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## The Offender Assessment System: an evaluation of the second pilot

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The Offender Assessment System (OASys) is a structured clinical assessment tool used by adult correctional services in England and Wales. It was developed to assess offending-related needs, likelihood of reconviction and risk of serious harm. Offenders are assessed at pre-sentence stage, at the start of most community and custodial sentences and at regular intervals during the sentences. These assessments aid effective management of offenders and targeting of interventions designed to reduce reconviction. OASys was rolled-out nationally from 2001 to 2004. By November 2005, around 870,000 assessments had been completed on 370,000 separate offenders. This Findings reports from the second OASys implementation pilot run between November 1999 and April 2000.

### Key points

#### Risk/needs profile

- The most frequent needs were education; training and employability thinking and behaviour. Patterns of need differed significantly between groups such as gender and offence type.
- On average, offenders presented with 3.8 of the ten needs assessed. The average was higher for female offenders (4.0), offenders in prison (5.0) and those convicted of burglary (5.4). It was lower for offenders aged over 40 (3.2), those of South Asian ethnicity (2.9) and those convicted of fraud (2.4).
- Risk of serious harm was assessed as low for 53% of offenders, medium for 36% and high for 11%. Risk of serious harm was assessed as highest for offenders in prison, those aged over 40 and those convicted of violent, sexual and criminal damage offences.

#### Predicting reconviction

- OASys scores were found to be a good predictor of reconviction. 26% of those rated as a low likelihood of reconviction were reconvicted within 24 months, compared with 58% rated as medium likelihood and 87% rated as high likelihood.
- Drug misuse and accommodation were the offending-related needs most predictive of reconviction. Alcohol misuse, emotional well-being and thinking and behaviour were the least predictive.

#### Actions and implications

- The need to test consistency between different assessors and monitor the quality of risk of serious harm assessments and sentence plans was identified. These projects are included in current research plans.

OASys was commissioned after a Home Office assessment, offending-related needs and user review of existing risk/needs assessment tools preferences (e.g. May, 1999; Powis, 2001; Aye Maung & Hammond, 2000).

The system was refined over the course of three pilot studies between 1999 and 2001, involving some 3,000 assessments across 28 Prison Service establishments and 13 probation areas. OASys principally consists of three components which examine different offending-related needs, assess and manage risk of harm, and develop and review a sentence plan.

#### Offending-related factors

These are characteristics associated with criminal activity or reconviction. There are two types: static factors which are not amenable to change (e.g. previous convictions) and dynamic factors which change over time (e.g. substance misuse). OASys includes the following 12 factors:

- offending information
- analysis of offences
- accommodation
- education, training and employability
- financial management and income
- relationships
- lifestyle and associates
- drug misuse
- alcohol misuse
- emotional well-being
- thinking and behaviour
- attitudes.

#### Risk of serious harm screening

Risk of serious harm is defined in the OASys manual as:

...a risk which is life-threatening and/or traumatic, and from which recovery, whether physical or psychological, can be expected to be difficult or impossible.

This screening is always completed and leads to a full risk analysis and risk management plan where risk to self or others is indicated. A summary sheet combines information on the offending-related factors to produce a weighted score indicating the likelihood of reconviction, and presents an overview of the risk of serious harm.

#### The sentence plan

This summarises work which should be completed to address the offending-related factors and manage risk of serious harm issues. As assessments are repeated over the course of a sentence, the sentence plan is reviewed to reflect progress and set new objectives.

The OASys pilots led to many changes. The offending-related factors form was restructured so it had fewer sections and questions in total. Documentation was improved to encourage greater consistency. Also, the risk levels were more clearly defined and the single rating of harm replaced with nine ratings, to allow risks to different groups to be separated.

#### Method

The aim of this study was to explore the data generated in the second OASys implementation pilot held between November 1999 and April 2000. A total of 2,031 offenders were assessed from 17 HM Prison Service establishments and 11 probation service areas. In addition, criminal conviction data were collected from the Police National Computer (PNC) to determine whether offenders were reconvicted following release from prison or from the start of a community sentence.

It should be noted that although the sample used in this study drew from a range of Prison Service establishments and probation areas, the findings should not be read as

**Table 1 Prevalence of offending-related needs (N=1,375)**

| OASys section                               | % with need | Groups with above average need          | Groups with below average need*                          |
|---|-------------|---|--|
| Offending information                       | 55          | Burglary, theft, robbery                | Female, South Asian, age 18–20, age 41+ fraud, probation |
| Accommodation                               | 41          | Sex offence, burglary, criminal damage  | Other offence, probation                                 |
| Education, training and employability (ETE) | 52          | Burglary                                | Age 41+, fraud   |
| Financial management and income             | 23          | Burglary, robbery                       | Age 41+, other offence, probation                        |
| Relationships                               | 33          | Female                                  | South Asian, other offence                               |
| Lifestyle and associates                    | 44          | Burglary, robbery                       | South Asian, age 41+, other offence, probation           |
| Drug misuse                                 | 31          | Burglary, robbery, drugs offence, theft | Age 41+, sex offence, other offence, probation           |
| Alcohol misuse                              | 31          | Criminal damage, violence               | Female, Black, fraud, drugs offence                      |
| Emotional well-being                        | 45          | Female, criminal damage, sex offence    | Drugs offence, other offence                             |
| Thinking and behaviour                      | 52          | Burglary, criminal damage               | Female, fraud, other offence, drugs offence, probation   |
| Attitudes                                   | 30          | Sex offence, burglary                   | Fraud  |

