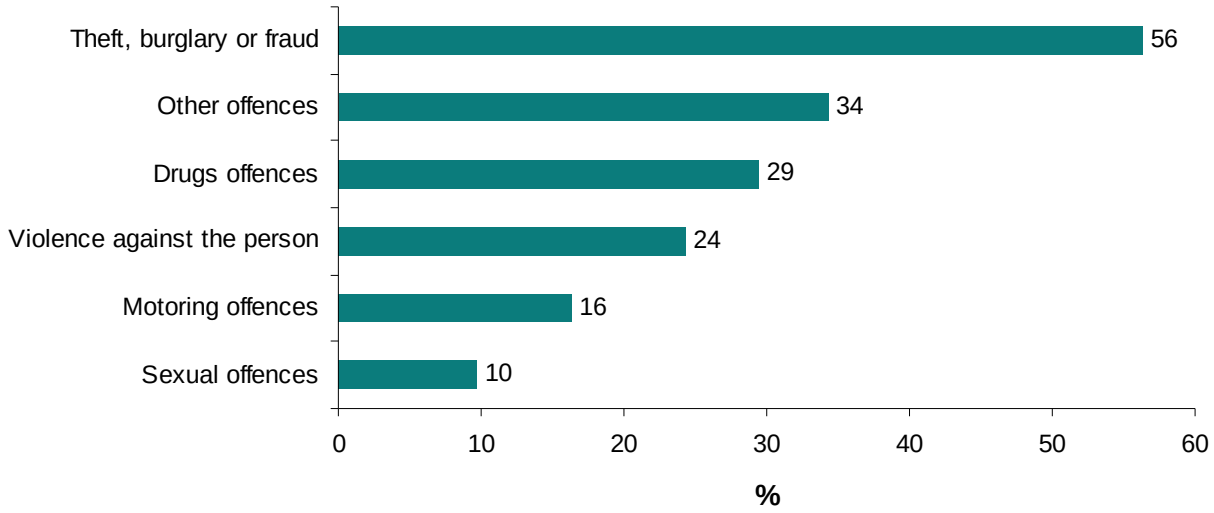
licence from custody.

37 Re-offending here refers to any type of offence – not necessarily re-offences in the same category as the index offence.

38 See Section 3.3 for further discussion of offender attitudes and re-offending.

39 See Section 3.4 for further discussion of measures of need and re-offending.

Figure 3.3: Percentage of offenders in each offence category who re-offended, by index offence[1]



Unweighted base (from top to bottom): 416, 230, 91, 572, 142, 45

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Form 20 administrative data; PNC data

1. Re-offending here refers to any type of offence, not necessarily re-offences in the same category as the index offence

Risk assessments

The OGRS score predicts an offender's likelihood of re-offending using offending history and offender characteristics. Re-offending rates were associated with the OGRS score; 13% of offenders with a 'very low' likelihood of re-offending went on to re-offend, compared with 67% of offenders with a 'very high' likelihood of re-offending (Appendix Table A.1).

Offenders are assigned to one of four 'tiers' during their management by the National Offender Management Service, based on a number of factors including their likelihood of re-offending (measured by OGRS). An increase in tier represents an increase in the likelihood of re-offending, risk of serious harm, the needs of the offender, and the demands of the sentence and the level of resource required by the Offender Manager to manage the offender. The re-offending rate varied from 31% for Tier 2 offenders to 40% for Tier 4 offenders (Appendix Table A.1).

At the time of the OMCCS study, tiering was directly linked to resource allocation decisions: Probation Service Officers would generally manage offenders on Tiers 1 and 2 whilst more

experienced Offender Managers would manage Tier 3 and 4 offenders, with some variation between Probation Trusts.[40]

Sentence length

Nine per cent of those with the longest sentence (25–36 months) re-offended compared with 43% of offenders with a sentence of 6 months or less (Appendix Table A.2).

Probation Trust

The re-offending rate varied between the 10 Probation Trusts included in the survey, from 17% to 51%;[41] these findings should be treated with caution as the base sizes were small. A range of re-offending rates was also observed across the 42 Probation Trusts covered in the full cohort of offenders,[42] from 29% to 46% (Appendix Table A.6). Some of this variation will relate to differences in the profile of offenders and offences between the Probation Trusts, but it may also reflect differences in local probation, policing and Crown Prosecution Service (CPS) priorities and practice.

3.3 Offender attitudes to offending

The OMCCS survey examined offenders' attitudes to their offending and their sentences. This section looks at whether changes in attitudes over time were associated with different re-offending rates. Developing and sustaining an offender's motivation to change is essential for desistance from offending. Desistance is typically not a linear process but can take time and may often be characterised by lapses and relapses (Maruna, 2001; McMurran, 2002; Mann *et al.,* 2002).

Attitudes to offending

There was a relationship between offenders' attitude to re-offending and the rate of re-offending. Offenders' general attitude to re-offending was derived from 20 questions from the CRIME-PICS II instrument; the degree to which attitudes were conducive to further offending was scored on a scale from 0 to 9, with higher scores indicating attitudes that were more conducive to re-offending.[43] Over half of those offenders with scores of 5 or more at the

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40 See Turley *et al.* (2011).

41 The mix of offenders being dealt with in different areas may vary, so different rates of re-offending by Probation Trust would be expected. These figures are not comparable with published MoJ local adult re-offending statistics due to differences in time periods and the types of offenders included.

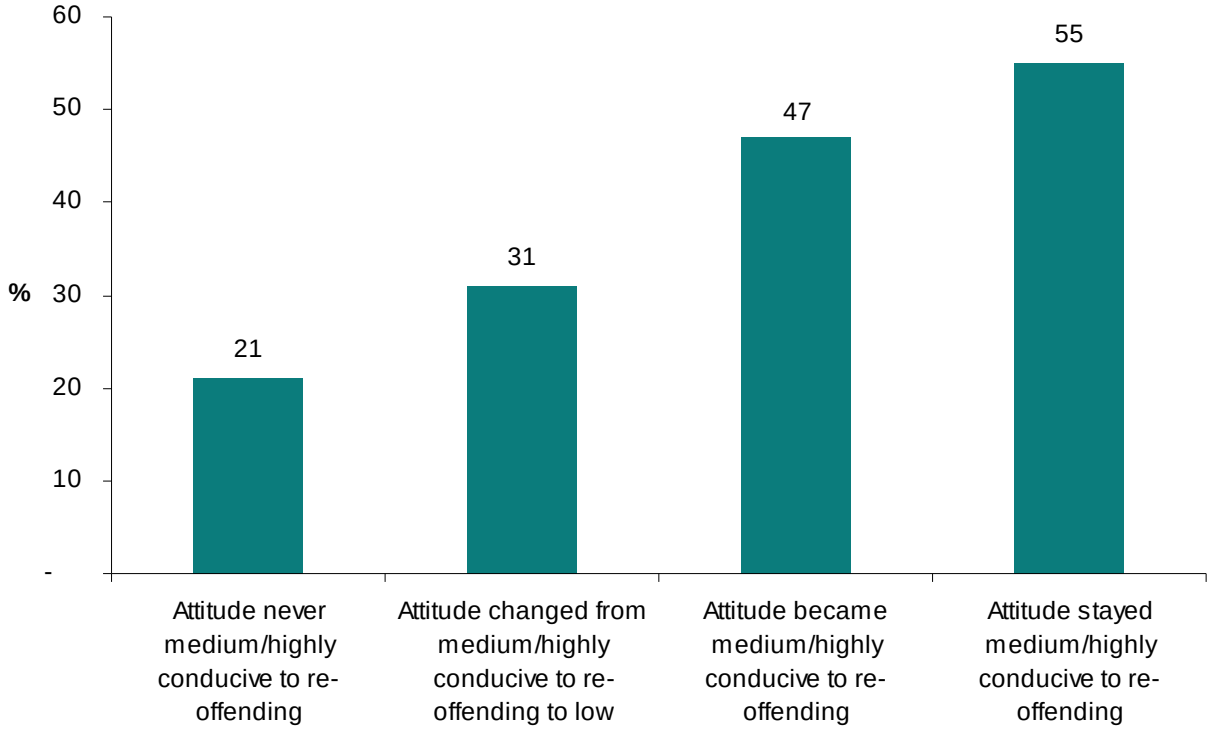
42 Including Tier 1 offenders.

43 CRIME-PICS II is an instrument that examines and detects changes in offenders' attitudes to offending using responses to attitudinal statements such as 'Crime has now become a way of life to me'. Offenders 'general attitudes' to re-offending were scored on a scale of 0–9; those with the most pro-criminal attitudes, which

Wave 1 interview re-offended, for example 60% of those with a score of 8 or 9 compared with just over one-fifth (21%) of those with the lowest score (see Appendix Table A.7).

Changes in offenders' general attitude to re-offending over time appeared important for predicting re-offending, although over the three waves of the OMCCS survey, attitude scores stayed low for the majority of offenders (79%). Offenders whose general attitude to re-offending score remained 'low' (a score of 0–2) between survey waves were significantly less likely to re-offend (21%) than other offenders (Figure 3.4).[44]

Figure 3.4: Percentage of offenders who re-offended by change in their general attitude to re-offending



Unweighted base (from left to right): 816, 173, 133, 303

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Waves 1, 2 and 3) and PNC data

1. As measured by CRIME-PICS II, a medium/high score was 3 or above

Offenders whose attitudes became 'low' (that is, those whose attitudes improved over time) were significantly less likely to re-offend (31%) than offenders whose attitudes stayed 'medium/high' (a score of 3 or more) (55%), or those whose attitudes became 'medium/high'

made them susceptible to involvement in crime, had a score of 8–9. The high, medium and low categories were defined in line with the CRIME-PICS II guidance.

44 Offenders' general attitude to re-offending was measured in each of the waves of the OMCCS survey. The attitude score at the first interview and the latest available interview (Wave 3 for those who completed the third survey, Wave 2 for those who did not) was compared to assess whether attitudes had changed over time.

(that is, those whose attitudes worsened, or became pro-criminal over time) (47%). There was not a statistically significant difference in the level of re-offending between offenders whose attitudes remained medium/highly conducive to re-offending (55%) and those whose attitudes became medium/highly conducive to re-offending (47%). These findings may indicate that improving offenders' attitudes could reduce their risk of re-offending, but the relationship may partially be a feature of other underlying factors.

3.4 Offenders' needs

Many offenders in the OMCCS cohort had complex needs, the level and nature of which was reported in Cattell *et al.* (2013). Offender Managers carrying out OASys assessments of offenders' needs to identify those requiring treatment found, for instance, that two-fifths had problems with their accommodation,[45] one-third had drug misuse needs, over half had employment, training and education (ETE) needs, and three-fifths had relationship needs.[46] Offenders often had multiple needs, presenting Offender Managers with the task of identifying priority needs and sequencing interventions appropriately. This section focuses on overall re-offending, but specific needs are likely to be associated with particular types of re-offending (for example, alcohol misuse needs and violence).

Specific needs and re-offending

Offenders who were assessed using OASys as having a need at the start of their sentence re-offended at a higher rate than those assessed as not having that need (Table 3.2). This suggests that 'criminogenic' needs were correctly identified using OASys.[47]

The re-offending rate for those with a drug misuse need was particularly high, with over half (55%) of those with an OASys-identified drug misuse need re-offending, compared with almost one-quarter (24%) of those assessed as not having this need. This was also reflected in two survey-identified measures of drug misuse need; 61% of offenders who felt they needed help with their drug use[48] re-offended, and 60% of offenders with a drug misuse need based on the behaviour they reported to the survey[49] re-offended (Appendix Table A.8 and A.14).