Note \* Above and below-average need groups diverged by at least 10% from the overall mean with a statistically significant difference ( $p < 0.05$ ). Other offences include motoring and public order offences.

representative of the entire offender population and care should be taken in generalising the results. While the sample size achieved was large enough to test the utility of OASys, it only offered limited opportunity to compare the risk/needs profile of different groups of offenders.

### Profile of offending-related needs

An offending-related need is identified when a section score exceeds a threshold (usually around one-third of the maximum score). Table 1 summarises the prevalence of offending-related needs and shows key differences between offender groups. Assessments were only included in this analysis when most or all of the questions in each section of the offending-related needs form were completed. Offending information is included in Table 1 as an indication of criminal history, but is not considered an offending-related need as it is not amenable to intervention.

On average, offenders had 3.8 needs (excluding offending information). The groups with the most needs were offenders convicted of burglary (average 5.4), criminal damage (4.6), robbery or theft (4.4) and prisoners (5.0). Offenders with the fewest needs were those convicted of fraud (2.4) or other offences (2.6), South Asian offenders (2.9), those assessed by the probation service (3.1) and those aged over 40 (3.2). Female offenders had slightly more needs than average (4.0).

There was an association between having one need and having other needs. However, drug misuse and alcohol misuse were rarely found together.

### Risk of serious harm profile

Table 2 shows the risk of serious harm rating given to different groups of offenders. Low risk indicated that there were no significant, current indicators of risk of serious harm. Medium risk indicated identifiable indicators of risk but a change of circumstances was likely to be needed for the offender to cause serious harm. High risk indicated that the offender could cause serious harm at any time.

Each of the sections of OASys allowed the assessor to indicate if the offending-related need being assessed was linked to risk of serious harm. On average, offenders had 1.9 links to harm, although 52% had no links. Details of the current offence suggested a link to harm for 29% of offenders. Other sections were linked to harm for between 14% and 19% of offenders, however the socio-economic sections (accommodation, ETE and financial management) were linked to harm for a maximum of 8% of offenders.

### Prediction of reconviction

The OASys scoring system aims to predict the likelihood of reconviction for each offender. Information on current and previous offending is combined with the offending-related 'need' data. Scores for each section are weighted to reflect the relative strength of their relationship with reoffending. These weightings were developed from studies of offending-related needs (e.g. May, 1999). The total weighted score is divided into three groups:

**Table 2 Risk of serious harm ratings by offender characteristics (N=998)**

| Offender characteristics      | % offenders in risk of serious harm group |              |           |           |           |
|-------------------------------|---|--------------|-----------|-----------|-----------|
|                               | %   | (n)          | Low       | Medium    | High      |
| <b>Sex</b>                    |   |              |           |           |           |
| Male                          | 87  | (870)        | 52        | 37        | 11        |
| Female                        | 13  | (128)        | 59        | 31        | 10        |
| <b>Ethnicity</b>              |   |              |           |           |           |
| White                         | 86  | (835)        | 51        | 37        | 11        |
| Black                         | 9   | (84)         | 57        | 35        | 8         |
| South Asian                   | 3   | (29)         | 62        | 28        | 10        |
| Other                         | 2   | (24)         | 63        | 21        | 17        |
| <b>Assessment site</b>        |   |              |           |           |           |
| Prison                        | 44  | (444)        | 48        | 37        | 15        |
| Probation                     | 56  | (555)        | 57        | 35        | 8         |
| <b>Age</b>                    |   |              |           |           |           |
| 18–20                         | 19  | (253)        | 61        | 29        | 10        |
| 21–24                         | 20  | (191)        | 59        | 35        | 6         |
| 25–40                         | 50  | (687)        | 49        | 39        | 12        |
| Over 40                       | 12  | (158)        | 49        | 33        | 18        |
| <b>Criminal offence</b>       |   |              |           |           |           |
| Violent offences              | 22  | (221)        | 39        | 48        | 15        |
| Sexual offences               | 9   | (87)         | 30        | 48        | 23        |
| Burglary                      | 13  | (126)        | 64        | 27        | 9         |
| Theft & handling              | 15  | (143)        | 62        | 29        | 9         |
| Robbery                       | 8   | (76)         | 36        | 51        | 13        |
| Fraud and forgery             | 5   | (47)         | 68        | 28        | 4         |
| Criminal damage               | 4   | (39)         | 33        | 41        | 26        |
| Drugs offences                | 9   | (94)         | 78        | 20        | 2         |
| Other offences                | 16  | (153)        | 64        | 29        | 7         |
| <b>All offenders assessed</b> | <b>100</b>                                | <b>(998)</b> | <b>53</b> | <b>36</b> | <b>11</b> |

Note: The risk of serious harm results given here were affected by unclear guidance given to the pilot assessors, which resulted in a likely overestimate of overall risk levels.