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45 In terms of its stability or its unsuitability due to the presence of criminal associates.
46 OASys measures of need used were the scored criminogenic needs.
47 'Criminogenic needs' are those that are related to criminal behaviour. The OASys identifies needs that are known to be predictive of re-offending across a population.
48 Based on offenders who said they had a need for help with their drug use.

Table 3.2: Percentage of offenders who re-offended, by needs identified in OASys

	% who re-offended			*Unweighted base*		
Type of need (OASys)	OASys identified a need	OASys identified no need	No OASys record	*OASys identified a need*	*OASys identified no need*	*No OASys record*
Accommodation	44	30	32	*380*	*694*	*422*
ETE	42	24	33	*607*	*442*	*447*
Relationships	36	33	33	*694*	*349*	*453*
Lifestyle and associates	43	23	33	*569*	*479*	*448*
Alcohol misuse	35	36	33	*419*	*629*	*448*
Drug misuse	55	24	36	*339*	*860*	*297*
Thinking and behaviour	37	32	33	*617*	*434*	*445*
Attitudes	41	29	33	*488*	*563*	*445*

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: OASys administrative data and PNC data

The majority of offenders had an OASys assessment of some kind, but not all needs were assessed for an individual offender within each OASys assessment.[50] For the majority of the needs there was a higher rate of re-offending among those assessed as having a need compared with those for whom there was no OASys need identified; the exception was alcohol misuse (Table 3.2). A small number of offenders had no assessment recorded in OASys.[51] These offenders had the same rate of re-offending overall as those who were assessed, suggesting that criminogenic needs may not have been identified or recorded due to potential errors in the administration of offender assessments.

Combinations of needs and re-offending

The number of needs and level of re-offending followed a consistent pattern. The proportion of offenders who re-offended increased as the number of OASys needs increased (Table 3.3); survey-identified measures of need followed a similar pattern (Appendix Table A.9). The exception was for offenders with no needs where re-offending rates were higher (28%) than those with one or two needs (23%; Table 3.3), although this difference was not statistically significant. Having multiple needs was associated with a particularly high rate of re-offending (Table 3.3). Over half (53%) of offenders with seven or eight OASys identified needs re-offended.

[49] A drug misuse need based on the behaviour reported to the survey was defined as those who reported that they used Class A drugs weekly or injected. See Cattell *et al.* (2013) for a more in-depth analysis of the different measures of need.

[50] Whilst an OASys assessment was carried out, it was possible for specific sections or questions to remain uncompleted during the assessment process.

[51] Unweighted base: 77.

Table 3.3: Percentage of offenders who re-offended by number of OASys-identified needs

Number of needs	% who re-offended	*Unweighted base*
0	28	*387*
1 to 2	23	*279*
3 to 4	32	*316*
5 to 6	43	*321*
7 to 8	53	*114*
Total	**34**	**1,417**

Base: Offenders with an OASys assessment on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: OASys administrative data and PNC data

Cattell *et al*. (2013) showed that there was not a consistent pattern in the combinations of OASys-identified needs that the OMCCS cohort had, although there was some indication that those who misused alcohol were less likely to also have a drug misuse need. Offenders who had the combination of ETE and drug misuse needs had high rates of re-offending; almost three-fifths of offenders with both needs re-offended (59%). Offenders with OASys-identified drug misuse and accommodation needs also re-offended at a high rate (58%) (Appendix Table A.10).

There was a clear association between drug misuse needs and re-offending. The overall rates of re-offending and the effect of having multiple needs on re-offending were reduced when offenders with a drug misuse need were excluded from the analysis (Appendix Table A.11).

Changes in needs

The following section uses longitudinal data from the OMCCS survey to describe changes in needs over time, although this analysis does not enable the change to be attributed to offender management approaches or other factors. The measures of need used here are survey-identified measures, based on offender-reported behaviour relating to drug misuse, alcohol misuse, accommodation needs and ETE needs.[52]

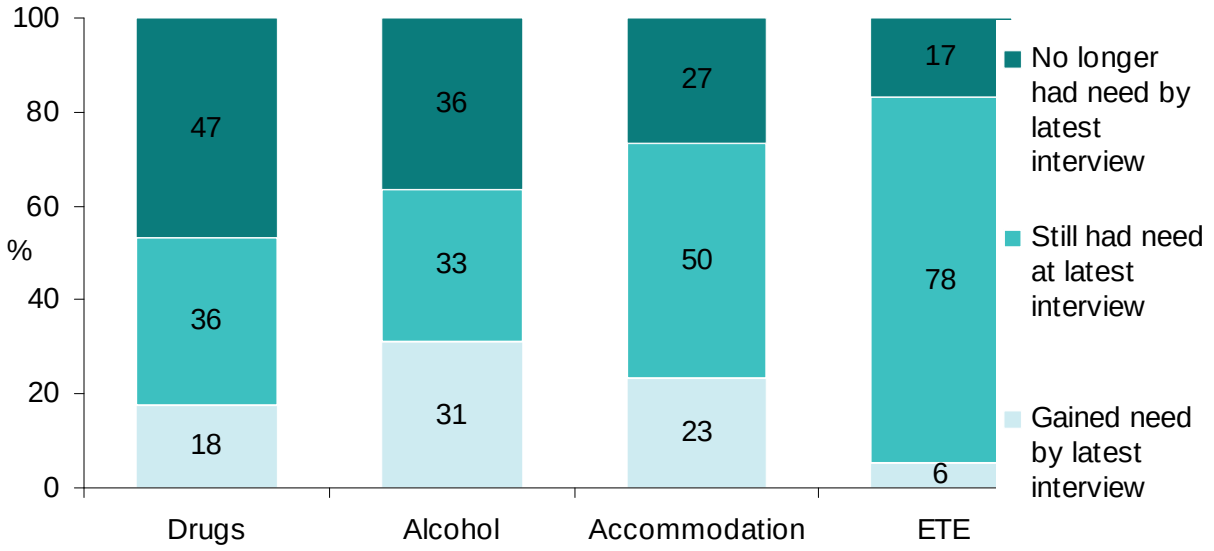
Among those offenders who reported a drug misuse need at some point in the OMCCS survey period almost half (47%) no longer had that need by their latest interview (Figure 3.5).[53] Offenders with alcohol misuse and accommodation needs also showed some

[52] See Appendix Table A.14 for definitions of these measures of need and for a comparison of the levels of need between these measures and similar OASys measures of need. Appendix Table A.15 shows the levels of re-offending associated with each of these measures of need.

[53] This analysis is based on the same set of questions asked at different points in time rather than, for example, offenders being asked: 'Has your situation changed from last time?' It is assumed that respondents answered the questions in a consistent way at each survey.

improvements; 36% and 27% respectively no longer had these needs by their latest survey interview. There was less change over time in ETE needs, with 78% of offenders who had an ETE need at some point in the survey period still having that need at their latest survey interview. This suggests that ETE needs were a persistent, as well as a widespread, problem (50% of offenders had a survey-identified ETE need at some point; Appendix Table A.12).

Figure 3.5: Change in survey-identified needs over time



Unweighted base (from left to right): 228, 257, 171, 751

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Waves 1, 2 and 3)

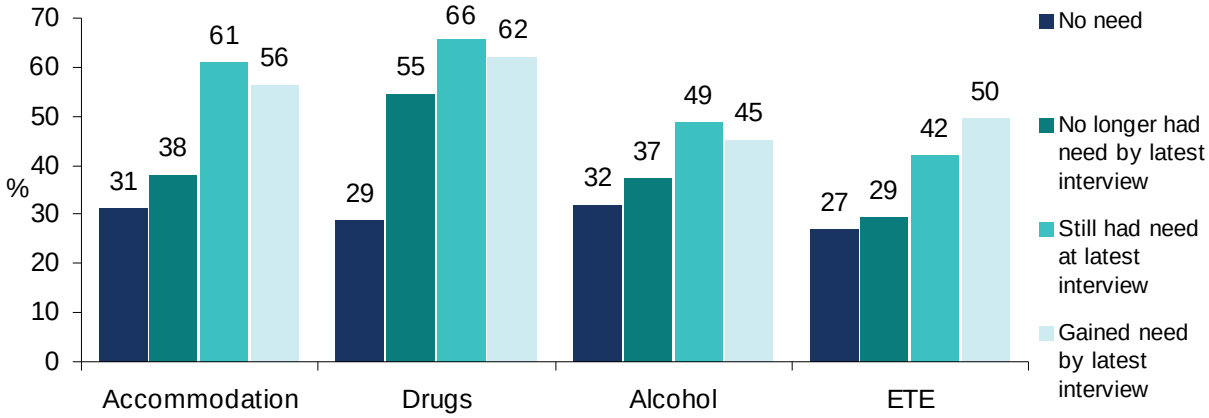
Over three-quarters (78%) of those offenders who no longer had an accommodation need by their latest survey interview were living in owned or rented accommodation (Appendix Table A.14). Of those who no longer had ETE need, 46% had gained a qualification, while 40% had gained employment and 14% gained both (Appendix Table A.15). Among those who were no longer classified as having a survey-identified alcohol need by their latest survey interview, a quarter reported that they had not used alcohol in the past four weeks. Whilst over half did still use alcohol, they reported that the amount they drank was less than the weekly recommended health limits of 21 units for women and 28 units for men[54] (Appendix Table A.16).

No longer having an accommodation or ETE need was associated with statistically significantly lower rates of re-offending. For offenders who no longer had a drugs or alcohol

[54] Levels published in the Department of Health Alcohol Strategy and NHS guidance: http://www.nhs.uk/change4life/Pages/alcohol-lower-risk-guidelines-units.aspx

misuse need the finding was not significant (Figure 3.6). For both accommodation and ETE needs, offenders who no longer had these needs by their latest survey interview had similar re-offending rates to those who did not have the need at any point during the OMCCS survey period. There was no difference in the rate of re-offending between those offenders who no longer had alcohol misuse or drug misuse needs by their latest survey interview and those who still had these needs. Drug and alcohol needs can often be long term and the benefits of tackling them may only be seen in relatively subtle ways at first, for example with reductions in the frequency or seriousness of re-offending.[55] A longer follow-up period could be a more suitable way to accurately measure desistance for offenders presenting these types of needs. This is discussed further in Chapter 4.

Figure 3.6: Percentage of offenders who re-offended by change in survey-identified needs over time



Unweighted base (from left to right): 1325, 50, 82, 39, 1268, 105, 78, 45, 1239, 100, 80, 77, 745, 122, 589, 40

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Waves 1, 2 and 3) and PNC data

3.5 Implementation of Community Orders

Interventions in Community Order sentences aim to prevent future offending. This section examines re-offending rates in relation to the programmes and treatments that offenders said they had started during their sentence.

[55] In the National Treatment Outcome Research Study (Gossop *et al.*, 2001), average duration of heroin use for the sample was 9 years and a quarter had used heroin for 13 years or more. After 4–5 years only a quarter (26%) of those treated in the community and a third (38%) of those who received residential treatment were abstinent from all drugs, and around 4 in 10 continued to use heroin at least weekly.

Requirements

Table 3.4 shows the rate of re-offending among those offenders who reported starting each requirement in their Community Order sentence by the Wave 1 interview (on average three months into the sentence). Those with a drug treatment requirement were particularly likely to re-offend (56%) compared with those receiving the more generic unpaid work requirement (27%).

Much of the variation in re-offending rates between these requirements is likely to reflect the profile of the offenders which the requirements were targeted at. Starting a treatment programme was associated with a higher rate of re-offending, however this finding is likely to reflect the underlying characteristics and higher levels of need for these offenders once other factors are controlled for (see Section 3.7 for further discussion).

Table 3.4: Percentage of offenders starting requirements who re-offended

Requirement	% who re-offended	*Unweighted base*
Drug treatment	56	*201*
Curfew	43	*178*
Specified activity[1]	39	*164*
Alcohol treatment	32	*269*
Accredited programme[1]	33	*222*
Unpaid work	27	*357*
Prohibited activity	19	*93*
Any punitive requirement[2]	33	*642*
Total	**34**	***1,496***

Base: Offenders with the requirement in their Community Order, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

1. The 12 month re-offending period for these requirements begins from the date the requirement started

2. Punitive requirements are unpaid work, curfew, prohibited activity and exclusion

The effectiveness of requirements is likely to be affected by the degree to which offenders engage with them. Differences in re-offending rates among offenders who fully attended unpaid work and accredited programmes and those who did not were not statistically significant, although base sizes were small (Appendix Table A.17).

For specified activities, such as education courses, the offender's relationship with the person leading the activity could provide an indication of engagement. Those offenders who reported having an 'excellent' relationship with their specified activity supervisor were less likely to re-offend (22%) than those who reported that the relationship was 'OK/ not very good/ bad' (57%; Table 3.5).

Table 3.5: Percentage of offenders who re-offended by relationship with specified activity supervisor

Relationship with specified activity supervisor	% who re-offended	*Unweighted base*
Excellent	22	*42*
Good	35	*65*
OK/ Not very good/ Bad	57	*49*
No specified activity	34	*1,332*
Total	**34**	***1,496***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

Drug treatment

As noted previously, the rate of re-offending was higher among those who started drug treatment as part of their Community Order than for those who did not. Those with an OASys-identified drug misuse need who had started treatment were more likely to re-offend (65%) than those with the need but who had not started treatment (47%) (Appendix Table A.18).

Drug treatment could be having a negative impact on offenders, leading to re-offending. However, it seems more plausible that in this cohort drug treatment was being provided to offenders with more severe drug misuse needs,[56] meaning that treatment providers would be working with offenders who presented with long-term drug problems that can be challenging to address.[57]

Four per cent of offenders with an OASys-identified drug misuse need score of zero (i.e. no drug misuse need) reported attending a drug treatment programme, compared with 23% of those whose drug misuse need score was two to five, and 64% of those whose score was six or above (Appendix Table A.19). When the level of OASys-identified drug misuse need was taken into account there was no longer a statistically significant difference in the rate of re-offending between those who attended drug treatment and those who did not (Appendix Table A.20).

Previous research has identified concerns that drug treatment was not being tailored to needs, for example drug users were all referred to a prescription service (Barnard *et al.*, 2009). Table 3.6 shows that, for the OMCCS survey cohort, although the most common type

[56] See Cattell *et al.* (2013), which found that those with a higher mean average drug misuse score, indicating more serious problems, were more likely to have that need addressed in their sentence plan.

[57] In the National Treatment Outcome Research Study (Gossop *et al.*, 2001), average duration of heroin use for the sample was 9 years and a quarter had used heroin for 13 years or more. After 4-5 years only a quarter

of treatment was being prescribed a substitute drug (64%), 57% of offenders reported having individual one-to-one counselling, while 28% reported having group counselling. Sixty-four per cent of offenders attending group counselling re-offended, 58% of those prescribed a substitute drug re-offended and 54% of those having individual one-to-one counselling re-offended;[58] offenders attending each different type of drug treatment programme were not significantly more likely to re-offend than those starting a drug treatment programme, but not attending that type of programme.

Table 3.6: Type of drug treatment programme attended as part of the Community Order

	% of offenders[1]
Prescribed a substitute drug	64
Individual or one-to-one counselling	57
Group counselling (not part of a residential programme)	28
Other type of counselling service	6
Detox	5
Residential rehabilitation programme	2
Unweighted base	*200*

Base: Offenders starting a drug treatment programme, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1)

1. May sum to greater than 100% as respondents were able to choose more than one option

Offenders appeared to be engaged with treatment, reporting strong relationships with their treatment supervisors (92% agreed that supervisors understood their needs well) and clear goals for their treatment (80% were aiming to stop taking all drugs) (Appendix Tables A.21 and A.22).

Meetings with probation staff

Examining the association between the face-to-face meetings offenders had with probation staff and re-offending may help to understand which aspects of offender management support desistance.

There were no statistically significant differences between the average (mean) number of meetings attended[59] and whether an offender re-offended (Appendix Table A.23). However, the number of missed appointments was associated with re-offending. Offenders who

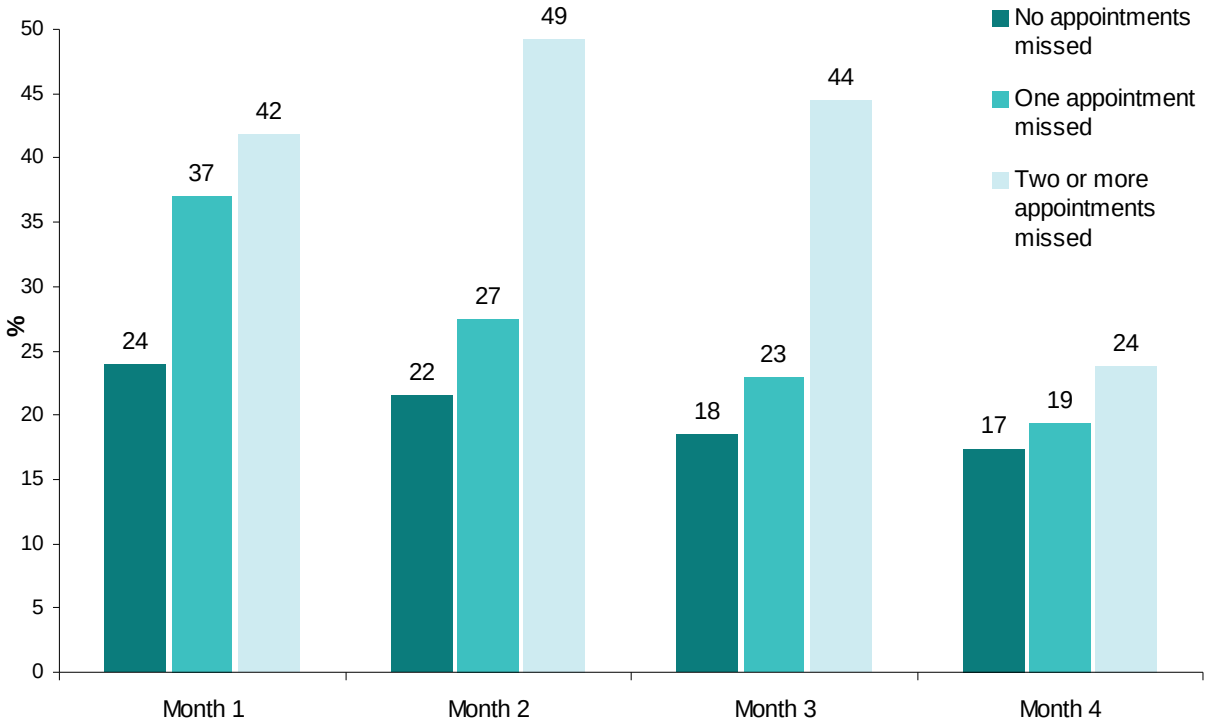
(26%) of those treated in the community and a third (38%) of those who received residential treatment were abstinent from all drugs, and around 4 in 10 continued to use heroin at least weekly.

58 Offenders may have been receiving more than one type of treatment; therefore these categories are not mutually exclusive.

59 Based on local administrative data on contacts.

re-offended were more likely to have missed an appointment prior to re-offending than those who did not re-offend (Figure 3.7). Of those offenders that missed two or more appointments in the first month after their sentence started, 42% re-offended compared with 24% of offenders who missed no appointments. This relationship was also seen in subsequent months, suggesting that missed appointments early in a sentence can provide a useful warning of an increased risk of re-offending.

Figure 3.7: Percentage of offenders who re-offended by number of missed appointments in each of the first four months since the Community Order started



Unweighted base (from left to right): 825, 210, 82, 784, 212, 74, 760, 201, 70, 720, 199, 88

Base: Offenders on Tiers 2 to 4 with a supervisions requirement (Wave 2/3 survey respondents matched to PNC data)

Source: Form 20 administrative data, local administrative data and PNC data

Offenders with a high likelihood of re-offending (measured by OGRS) were more likely to miss appointments (Appendix Table A.24), while tier appeared to have had no relationship with the number of appointments missed (Appendix Table A.25).

There was some evidence from the OMCCS survey that frequent meetings may be associated with a higher rate of re-offending. Offenders who met with their Offender Manager more than once a week in the first three months of their sentence were particularly likely to re-offend, compared with those who met less frequently (Table 3.7). Offender Managers are likely to be making decisions about the frequency of meetings based on a range of factors,

including caseload pressures and their own assessment of the risks and needs of the offender.[60]

Table 3.7: Percentage of offenders who re-offended by frequency of meetings with Offender Manager

Frequency of meetings	% who re-offended	*Unweighted base*
More than once a week	59	*54*
Once a week	38	*884*
2–3 times per month	25	*371*
Once a month or fewer	27	*148*
Do not meet with Offender Manager	30	*39*
Total	**34**	***1,496***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

The relationship between the typical duration of meetings between the offender and Offender Manager and re-offending was not statistically significant (Table 3.8). Those with the shortest meetings (less than 10 minutes) were found to be no more likely to re-offend than those who had much longer meetings. This might be the result of Offender Managers deciding to spend little time with those they regard as unlikely to re-offend.

Table 3.8: Percentage of offenders who re-offended by duration of meetings with Offender Manager

Duration of meetings	% who re-offended	*Unweighted base*
Less than 10 minutes	29	*118*
10 to 19 minutes	38	*401*
20 to 29 minutes	36	*360*
30 to 44 minutes	35	*375*
45 to 59 minutes	32	*133*
One hour or more	28	*79*
Total	**35**	***1,466***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

Warnings and breach

Warnings are discretionary measures available to Offender Managers to address an offender's failure to comply with the requirements of the Community Order. Up to two warnings may be given before a 'breach' that may result in changes to the Community Order, fines, or resentencing.[61]

[60] Offenders in higher tiers and with more needs are expected to attend meetings more frequently.

[61] At the time of the OMCCS it was not possible for a court to impose fines in relation to breach (as per the provisions in the Legal Aid, Sentencing and Punishment of Offenders Act 2012, Section 67); therefore most of this cohort of offenders were likely to have additions or changes to their sentences following breach. However, a small proportion of offenders who received longer sentences may be affected by the new provisions.

Offenders who had received a warning by the Wave 1 survey were more likely to re-offend (44%) than those who had not received a warning (30%). Offenders who reported that they had breached their Community Order before the Wave 1 survey were more likely to re-offend (54%) than those who did not (33%) (Table 3.9). As with missed appointments, warnings and breaches early in a Community Order may provide an indication to Offender Managers of offenders who require additional support.