- low likelihood of reconviction (scores of 0 to 40)
- medium likelihood (scores of 41 to 99)
- high likelihood (scores of 100 to 168).

An assessment of reconviction was made for 757 offenders for whom criminal convictions were traced on the Police National Computer. Reconviction was assessed for a 24-month period following discharge from prison or the commencement of a community order. 26% of the low likelihood group were reconvicted within 24 months, 58% of the medium likelihood group and 87% of the high likelihood group. While this represents a good prediction of reconviction, a comparison with other predictors showed that OASys outperformed clinical tools but not the Offender Group Reconviction Scale (OGRS) which is the actuarial predictor (Copas and Marshall, 1998). A combination of OGRS and OASys produced performance almost equal to OGRS alone (see Methodological note).

**Table 3 Predicting reconviction from offending-related needs (N=757)**

| OASys section                               | % reconvicted          |                     |
|---|------------------------|---------------------|
|   | Offenders without need | Offenders with need |
| Offending information                       | 30                     | 69*                 |
| Accommodation                               | 40                     | 69*                 |
| Education, training and employability (ETE) | 37                     | 64*                 |
| Financial management and income             | 45                     | 74                  |
| Relationships                               | 46                     | 61                  |
| Lifestyle and associates                    | 39                     | 68                  |
| Drug misuse                                 | 41                     | 74*                 |
| Alcohol misuse                              | 50                     | 53                  |
| Emotional well-being                        | 44                     | 58                  |
| Thinking and behaviour                      | 41                     | 61                  |
| Attitudes                                   | 42                     | 74*                 |

Note \* Difference between reconvicted rate for offender with need compared with offenders without need statistically significant ( $p < 0.05$ ).

Section scores were also compared with reconviction outcome. Table 3 shows the reconviction rates for those assessed as having or not having each need. Offending information was highly predictive, as were accommodation, ETE, drug misuse and attitudes. Alcohol misuse, emotional well-being and thinking and behaviour did not appear to predict reconviction when offenders' other needs were statistically controlled. However, the use of statistical data does not fully control for factors outside OASys that could influence reoffending and these results should be treated with some caution.

### Methodological note

The accuracy of the likelihood of reconviction predictions was assessed using the Area Under the Curve (AUC) statistic. OASys achieved an AUC of 0.764 out of 1.0. This is considered a good measure of predictive accuracy. The OGRS actuarial risk predictor (Copas and Marshall, 1998) had an AUC of 0.8 using static factors only. By substituting OGRS for the OASys offending-information score, the AUC of OASys rises to 0.787. This approach will be tested on a larger sample in the OASys Data, Evaluation and Analysis Team's (O-DEAT) programme of reconviction studies.

### References

Aye Maung, N. and Hammond, N. (2000). *Risk of Reoffending and Needs Assessments: the user's perspective*. Home Office Research Study No 216. London: Home Office.

Copas, J. B. and Marshall, P. (1998). The Offender Group Reconviction Scale: the statistical reconviction score for use by probation officers. *Journal of the Royal Statistical Society, Series C* 47, 159–171.

### Discussion

#### Implications for practice

The findings on prevalence of offending-related needs and levels of risk of serious harm provide information about targeting and designing interventions for different groups of offenders. Such information was used in the development of the National Probation Service's targeting guidelines launched in 2004. This research also demonstrated the potential for OASys data to be used in resource allocation within the National Offender Management Service.

The results show that most of the needs assessed in OASys are linked to reconviction. The finding that thinking and behaviour did not help to predict reconviction is surprising given the evidence supporting this link in the wider literature. Possible explanations for this are being explored further.

Although OGRS was a slightly better predictor of reconviction, its combination with OASys produced a strong predictive accuracy while maintaining valuable information on dynamic factors which helps assessors to effectively address the needs of offenders.

#### Future research

Further research is planned:

- to determine the consistency of assessments made by different users
- to measure change in OASys scores over time
- to compare OASys with the juvenile assessment tool ASSET.

A further reconviction study will consider how to improve the predictive accuracy of OASys overall and for different subgroups of offenders.

For a more detailed report see *An evaluation of the Offender Assessment System (OASys) in three pilots 1991–2001* by Philip Howard, Danny Clark and Natasha Garnham. Copies are available from the Home Office website <<http://www.noms.homeoffice.gov.uk/news-publications/policy-consultation/>> (until August 2006).

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