Table 3.9: Percentage of offenders who re-offended by whether they had received a warning or had breached by Wave 1 survey

	% who re-offended	*Unweighted base*
Whether had received a warning by Wave 1		
Yes	44	*400*
No	30	*1,095*
Whether had breached by Wave 1		
Yes	54	*91*
No	33	*1,405*
Total	**34**	***1,495***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

3.6 Relationships between offenders and Offender Managers

Good relationships between offenders and Offender Managers are recognised as being important for the identification of needs, ongoing engagement with the sentence, and ultimately for rehabilitation (Burnett and McNeill, 2005). Amongst other things, successful supervision requires the development of trust, flexibility, a constructive and consistent relationship and the availability of sufficient resources such as time and locations to hold meetings (Turley *et al.*, 2011), while poor relationships may harm desistance from offending behaviour (Shapland *et al.,* 2012a, 2012b).

Offenders who said that they had an 'excellent' relationship with their Offender Manager were less likely to re-offend (30%) than those with an 'OK' relationship (40%) (Table 3.10).

Table 3.10: Percentage of offenders who re-offended by views of relationship with Offender Manager

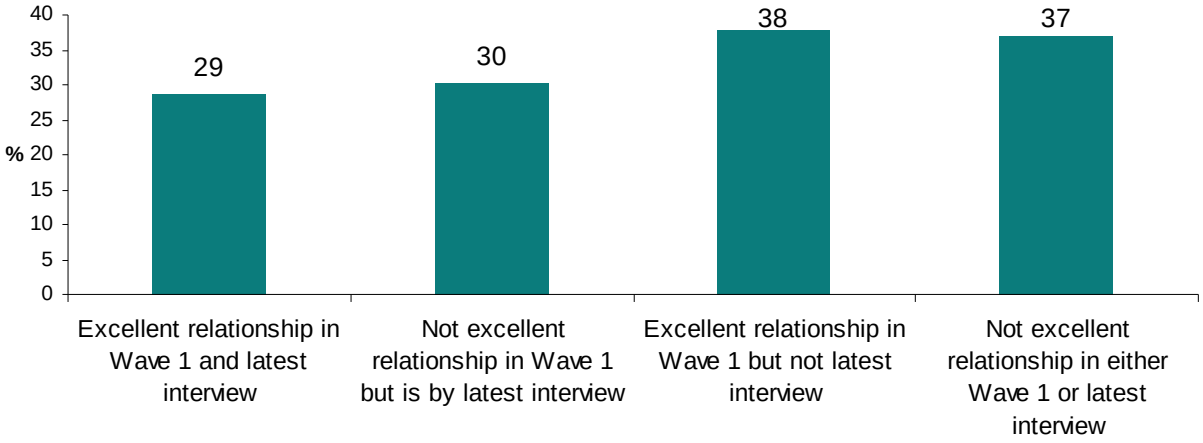
	% who re-offended	*Unweighted base*
Excellent	30	*593*
Good	36	*630*
OK	40	*237*
Not very good/ Bad	38	*30*
Total	**34**	***1,490***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

Offenders who said they had an 'excellent' relationship at both their first and latest survey interview were the least likely to re-offend (29%). Their rate of re-offending was lower than for offenders who did not report an 'excellent' relationship at either the first or latest survey interview (37%) and for offenders who reported an 'excellent' relationship initially but no longer said this at their latest survey interview (38%) (Figure 3.8). This suggests that developing and maintaining excellent relationships is important in supporting desistance.

Figure 3.8: Percentage of offenders who re-offended by change in offender's views of relationship with Offender Manager



Unweighted base (from left to right): 410, 234, 174, 641

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Waves 1, 2 and 3) and PNC data

Offenders who 'strongly agreed' that their Offender Manager understood their needs were less likely to re-offend (30%) than those who 'agreed' (36%) and those who 'disagreed/ strongly disagreed' (45%) (Table 3.11).

Table 3.11: Percentage of offenders who re-offended by opinion of whether Offender Manager understands needs

	% who re-offended	***Unweighted base***
Strongly agree	30	*560*
Agree	36	*741*
Neither agree nor disagree	45	*103*
Disagree/ Strongly disagree	45	*92*
Total	**34**	***1,496***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

Similarly, those who 'strongly agreed' that by re-offending they would let their Offender Manager down were less likely to re-offend (29%) than those who 'agreed' (39%) or those who either 'disagreed/ strongly disagreed' (35%) (Table 3.12).

Table 3.12: Percentage of offenders who re-offended by opinion of whether re-offending would let Offender Manager down

	% who re-offended	*Unweighted base*
Strongly agree	29	*512*
Agree	39	*653*
Neither agree nor disagree	33	*148*
Disagree/ Strongly disagree	35	*181*
Total	**35**	***1,494***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

3.7 Multivariate analysis: factors independently associated with re-offending

The bivariate analysis (presented in Sections 3.1–3.6) shows that a number of 'static' and 'dynamic' factors are associated with re-offending. However, this analysis does not take account of associations between these factors, and other factors with re-offending. In reality, there will be a number of factors that are potential predictors of re-offending. For example, the effect of drug use on re-offending may be different when age and gender is taken into account. Controlling, or adjusting, for other explanatory factors enables a more detailed explanation of re-offending to be provided.

To identify which factors were independently associated with re-offending, Cox proportional hazard modelling (see Appendix B) was carried out to examine the factors simultaneously.

This section summarises the findings from the hazard modelling, examining all factors described in the bivariate analysis as being associated with re-offending and other factors chosen for their relevance to the aims of re-offending policy development. This analysis identifies the probability of re-offending in relation to explanatory factors, whilst controlling for other static factors such as age, gender and ethnicity.

The hazard modelling in this report focuses on 'dynamic' factors such as needs, attitudes and programme participation; 'static' factors were included as control variables. A series of initial models were produced to establish which factors were most strongly associated with re-offending; summaries of these models are provided in Appendix B. Individual factors or groups of factors, such as sentence requirements started, were examined alongside the control variables to establish their significance before the development of a final model.

The final hazard model included the variables found to be most strongly associated with re-offending in the preceding modelling and those variables considered to be relevant to the aims and areas of policy development discussed in this report (Appendix Table B.1).[62]

The factors associated with higher hazard ratios,[63] or a higher probability of re-offending over the re-offending period, were amongst offenders that:

- were male;
- had a higher likelihood of re-offending (measured by OGRS);
- committed an acquisitive index offence, compared with violence;
- had a drug misuse need in the early months of the Community Order;[64]
- had an unstable accommodation need;
- had a pro-criminal attitude;
- disagreed[65] that their Offender Manager understood their needs;
- met with their Offender Managers for 10–19 minutes, compared with those meeting for an hour or more; and
- met with their Offender Managers less than once a month, compared with once a week, while those who met with their Offender Managers once a week were more likely to re-offend compared with those who met once every two or three weeks.

The following sections consider these findings in more detail (see also Appendix Table B.1).

Offender characteristics

The bivariate analysis showed that men were more likely to re-offend than women (see Section 3.2). When controlling for other factors in the hazard modelling this association remained. Hazard ratios were over 1.5 times higher for men than women. The bivariate analysis found that offenders over 40 were less likely to re-offend than offenders in younger age categories.

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62 Table B.1 provides the full set of covariates in the model together with their hazard ratio and significance level and confidence interval.

63 The hazard ratio is an expression of the hazard (or chance of an event occurring) for one factor as a ratio of the hazard of the event occurring for another. For example, hazard ratios can look at the probability of first re-offence over a 12 month re-offending period, compared with another category of offenders whilst controlling for other factors.

64 Survey-identified measures of need were used in this model rather than OASys variables, mainly because a proportion of offenders did not have a record of an OASys assessment across all of the needs.

65 This measure includes those who disagreed and strongly disagreed.

Risk of re-offending

The OGRS score predicts an offender's likelihood of re-offending using offending history and offender characteristics. Higher re-offending rates were strongly associated with higher OGRS scores in the bivariate analysis (Section 3.2); the hazard modelling confirmed this association.

Index offence

The bivariate analysis also showed that the rate of re-offending varied by the type of offence for which offenders were first sentenced (Section 3.2). The hazard of re-offending for those convicted of an acquisitive index offence (theft, burglary and fraud) was more than twice that of offenders convicted of a violent index offence.

Offenders' needs

There was a strong bivariate association between drug misuse needs and re-offending (Section 3.4) and this was confirmed by the hazard modelling. The hazard of re-offending was higher among those with a drug misuse need than among those without a drug misuse need.

The hazard of re-offending was also higher among those with an accommodation need. The associations between re-offending and the other needs, including having a mental health condition, alcohol misuse and ETE needs, were not statistically significant once the effect of other factors were controlled for in the modelling.

Attitudes to offending

The bivariate analysis found a relationship between pro-criminal attitudes (Section 3.3) and re-offending. This remained in the hazard modelling; offenders with pro-criminal attitudes that were highly conducive to re-offending were more than 1.5 times more likely to re-offend than those with low (non-criminal) attitudes.

Meetings with probation staff

The bivariate analysis suggested that frequent meetings between offenders and Offender Managers may be associated with a higher rate of re-offending. The hazard modelling confirmed that offenders who met their Offender Managers once a week were more likely to re-offend than those meeting every two to three weeks, however it also found that offenders who met their Offender Managers less than once a month were more than twice as likely to re-offend than those meeting once a week.

In the bivariate analysis, meeting duration showed no significant relationship with re-offending. However, the hazard modelling, once controlling for other factors, found that meeting duration was an important factor in re-offending. Where meetings typically lasted an hour or more offenders were less likely to re-offend compared with those who had shorter meetings; offenders whose meetings were typically 10 to 19 minutes had a hazard ratio that was twice that of those with one of an hour or more.

Views of Offender Managers

The offenders' views of whether their Offender Managers understood their needs well was found to be significant in the bivariate analysis (Section 3.6). The hazard modelling confirmed that this relationship was associated with a lower probability of re-offending.

Factors not significantly associated with re-offending

A number of factors were not statistically significantly associated with re-offending once the influence of other factors was taken into account. These were:

- sentence length;
- having unpaid work, a curfew, a prohibited activity or an accredited programme requirement;
- starting drug, alcohol or mental health treatment as part of the Community Order (those starting treatment were slightly more likely to re-offend, but this was significant at the 10% level only); and
- missing meetings in first month of sentence.

Factors not included in the model

A number of factors were not included in the final hazard model because they were not statistically significantly associated with re-offending in preliminary hazard models, because they were highly correlated with one another (co-linear), or obscured other relationships in the model (see Appendix B). These were:

- Relationship with Offender Manager: Although significant in the bivariate analysis (Section 3.6), the hazard modelling did not find the quality of the relationship between offenders and Offender Managers to be statistically significantly associated with re-offending when other factors were controlled for. However, important components of this relationship that were identified through logistic regression analysis were found to be significant (see Appendix Table A.26), such as duration of meetings and understanding needs.

- Probation Trust: The hazard modelling showed that differences remained between Probation Trusts after controlling for the likelihood of re-offending (measured by OGRS) and demographics. This suggests that local practices and local performance may have had an impact on proven re-offending rates, however Probation Trust was not included as a factor in the final model as the base sizes were small and the wide variation between Trusts' re-offending rates obscured other relationships in the model, which made interpretation problematic.
- Warnings and breach: The bivariate analysis found that offenders who reported that they had breached their Community Order were more likely to re-offend than those who did not (Section 3.5). However, when controlling for other factors, the hazard modelling found that these associations were not statistically significant.

4. Conclusions and implications

The main aims of this report were to investigate whether offenders' needs, attitudes, relationships with Offender Managers, and the way Community Orders are implemented can influence their risk of re-offending.

These findings show that re-offending is greatest in the first months of the Community Order and that offenders on Community Orders often have complex needs, some of which will be related to their offending behaviour. The evidence reinforces the importance of a wide range of 'static' factors in predicting future offending, such as gender and index offence. It also demonstrates that 'dynamic' factors such as the changing needs and attitudes of offenders can help to explain why someone re-offends and how addressing these may reduce re-offending.

Establishing causal links is beyond the scope of this report; nevertheless the results will be of interest to those involved in development of policy to reduce re-offending and for providers in the delivery of Community Orders and supervision in the community. Key conclusions and implications are discussed in more detail below.

4.1 Competition and payment by results

The rate of re-offending varied significantly by index offence type, being twice as high for acquisitive offences (theft, burglary and fraud) compared with violence when controlling for other factors.[66] This raises the importance of sequencing interventions effectively; some criminogenic needs, such as serious alcohol abuse, should ideally be addressed before offender behaviour programmes are started (Turley *et al.*, 2011).

The evidence also highlights a balance to be struck between long-term criminogenic needs, intervention provision and outcome measurement. For example, dependent drug using offenders with long-term and complex needs require effective strategies to tackle their drug use to support desistance.[67]

[66] This was also found by Howard *et al*. (2009).

[67] In the specific case of dependent drug users, previous research shows that they typically have long substance abuse careers that are non-linear and characterised by cycles of treatment, improvement and relapse over many years (Gossop *et al.*, 2001).

4.2 Offender management

Offenders' attitudes to crime may provide an indication of their likelihood of re-offending. The findings show that re-offending was significantly higher for offenders whose attitudes became pro-criminal during their sentence.[68] Offender Managers are already encouraged to be alert to the deteriorating attitudes of offenders toward offending, as indicators for potential future offending.

Accommodation needs were associated with an increased probability of re-offending and offenders who had accommodation or ETE needs that were subsequently resolved had a lower rate of re-offending than those who gained or continued to have those needs. However, it is not clear why only small numbers of offenders had these needs resolved between their initial and subsequent interviews, and it was not possible to include these measures in the multivariate analysis. Further work is required to understand the extent to which attention is given to addressing accommodation and ETE needs and how local capacity constraints may act as a barrier.

Overall the findings showed frequent meetings and short meetings were associated with higher levels of re-offending, when controlling for other factors. Meetings of 10–19 minutes between offenders and Offender Managers were associated with an increased rate of re-offending, compared with those meeting for an hour or more, while meeting once a week, compared with once every two or three weeks, was associated with higher re-offending. In some instances, very short meetings may reflect caseload pressures, but in others it may be an acknowledgement of an offender's low risk of re-offending. Very frequent meetings may sometimes be counterproductive if they lead to missed appointments and breach, whereas in other circumstances they may provide valuable structure to an offender's daily life.

The findings of this report suggest that the influence of the offender's relationship with their Offender Manager on re-offending is not straightforward. A simple measure of the quality of the relationship was not statistically significantly associated with re-offending when other factors were controlled for. However, important components of this relationship, such as duration of meetings and understanding offender needs, were found to be significant. Given evidence of the importance of good relationships, it will be essential to avoid a 'tick box' approach to meetings; this may be achieved by assessing meetings for their quality.[69]

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[68] Based on bivariate analysis.
[69] See the discussion in Shapland *et al.* (2012a, 2012b) on quality.

4.3 Implications

There are a number of practice implications suggested by the findings of this report:

- Offender management approaches may be more effective where they are tailored to offence type. Consideration should be given to varying rates of re-offending for different offence types.
- Implementing interventions intended to reduce re-offending as early as possible in sentences, particularly for acquisitive offenders, may decrease re-offending levels.
- Consideration should be given to how providers could be incentivised to invest in addressing long-term and complex needs such as dependent drug use that are associated with a particularly high risk of re-offending.
- A formal review by Offender Managers of the initial offender assessment in the first months (when the risk of re-offending is highest), could ensure implementation of sentences are tailored to the changing attitudes and needs of offenders (i.e. additional support requirements and/or sentence flexibility).
- A focus on fewer, longer meetings between offenders and Offender Managers, monitored for their quality, may be beneficial. Closely monitoring missed appointments, breaches and warnings early in a sentence may help Offender Managers identify and better support offenders who are particularly likely to re-offend.

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Glossary and Abbreviations

Accredited programme: These are structured and planned interventions with offenders. Centred on an evidence base of what works, they provide a consistent approach to reducing offending and aid rehabilitation.

Acquisitive offence: In the present research: theft, burglary and fraud.

CPS: Crown Prosecution Service.

CRIME-PICS II: A standard tool for translating responses to attitudinal statements or questions regarding offending behaviour into a raw score. Once calculated, this raw score can be used to identify those with undesirable or problematic attitudes towards offending.

Criminogenic needs: Needs such as dependent drug use that are associated with an offender's criminal behaviour and which are amenable to change.

Form20: The FORM 20 database contains information on all probation sentence commencements, and is held by Probation Trusts at the national level.

GLM: The Good Lives Model (GLM) of rehabilitation (Maruna, 2001; Ward and Maruna, 2007) emphasises the importance and utility of identifying and reinforcing positive characteristics of individual offenders to support them to lead 'good' lives desisting from crime. This is often described as a 'strengths-based' approach.

Hazard ratios: In the present research, hazard ratios provide the probability of first re-offence at any given point compared with another category of offenders. This enables us to consider, for instance, whether those who are on longer sentences are less likely to re-offend than those on shorter sentences, controlling for the type of offence for which they were originally convicted.

Index offence: The main offence for which an offender was convicted, resulting in their current sentence.

MoJ: Ministry of Justice.

NOMM: National Offender Management Model. The NOMM was introduced to provide a more strategic approach to managing offenders. Central to this was the end-to-end management approach whereby interventions are selected, sequenced and delivered. Responsibility for this resides with a single Offender Manager who is responsible for managing, supervising and administrating the whole of an offender's sentence from commencement to termination (NOMS, 2005).

NOMS: National Offender Management Service.

OASys: Offender Assessment System. OASys is a national system used to assist Offender Managers in identifying the risks and needs of an offender in order to ensure that resources are allocated effectively. Those on Tier 2 with a supervision requirement are eligible for a standard OASys assessment, and the Offender Manager must complete a series of scored items within each of the eight criminogenic needs. Offenders on Tiers 3 and 4 are eligible for a full assessment. Building on the standard assessment, this covers additional issues within the eight criminogenic needs.

Offender Manager: The person with overall responsibility for the offender and delivering the sentence's objectives. This could be either a Probation Officer or a Probation Service Officer.

OGRS: The Offender Group Reconviction Scale (OGRS3) uses 'static' factors (such as age at sentence, gender, offence committed and criminal history) to predict the likelihood of proven re-offending within a given time (usually one or two years after starting their Community Order). In use since the late 1990s, OGRS has been continually developed and validated and has become the standard method of predicting re-offending in the Probation Service and the Prison Service of England and Wales (Howard *et al.*, 2009). Its current iteration (OGRS3) groups scores into low (less than a 50% chance of proven re-offending within two years), medium (between 50% and 74%), high (between 75% and 89%) and very high (a 90% or more chance of proven re-offending) risk bands.

OMCCS: Offender Management Community Cohort Study.

PbR: Payment by Results.

PNC: Police National Computer.

Proven re-offending: '[A] proven re-offence is defined as any offence committed in a one year follow-up period and receiving a court conviction, caution, reprimand or warning in the one year follow-up or a further six month waiting period' (MoJ, 2012b: 4).

RNR: Risk-Need-Responsivity is an approach to addressing offending behaviour (see Bonta and Andrews, 2007). It uses the systematic and robust assessment of offenders to identify needs associated with a higher risk of offending and to accordingly prioritise resources. Work with offenders uses the notion of responsivity, understood as cognitive-social learning processes based on positive professional–client relationships that seek to steer change towards positive outcomes. General responsivity relates to general cognitive-behavioural approaches aimed at reducing offending, whereas individual responsivity relates to the engagement with non-criminogenic factors that may need to be addressed to successfully treat those that are criminogenic.

Punitive requirement: These are programmes designed to punish an offender (e.g. unpaid work).

Survival analysis: A set of techniques that in the context of re-offending analysis enable us to take account of when offences occur, and to identify the factors independently associated with their occurrence.

Tier: The NOMS Offender Management Model identifies four broad modes of case management to ensure that offenders are consistently and appropriately managed. Known as tiers, they prescribe a different approach, and operate in a cumulative way, starting with punish for Tier 1, adding help for Tier 2, then change for Tier 3 and finally control for Tier 4. An increase in tier represents an increase in the likelihood of re-offending and risk of serious harm, and needs of the offender, the demands of the sentence and the level of resource required by the Offender Manager (Probation Circular PC08/2008). A change in risk (both of re-offending and of harm) can result in a change of tier.

Appendix A
Additional data tables

Section 3.1 Level and type of re-offending

Appendix Table A.1: Percentage of offenders who re-offended by offender characteristics, comparison between the full cohort and the survey cohort

	Full cohort (All tiers)		Survey cohort (Tiers 2 to 4)	
	% who re-offended	*Unweighted base*	% who re-offended	*Unweighted base*
Tier				
1	24	*47,848*	–	–
2	34	*31,758*	31	*695*
3	46	*40,301*	37	*719*
4	61	*4,461*	40	*82*
Risk of re-offending (OGRS3)				
Very low	18	*41,108*	13	*367*
Low	23	*29,617*	22	*410*
Medium	42	*31,578*	36	*416*
High	65	*19,007*	56	*246*
Very high	82	*4,408*	67	*57*
Risk of Serious Harm (RoSH)				
Low	36	*33,494*	40	*513*
Medium	40	*43,297*	32	*826*
High	45	*2,170*	26	*55*
Very high	–	*16*	–	*1*
Gender				
Female	29	*19,636*	27	*346*
Male	36	*106,082*	36	*1,150*
Age				
18 to 20	43	*21,102*	39	*105*
21 to 24	38	*23,652*	35	*219*
25 to 29	37	*22,639*	38	*294*
30 to 34	36	*16,820*	36	*302*
35 to 39	33	*14,512*	38	*187*
40 or over	24	*26,993*	28	*389*
Ethnicity				
BME	32	*17,395*	35	*1,288*
White	32	*17,395*	30	*147*
Total	**35**	***125,718***	**34**	***1,496***

Base: Survey: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data). Full cohort: All offenders (matched to PNC data)

Source: Form 20 administrative data, OASys administrative data, PNC data and survey data (Wave 1)

Appendix Table A.2: Percentage of offenders who re-offended by offence characteristics; comparison between the full cohort and the survey cohort

	Full cohort (All tiers)		Survey cohort (Tiers 2 to 4)	
	% who re-offended	*Unweighted base*	% who re-offended	*Unweighted base*
Sentence length				
6 months or less	42	*11,489*	43	*160*
7–12 months	34	*94,689*	36	*993*
13–18 months	42	*9,748*	31	*168*
19–24 months	34	*8,045*	28	*126*
25–36 months	16	*1,653*	9	*49*
Offence				
Violence against the person	31	*43,282*	24	*572*
Theft, burglary or fraud	47	*38,601*	56	*416*
Sexual offences	14	*1,974*	10	*45*
Drugs offences	36	*8,936*	29	*91*
Motoring offences	19	*16,667*	16	*142*
Other offences	34	*16,258*	34	*230*
Number of requirements				
1	29	*64,396*	37	*435*
2	39	*44,001*	34	*775*
3	45	*15,045*	35	*258*
4	52	*2,098*	–	*21*
5	49	*163*	–	*7*
Previous offences				
None	8	*18,102*	4	*158*
1 to 5	23	*40,075*	21	*487*
6 to 11	37	*20,967*	35	*256*
12 to 16	43	*10,036*	35	*114*
More than 16	58	*36,538*	51	*481*
Total	**35**	***125,718***	**34**	***1,496***

Base: Survey: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data). Full cohort: All offenders (matched to PNC data)

Source: Form 20 administrative data, OASys administrative data and PNC data

Appendix Table A.3: Re-offence type for the first re-offence among the full cohort

Offence category	% of offenders
Theft, burglary, fraud	36
Violence against the person	20
Public order offences	11
Drugs offences	11
Arson and criminal damage	7
Motoring offences	7
Sexual offences	1
Other offences	7
Unweighted base	*43,879*

Base: Offenders who re-offended from full cohort of offenders (matched to PNC data)

Source: PNC data

Section 3.2 Offender and offence characteristics

Appendix Table A.4: Index offence by age, proportion who are female, number of previous offences and sentence length

	Age		Female		Number of previous offences		Sentence length	
Offence category	Mean (years)	*Unweighted base*	% of offenders	*Unweighted base*	Mean	*Unweighted base*	Mean (months)	*Unweighted base*
Violence against the person	31	*567*	13	*567*	14	*567*	14	*567*
Sexual offences	42	*45*	0	*45*	8	*45*	32	*45*
Burglary	31	*99*	12	*99*	31	*99*	13	*99*
Fraud and forgery	36	*60*	39	*60*	13	*60*	13	*60*
Drugs offences	33	*91*	15	*91*	25	*91*	12	*91*
Motoring offences	38	*142*	18	*142*	16	*142*	14	*142*
Vehicle theft and unauthorised taking	27	*35*	10	*35*	24	*35*	13	*35*
Theft and handling stolen goods	32	*223*	27	*223*	38	*223*	11	*223*
Public order offences	30	*120*	12	*120*	13	*120*	14	*120*
Arson and criminal damage	27	*50*	12	*50*	20	*50*	12	*50*
Other offences	32	*64*	16	*64*	10	*64*	12	*64*
Total	**32**	***1,496***	**14**	***1,496***	**20**	***1,496***	**14**	***1,496***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Form 20 administrative data, OASys administrative data, PNC data and survey data (Wave 1)

Appendix Table A.5: Index offence by attitude to re-offending, number of needs (OASys), drug misuse score (OASys), drug misuse needs (survey-identified) and number of sentence requirements

	General attitude to re-offending (CRIME-PICS II)[1]		Number of needs (OASys)[2]		Drug misuse score (OASys)[2]		Drug misuse need (survey-identified)[3]		Number of sentence requirements	
Offence category	Mean score	*Unweighted base*	Mean no.	*Unweighted base*	Mean score	*Unweighted base*	% with need	*Unweighted base*	Mean no.	*Unweighted base*
Violence against the person	1.9	*544*	3.1	*389*	0.9	*389*	13	*567*	2.0	*567*
Sexual offences	1.4	*45*	3.3	*43*	0.4	*43*	6	*45*	2.1	*45*
Burglary	2.8	*93*	4.1	*62*	3.7	*62*	35	*99*	2.1	*99*
Fraud and forgery	1.1	*59*	2.0	*30*	0.9	*30*	9	*60*	1.8	*60*
Drugs offences	2.7	*90*	3.3	*54*	4.7	*54*	51	*91*	2.0	*91*
Motoring offences	1.4	*140*	2.1	*71*	0.6	*71*	7	*142*	2.2	*142*
Vehicle theft and unauthorised taking	3.2	*33*	–	*19*	–	*19*	–	*35*	–	*35*
Theft and handling stolen goods	3.7	*212*	3.9	*148*	4.2	*148*	49	*222*	1.9	*223*
Public order offences	2.6	*116*	3.5	*84*	0.8	*84*	1	*120*	2.1	*120*
Arson and criminal damage	2.1	*48*	3.9	*32*	1.8	*32*	20	*50*	1.7	*50*
Other offences	2.0	*60*	4.5	*45*	1.5	*45*	2	*64*	2.0	*64*
Total	***2.3***	***1,440***	**3.3**	***977***	**1.9**	***977***	**20**	***1,495***	**2.0**	***1,496***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Form20 administrative data, OASys administrative data, PNC data and survey data (Wave 1)

1. Scores range from 0 to 9; a high score indicates a more pro-criminal attitude

2. Base limited to those with an OASys needs assessment

3. Survey-identified measures of drug misuse need based on behaviour reported to the survey, defined as using a Class A drug weekly or more or injecting

Appendix Table A.6: Re-offending by Probation Area (full cohort – administrative data)

Probation Area (anonymous)	% who re-offended
1	29
2	29
3	29
4	29
5	30
6	30
7	30
8	30
9	31
10	32
11	33
12	33
13	34
14	34
15	34
16	34
17	34
18	34
19	34
20	34
21	35
22	35
23	35
24	35
25	35
26	36
27	36
28	36
29	36
30	36
31	37
32	37
33	37
34	37
35	37
36	37
37	39
38	39
39	40
40	41
41	45
42	46
Total	**35**

Base: All offenders (matched to PNC data)

Source: Form 20 administrative data and PNC data

1. Base sizes excluded from the individual Probation Areas to ensure they are not identifiable. Minimum unweighted base: 954

Section 3.3 Offender attitudes to offending

Appendix Table A.7: Percentage of offenders who re-offended by general attitude to re-offending score

General attitude to re-offending (CRIME-PICS II)	% who re-offended	*Unweighted base*
0	21	*564*
1	27	*270*
2	39	*120*
3	40	*128*
4	42	*83*
5	54	*87*
6	50	*59*
7	54	*59*
8 or 9	60	*70*
Total	**34**	***1,440***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

Section 3.4 Offenders' needs

Appendix Table A.8: Percentage of offenders who re-offended by needs reported to the survey

	% who re-offended		*Unweighted base*	
Type of need[1]	Reported having need	Reported no need	*Reported having need*	*Reported no need*
Accommodation	45	30	*423*	*1,073*
Basic skills	45	33	*204*	*1,292*
Education	40	32	*430*	*1,066*
Getting work	45	27	*572*	*924*
Finances	45	30	*420*	*1,076*
Mental health	41	33	*304*	*1,192*
Physical health	40	34	*213*	*1,283*
Family	39	34	*211*	*1,285*
Drug misuse	61	28	*237*	*1,259*
Alcohol misuse	41	33	*284*	*1,212*

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

1. Measure of need based on offenders who reported that they needed help with this need to the survey

Appendix Table A.9: Percentage of offenders who re-offended by number of needs reported to the survey

Number of needs[1]	**% who re-offended**	***Unweighted base***
0	21	*394*
1 to 3	34	*720*
4 to 7	45	*362*
8 to 10	–	*20*
Total	**34**	**1,496**

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

1. Based on offenders who reported that they needed help with a need to the survey

Appendix Table A.10: Percentage of offenders who re-offended among those with an OASys-identified drugs misuse need who also had another OASys-identified need, by type of additional need

OASys-identified need had in combination with drug misuse need	% who re-offended	*Unweighted base*
Accommodation	58	*136*
ETE	59	*270*
Relationships	55	*228*
Lifestyle and associates	56	*269*
Alcohol misuse	53	*106*
Thinking and behaviour	56	*214*
Attitudes	54	*216*

Base: Offenders with an OASys drug misuse need, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1), OASys administrative data and PNC data

Appendix Table A.11: Percentage of offenders who re-offended by number of offender-reported and OASys-identified needs, excluding those with OASys and/or offender-reported drug misuse need

	OASys-identified needs		Reported needs[1]	
Number of needs	% who re-offended	*Unweighted base*	% who re-offended	*Unweighted base*
0	22	*184*	17	*273*
1 to 3	19	*351*	26	*394*
4 or more	28	*295*	28	*159*

Base: Offenders with an OASys assessment and without a drug misuse need, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1), OASys administrative data and PNC data

1. Measure of need based on offenders who reported that they needed help with this need to the survey

Appendix Table A.12: Percentage of offenders with each type of need according to different measures of need

Measure of need	Accommodation	*Unweighted base*	Drug misuse	*Unweighted base*	Alcohol misuse	*Unweighted base*	ETE	*Unweighted base*
OASys identified	37	*1,074*	34	*1,199*	41	*1,048*	62	*1,049*
Survey identified[1]	10	*1,496*	14	*1,496*	13	*1,476*	50	*1,496*
Reported[2]	30	*1,496*	19	*1,496*	21	*1,496*	52	*1,496*

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and OASys administrative data

1. Survey-identified measures of need based on behaviour reported to the survey: Accommodation – defined as those who are either homeless or living in temporary or unstable accommodation (for example in a hostel); Drugs misuse – defined as using a Class A drug weekly or more or injecting; Alcohol misuse – as outlined in the 2007 Alcohol Strategy, women who regularly drink over 35 units a week and men who regularly drink over 50 units a week; ETE – defined as unemployed with no qualifications or unemployed and poor work history

2. Measure of need based on offenders who reported that they needed help with this need to the survey

Appendix Table A.13: Percentage of offenders who re-offended by different measures of need

	% who re-offended			*Unweighted base*		
Type of need	OASys-identified need	Survey-identified need[1]	Reported need[2]	*OASys-identified need*	*Survey-identified need[1]*	*Reported need[2]*
Accommodation	44	53	45	*406*	*132*	*423*
Drug misuse	55	60	61	*255*	*183*	*237*
Alcohol misuse	35	41	41	*429*	*181*	*284*
ETE	42	41	42	*429*	*711*	*739*

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data).

Source: Survey data (Wave 1), OASys administrative data and PNC data

1. Measure of need based on behaviour reported to the survey

2. Measure of need based on offenders who reported that they needed help with this need to the survey

Appendix Table A.14: Percentage of offenders by type of household structure at latest survey interview, for those who no longer had a survey-identified accommodation need

Household structure at latest survey interview	**% of offenders**
Living in owned/rented accommodation	78
Living with parents	11
Paying board	11
Unweighted base	*50*

Base: Offenders who had an accommodation need at Wave 1 but no longer did by Wave 2/3, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (latest survey interview, Wave 2/3)

1. An accommodation need was defined as those who are either homeless or living in temporary or unstable accommodation (for example in a hostel)

Appendix Table A.15: Percentage of offenders by nature of improvement in ETE need at latest survey interview, for those who no longer had a survey-identified ETE need

	% of offenders
Gained a qualification	46
Gained employment	40
Gained both a qualification and employment	14
Unweighted base	*122*

Base: Offenders who had an ETE need at Wave 1 but no longer did by Wave 2/3, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (latest survey interview, Wave 2/3)

1. An ETE need was defined as being unemployed with no qualifications or unemployed and poor work history

Appendix Table A.16: Percentage of offenders by weekly alcohol intake at latest survey interview, for those who no longer had a survey-identified alcohol need

Weekly alcohol intake at latest survey interview	% of offenders
None	25
Safe amount	52
Above health limit (21 units for women, 28 for men) but below harm limit (35 units for women, 50 units for men)	23
Unweighted base	*100*

Base: Offenders who had an alcohol need at Wave 1 but no longer did by Wave 2/3, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (latest survey interview, Wave 2/3)

1. An alcohol need was defined as outlined in the 2007 Alcohol Strategy, women who regularly drink over 35 units a week and men who regularly drink over 50 units a week

Section 3.5 Implementation of Community Orders

Appendix Table A.17: Percentage of offenders who re-offended by whether the offender had missed any days of unpaid work or accredited programme sessions

	% who re-offended	*Unweighted base*
Whether had missed any days of unpaid work		
Yes	29	*222*
No	24	*132*
No unpaid work	38	*1,139*
Whether had missed any sessions of accredited programme		
Yes	39	*59*
No	28	*148*
No accredited programme	35	*1,274*
Total	**34**	***1,496***

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and PNC data

Appendix Table A.18: Percentage of offenders who re-offended by whether the offender started a drug treatment programme, for those with an OASys-identified drug misuse need

Whether started drug treatment programme	% who re-offended	*Unweighted base*
No	47	*201*
Yes	65	*138*
Total	**55**	***339***

Base: Offenders with an OASys-identified drug need, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1), OASys administrative data and PNC data

Appendix Table A.19: Percentage of offenders who had started a drug treatment programme by OASys-identified drug misuse need score

OASys drug misuse score	% of offenders who had started drug treatment programme	*Unweighted base*
0 to 1	4	*860*
2 to 5	23	*173*
6 to 10	64	*166*
Total	**17**	***1,199***

Base: Offenders with an OASys drug misuse need assessment, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1) and OASys administrative data

Appendix Table A.20: Percentage of offenders who re-offended, by whether they had started a drug treatment programme, for those with an OASys-identified drug misuse need score of six or higher

Whether started drug treatment programme	% who re-offended	*Unweighted base*
No	58	*65*
Yes	67	*101*
Total	**64**	***166***

Base: Offenders with an OASys-identified drug misuse need score of 6 or more, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1), OASys administrative data and PNC data

Appendix Table A.21: Offenders' views of drug treatment supervisor and engagement with drug treatment programmes

		Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	*Unweighted base*
Drug treatment supervisor understands needs	%	41	51	4	1	2	*198*
Drug treatment supervisor supports daily life	%	24	46	9	15	6	*198*
Drug treatment supervisor motivates to make improvements	%	29	55	7	7	2	*198*
Without drug treatment would end up in prison	%	35	41	10	12	2	*200*
Stopping using drugs is more important than anything else	%	58	35	3	3	1	*200*
Does not need drug treatment to stop using drugs	%	5	12	7	48	29	*200*

Base: Offenders who had started a drug treatment programme, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1)

Appendix Table A.22: Offenders' goal from drug treatment programmes

	% of offenders[1]
Stop taking all drugs	80
Sort life out/get it together	23
Improve health	22
Get out of crime/stop getting in legal trouble	16
Improve employment chances	15
Stop taking specific drug(s)	12
Improve relationships	12
Sort out finances	7
Reduce use of specific drugs	7
Sort out other family issues	6
Avoid a sentence	6
Improve education	5
Keep someone happy (e.g. family, partner)	4
Get kids back/contact with kids	4
Sort out accommodation	4
Receive script/prescription	4
Look better in court	1
Just see what happens/what's available	1
Referral to another drug service	1
Get care worker/someone to talk to	0
No clear goals	1
Unweighted base	*200*

Base: Offenders who had started a drug treatment programme, Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1)

1. May sum to greater than 100% as respondents able to choose more than one option

Appendix Table A.23: Number of contacts and missed contacts after 1, 2, 3 and 4 months following sentence start by whether the offender re-offended

		Contacts			Missed contacts		
Months following sentence start	**Re-offended**	Mean no. of contacts	Standard deviation	*Unweighted base*	Mean no. of missed contacts	Standard deviation	*Unweighted base*
1	Yes	3.4	1.7	*299*	0.5	0.9	*290*
	No	3.8	1.6	*883*	0.3	0.7	*827*
2	Yes	6.3	3.1	*273*	0.9	0.9	*241*
	No	6.8	2.5	*935*	0.5	0.7	*833*
3	Yes	9.5	4.4	*203*	1.4	1.5	*203*
	No	9.4	3.5	*843*	0.8	1.2	*843*
4	Yes	12.0	4.5	*178*	1.8	2.4	*178*
	No	11.9	6.0	*848*	1.1	2.1	*848*

Base: Offenders on Tiers 2 to 4 with a supervision requirement (Wave 2/3 survey respondents matched to PNC data)

Source: Local administrative data, PNC data and Form 20 administrative data

Appendix Table A.24: Number of contacts and missed contacts after 1, 2, 3 and 4 months following sentence start by likelihood of re-offending (OGRS)

		Contacts			Missed contacts		
Months following sentence start	**Likelihood of re-offending (OGRS)**	Mean no. of contacts	Standard deviation	*Unweighted base*	Mean no. of missed contacts	Standard deviation	*Unweighted base*
1	Very Low	3.9	1.4	*245*	0.1	0.7	*245*
	Low	3.8	1.6	*305*	0.2	0.6	*305*
	Medium	3.6	1.7	*376*	0.4	0.7	*376*
	High	3.6	1.8	*192*	0.5	1.0	*192*
	Very High	2.8	1.7	*34*	0.8	1.1	*34*
2	Very Low	6.8	2.3	*316*	0.2	1.2	*282*
	Low	6.7	2.5	*342*	0.5	1.1	*328*
	Medium	6.5	3.0	*306*	0.7	1.2	*299*
	High	6.8	2.7	*144*	0.9	1.5	*142*
	Very High	–	–	*23*	–	–	*23*
3	Very Low	9.6	3.3	*313*	0.4	1.7	*286*
	Low	9.4	3.6	*335*	0.7	1.4	*324*
	Medium	9.2	4.3	*294*	1.1	1.6	*290*
	High	9.9	3.7	*127*	1.4	2.1	*125*
	Very High	–	–	*21*	–	–	*21*
4	Very Low	12.2	4.3	*309*	0.5	2.2	*285*
	Low	11.9	4.6	*330*	0.9	1.8	*319*
	Medium	11.7	5.5	*282*	1.5	2.0	*281*
	High	12.5	5	*122*	2.0	2.7	*120*
	Very High	–	–	*21*	–	–	*21*

Base: Offenders on Tiers 2 to 4 with a supervision requirement (Wave 2/3 survey respondents matched to PNC data)

Source: Local administrative data, Form 20 administrative data and OASys administrative data

Appendix Table A.25: Number of contacts and missed contacts after 1, 2, 3 and 4 months following sentence start by tier

		Contacts			Missed contacts		
Months following sentence start	**Tier**	Mean no. of contacts	Standard deviation	*Unweighted base*	Mean no. of missed contacts	Standard deviation	*Unweighted base*
1	2	3.6	1.5	*478*	0.3	0.6	*478*
	3	3.7	1.6	*604*	0.4	0.8	*604*
	4	4.5	2.0	*70*	0.2	0.5	*70*
2	2	6.1	2.5	*525*	0.5	1.0	*514*
	3	6.9	2.6	*545*	0.7	1.4	*514*
	4	8.9	3.3	*61*	0.1	1.5	*46*
3	2	8.3	3.3	*508*	0.8	1.4	*501*
	3	9.9	3.6	*523*	1.1	1.9	*498*
	4	12.9	4.4	*60*	0.1	1.9	*48*
4	2	10.2	4.2	*497*	1	1.8	*490*
	3	12.7	4.5	*509*	1.5	2.4	*487*
	4	17.1	5.6	*59*	0.3	2.5	*50*

Base: Offenders on Tiers 2 to 4 with a supervision requirement (Wave 2/3 survey respondents matched to PNC data)

Source: Form 20 administrative data and local administrative data

Section 3.6 Relationships between offenders and Offender Managers

Appendix Table A.26: Logistic regression of factors associated with having an excellent relationship with Offender Manager

				95% CI for odds ratio	
		Sig.	Odds ratio	Lower	Upper
Typical duration of meetings with Offender Manager (Wave 1)	Less than 10 minutes**	0.000	0.26	0.13	0.51
	10 to 19 minutes**	0.005	0.44	0.24	0.78
	20 to 29 minutes	0.113	0.63	0.35	1.12
	30 to 44 minutes*	0.079	0.60	0.34	1.06
	45 to 59 minutes	0.413	0.76	0.40	1.46
	One hour or more (reference)		1.00		
Frequency of meetings with Offender Manager (Wave 1)	More than once a week (reference)		1.00		
	Once a week	0.716	0.90	0.51	1.59
	Once a fortnight	0.362	1.33	0.72	2.44
	Once every 3 weeks	0.331	2.19	0.45	10.66
	Once a month	0.525	0.80	0.40	1.59
	Less than once a month**	0.050	0.13	0.02	1.00
Likelihood of re-offending (OGRS)	Continuous variable**	0.001	0.84	0.75	0.93
Whether received any warnings at Wave 1	No warnings**	0.000	1.68	1.31	2.17
Number of probation staff seen to Wave 1 survey interview	One (reference)		1.00		
	Two**	0.001	0.64	0.49	0.83
	Three	0.851	0.97	0.69	1.35
	Four or more	0.863	1.03	0.70	1.52
Constant		0.206	1.75		

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Waves 1, 2 and 3)

SPSS forward stepwise logistic regression

Dependent variable was whether had an excellent relationship (1) or not (0) with the Offender Manager

Variables entered into the model but found not to be significant: tier

Odds ratios of greater than one indicate relatively higher odds of having an excellent relationship than the reference category in that variable; less than one indicate relatively lower odds

A significance level of 0.05 was used, indicating a statistically significant impact of that variable on the dependent variable (at the 5% level)

** Indicates a statistically significant difference at the 0.05 level in the odds ratio compared with the reference category or for the variable in the case of continuous variables

* Indicates a statistically significant difference at the 0.10 level in the odds ratio compared with the reference category or for the variable in the case of continuous variables

Appendix B
Survival analysis

Survival curves

This report includes survival curves that illustrate the probability of re-offending across the cohort over time. This analysis can take account of 'censored' points for cases (the point up to which data is available for a given case), but for the analysis presented here, all offenders have a 12 month reference period from the date of the start of their Community Order.

Cox proportional hazards models

Proportional hazards models enable us to consider the variation in probabilities of re-offending over time in relation to explanatory variables, such as drug misuse. It allows us to control for other covariates (such as age and gender) to understand whether there remains an association with re-offending with the variable of interest.

Analysis was carried out using Stata.

Proven first re-offence data was available for up to 12 months after the sentence start (that is, offences of any type that were committed in the 12-month period and for which there was a conviction).

A series of initial models were produced to establish which factors were most strongly associated with re-offending. Individual factors or groups of factors (such as sentence requirements started) were examined alongside the control variables to establish their significance before the development of a final model. Summaries of these initial models are provided below.

'Static' factors – OGRS, index offence type, sex, age and ethnicity

Analysis confirmed that the 'static' predictor of likelihood of re-offending used by the Probation Service (OGRS) was a very strong predictor of re-offending within the Community Order cohort.[71] In a model that included age, gender and index offence type (the offence for which the offender received the Community Order sentence), those in the highest likelihood of re-offending group (90–100%) had a hazard ratio (or probability of re-offending at any

[71] The two-year version of OASys was used in this analysis, which predicts re-offending over a two-year period.

given point having not already offended) that was nearly five times higher than for the lowest likelihood of re-offending group (0–24%).[72]

Type of index offence was also strongly associated with re-offending in this model. Those who had been sentenced to their Community Order for an acquisitive offence (theft, burglary or fraud) were more than twice as likely as those who committed a violent offence to re-offend in the period.[73]

Male offenders were found to have a higher hazard of re-offending (47% higher), controlling for OGRS, age and index offence, than female offenders.

Age was not significantly associated with re-offending once these other factors were controlled for. OGRS includes age in its derivation, but age was not associated with re-offending even in a model that excluded OGRS (whilst controlling for offence type and 'dynamic' factors).

White offenders had a higher rate of re-offending than Black and Minority Ethnic offenders in bivariate findings, although these associations with ethnicity were not significantly associated with re-offending once other factors were controlled for in the hazard modelling.

Needs – survey-identified measures of behaviour

A range of needs that had strong bivariate associations with re-offending were identified in the analysis (see Section 3.4). Needs as determined by behaviour reported to the survey were initially included in a hazard model alongside age, sex and OGRS to understand which were significant when other factors were controlled for:

- Drug misuse was strongly associated with re-offending, controlling for the other factors in the model. Those using Class A drugs or injecting any drug had a hazard of re-offending that was half as high again compared with those who did not.
- Pro-criminal attitudes, measured by CRIME-PICS II, were associated with re-offending. Those with the poorest attitudes had hazards of re-offending that were over two-thirds as high again compared with those with the most positive attitudes.

[72] In the final model described in Table B.1 the continuous version of the OGRS measure was used to maximise its explanatory power.

[73] This re-offending measure refers to any type of offence – not just those in the same category as the index offence.

- Alcohol misuse needs and mental health conditions were found not to be significant.

OGRS provides a useful control variable, particularly as it is available to Offender Managers for all offenders they deal with. However, it poses a problem for the interpretation of models as it is highly dependent on previous conviction history. Previous conviction history itself is not an explanation of re-offending and may act as a 'latent' variable, measuring risk factors that were not directly observed, such as psychological traits which contributed to the offending behaviour in those previous convictions. Omitting OGRS from the model increased the hazard ratios of drug users compared with non-drug users and of those with pro-criminal attitudes compared with those with more positive attitudes towards crime. It also resulted in stable accommodation and ETE needs becoming significant.

The survey needs measures used in this analysis were obtained on average three months into the sentence (at the first OMCCS survey). In some cases, re-offences will have occurred prior to the survey. However, it is plausible that these provide a good indication of needs of an offender in the early period of the sentence, particularly given the relatively low levels of change over time in most of the measures of need.

Needs – OASys measures

OASys measures of need have been refined and validated against re-offending data over a number of years (for instance see Moore, 2009). However, the OMCCS cohort includes those who do not receive a formal OASys assessment and those for whom there was no record of an assessment. A model that included the eight OASys identified needs as variables indicating whether an offender 'had the need' or 'did not have a need according to OASys' found that:

- those with drug misuse problems had higher hazards of re-offending than those who did not;
- those with accommodation needs had a higher hazard of re-offending compared with those who did not;
- no other needs were significant when controlling for OGRS.[74]

[74] Recent OASys validation analysis by MoJ has led to an amendment to the scoring process that now results in all eight needs being independently predictive whilst controlling for OGRS3 – see forthcoming compendium publication.

This suggests that the OASys assessment process may miss important accommodation needs among offenders who are not assessed. It appears that OASys is good at measuring a criminogenic need relating to drug misuse across the cohort.

Sentence characteristics

The number of requirements in the sentence, the sentence length and the tier of the sentence were included in a model alongside the 'static' factors: OGRS, type of offence, sex and age. Despite relatively strong associations with re-offending in bivariate analysis (see Section 3.2), none of these sentence characteristics were found to be statistically significant when controlling for these other factors. This suggests that sentencing was strongly related to the type of offence and the criminal history of the offender. It also suggests that likelihood of re-offending (measured by OGRS) and the type of offence were central to the decision about the resources to apply to offenders via their tier classification.

Requirements started

Offenders were asked about the requirements that they had started during their sentence. A model controlling for OGRS, age and sex found:

- Those who had started unpaid work, whether or not they missed some sessions, were less likely to re-offend than those who did not (hazards were over two-thirds of those who did not start unpaid work).
- The small group who were subject to a prohibited activity requirement were also less likely to re-offend than those who were not.
- Other requirements were not significant when controlling for other factors.

Offender Manager relationship

The nature of the Offender Manager relationship and the frequency with which offenders saw their Offender Manager were found to be strongly associated with re-offending in the bivariate analysis. However, when included in a model with OGRS, although hazard ratios were higher for those without an 'excellent' relationship, the relationship with re-offending was only significant at the 10% level. It was not significant at this level when 'dynamic' factors were introduced.

However, offenders' perception of whether their Offender Manager understood their needs was found to be statistically significant.

The average duration of meetings was not found to be statistically significant in this model, although in the final model (Appendix Table B.1) it did become significant.

Frequency of meetings (as reported by offenders to the survey) was found to be significantly associated with re-offending, with higher hazards for those meeting more than once a week, controlling for other factors.

Offenders' views about how easy they found it to fit the Community Order around their other commitments were not found to be significantly associated with re-offending once other factors were controlled for.

Compliance

Warnings and breaches could be seen both as early indications of potential re-offending, and in the case of warnings in particular as a means of addressing non-compliance. These measures were included in a model with a measure of the number of appointments missed in the first month of the Community Order alongside OGRS, sex and age:

- None of the compliance-related variables were found to be statistically significantly associated with re-offending, controlling for other factors

Protective factors

The presence of partners and children in offenders' households at the first OMCCS survey was included in a model with OGRS, age and sex to establish whether these provided protective factors for the cohort. No statistically significant relationship was found.

Probation Area

Probation Area was included in a model with OGRS, sex and age. There was statistically significant variation for offenders in different areas, however Probation Trust was not included in the final model as the base sizes were small and the wide variation between Trusts' re-offending rates obscured other relationships in the model which made interpretation problematic.[75]

[75] At the time of the survey fieldwork there were 42 Probation Areas, but these have since become Probation Trusts, with some areas merging to form 35 Trusts in total.

Appendix Table B.1: Cox proportional hazard model of re-offending within 12 months of the start of the Community Order

	Covariate significance 5%=** 10%=*	Hazard ratio	Std. error	*z*	*P* > *z*	95% CI Low	95% CI High
Gender	**						
Female (reference)		1.000					
Male		1.631	0.255	3.130	0.002	1.201	2.215
Likelihood of re-offending (OGRS) (continuous)	**	1.005	0.002	2.740	0.006	1.001	1.008
Index offence	**						
Violence (reference)		1.000					
Theft, burglary, fraud		2.256	0.324	5.660	0.000	1.702	2.989
Sexual offences		0.489	0.297	−1.180	0.239	0.148	1.611
Drug offences		1.008	0.252	0.030	0.976	0.617	1.645
Motoring offences		0.747	0.187	−1.170	0.244	0.458	1.219
Other offences		1.374	0.229	1.910	0.056	0.991	1.905
Sentence length							
6 months or less (reference)		1.000					
7–12 months		0.811	0.128	−1.320	0.187	0.595	1.106
13–18 months		0.712	0.162	−1.500	0.134	0.456	1.111
19–36 months		0.838	0.218	−0.680	0.498	0.503	1.397
Drug misuse – survey-derived[1]	**						
No need (reference)		1.000					
Has need		1.383	0.195	2.300	0.021	1.050	1.823
Unstable accommodation – survey-derived[1]	**						
No need (reference)		1.000					
Has need		1.472	0.252	2.260	0.024	1.053	2.058
Unpaid work							
No unpaid work (reference)		1.000					
Did unpaid work – missed some sessions		0.774	0.162	−1.220	0.221	0.513	1.167
Did unpaid work – no sessions missed		0.867	0.146	−0.850	0.398	0.623	1.207
Curfew							
No curfew (reference)		1.000					
Has curfew		1.188	0.177	1.160	0.247	0.887	1.591
Prohibited activity							
No prohibited activity (reference)		1.000					
Has prohibited activity		0.634	0.189	−1.530	0.127	0.353	1.138
Any accredited programme							
No accredited programme (reference)		1.000					
Has accredited programme		0.930	0.151	−0.450	0.656	0.677	1.279
Any treatment (drugs, alcohol, mental health)	*						
No treatment (reference)		1.000					
Has treatment		1.221	0.134	1.820	0.068	0.985	1.514
Attitude to re-offending (CRIME-PICS II) (Wave 1)	**						
Low (reference)		1.000					
Medium		1.499	0.192	3.170	0.002	1.167	1.926
High		1.714	0.268	3.440	0.001	1.261	2.330
Offender Manager understands needs (Wave 1)	**						
Strongly agree (reference)		1.000					
Agree		1.135	0.137	1.050	0.293	0.896	1.438

	Covariate significance 5%=** 10%=*	Hazard ratio	Std. error	*z*	*P* > *z*	95% CI Low	95% CI High
Neither agree nor disagree		1.726	0.311	3.030	0.002	1.212	2.458
Disagree / Strongly disagree		1.829	0.378	2.920	0.004	1.219	2.742
Average duration of meetings (Wave 1)	**						
Less than 10 minutes		1.013	0.333	0.040	0.968	0.532	1.931
10–19 minutes		1.908	0.559	2.210	0.027	1.075	3.387
20–29 minutes		1.657	0.481	1.740	0.082	0.938	2.928
30–44 minutes		1.569	0.461	1.530	0.126	0.882	2.791
45–59 minutes		1.684	0.535	1.640	0.101	0.904	3.139
An hour or more (reference)		1.000					
Frequency of meetings in first 3 months of sentence	**						
More than once a week		1.012	0.225	0.050	0.959	0.654	1.566
Once per week (reference)		1.000					
Once every 2/3 weeks		0.740	0.110	−2.030	0.042	0.554	0.990
Once a month		0.743	0.148	−1.490	0.137	0.502	1.099
Less than once a month		2.324	0.704	2.780	0.005	1.284	4.208
Missed meetings in first month of sentence							
None missed (reference)		1.000					
1 missed		1.138	0.156	0.940	0.348	0.869	1.489
2 missed		1.127	0.223	0.600	0.547	0.765	1.660
3 missed		1.495	0.423	1.420	0.155	0.859	2.603

Base: Offenders on Tiers 2 to 4 (Wave 2/3 survey respondents matched to PNC data)

Source: Survey data (Wave 1), OASys administrative data, Form20 administrative data, local administrative data and PNC data

The measure of unpaid work, curfew, prohibited activity, accredited programme, and treatment programmes were survey-derived measures based on offenders who reported that they had started these requirements

1. Survey-derived measures based on behaviour reported to the survey; accommodation need defined as those who are either homeless or living in temporary or unstable accommodation (for example in a hostel); drug misuse need defined as using a Class A drug weekly or more or injecting