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# Evaluation of Alcohol Arrest Referral Pilot Schemes (Phase 2)

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# Evaluation of Alcohol Arrest Referral pilot schemes (phase 2)

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<sup>1</sup> *\*Dr Franco Sassi was affiliated with the London School of Economics and Political Science when this project started. The project is not part of OECD institutional work.*

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## Executive summary

### Background

Alcohol is frequently involved in violent offences; victims believed the offender(s) to be under the influence of alcohol in 44 per cent of all violent incidents (Chaplin *et al.*, 2011) and it is estimated that alcohol-related crime costs the economy of England and Wales between £8 billion and £13 billion per year (Home Office, 2010). Research has consistently shown links between crime and disorder, 'binge' drinking and the night-time economy (Allen *et al.*, 2003; Hobbs *et al.*, 2003; Matthews and Richardson, 2005).

Alcohol Arrest Referral (AAR) pilots were first introduced by the Home Office in 2007 in four police forces in England as a means of tackling the link between alcohol and offending, in particular in the night-time economy. A second phase of pilots started in eight new police force areas in November 2008 and was funded until September 2010. The pilots built upon positive evidence from healthcare settings, which found that brief interventions helped to reduce alcohol consumption. The aim was to see whether this benefit could extend to a criminal justice setting and specifically, be used to also reduce re-offending.

AAR involves offering a brief intervention to individuals arrested and deemed by a police officer to be under the influence of alcohol. An AAR intervention typically involves one brief intervention session with an AAR worker, but, in some cases 'follow-up' sessions are offered. The majority of interventions were delivered on a voluntary basis, with first sessions tending to be held in custody settings.

This report presents findings from an evaluation of the second phase of AAR schemes<sup>2</sup>. The evaluation took place between March 2009 and June 2010, and includes a six month follow-up of clients (until December 2010). The main aims of the evaluation were:

- to analyse the profile of those engaged by the schemes;
- to establish whether alcohol interventions had an effect on re-offending rates;
- to provide evidence on the cost effectiveness of the schemes;
- to seek evidence of any change in alcohol consumption and wellbeing indicators for those receiving alcohol interventions;
- to identify implementation and delivery lessons that can be applied to any future AAR schemes.

### Approach

In order to address the above aims the evaluation included assessments of process, outcome (including costs) as detailed below:

Process assessment:

- interviews with purposively selected personnel involved in the delivery and running of the pilots;
- observation of interventions;
- examination of scheme documentation;
- interviews with clients who had attended AAR interventions;

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<sup>2</sup> A report on the evaluation of the phase one schemes was conducted by Kennedy *et al* (2012) and can be found at <http://www.homeoffice.gov.uk/publications/science-research-statistics/research-statistics/crime-research/occ101>.

- analysis of a 12-month sample (May/June 2009 to June 2010) of Alcohol Intervention Record (AIR) data.

#### Outcome assessment:

- impact assessment comparing re-arrest in a six-month follow-up study for those who received the intervention with matched individuals not receiving an intervention from within the same police force in a time period before the start of the AAR scheme;
- exploration of factors that might account for any changes in arrest rates, using correlations and regression analyses;
- follow-up interviews with clients who had attended AAR six months after the intervention;
- break-even analysis<sup>3</sup> to determine the level of reduction of re-arrest that would be necessary for the schemes to break even and thus be cost effective.

### Key findings – process assessment

#### The profile of arrestees involved in the AAR

As with the phase one pilot study, this research provided useful information about a group of arrestees who have previously been under-researched. Data on 4,739 arrestees who were given an intervention were analysed. Key findings included:

- the overwhelming majority of arrestees were White (93 per cent) and male (86 per cent);
- 43 per cent of arrestees were aged between 18 and 24;
- the largest proportion of arrestees were assessed as being alcohol-dependent (37 per cent) as assessed by the Alcohol Uses and Disorder Identification Tool (AUDIT) tool<sup>4</sup>;
- the largest proportion of arrestees were arrested for violence offences (around one-third, 36 per cent) followed by drunk and disorderly offences (16 per cent).

#### Clients referred

The eight AAR schemes were developed to address prolific offending mainly for night-time economy type offences, such as drunk and disorderly or alcohol-related violence, and it was anticipated that most referrals would be occasional binge drinkers. The findings above indicate that in practice, a large proportion of clients referred were dependent drinkers (over one-third of clients, 37 per cent). Around half of clients were assessed as being in the harmful and hazardous categories (49 per cent) which are considered to be suitable for a brief intervention.

The offence profile of clients was similar to that anticipated. However, an examination of arrests for both the intervention and comparison groups found that over a half (54 per cent) for the intervention group and just under two-thirds (61 per cent) of the comparison group had no prior history of arrest in the six-months prior to the intervention or 'dummy' intervention. Suggesting that the population of clients referred were not particularly prolific offenders.

#### Implementing the scheme

It was found that good co-operation between custody staff and alcohol workers was important to the effective running of the AAR schemes and that having an

<sup>3</sup> Cost effectiveness analyses were planned but due to the negative or null results from the impact study these were limited to a break-even analysis.

<sup>4</sup> AUDIT is a standardised measure of ten questions about alcohol use and consequences. A score of 20-plus indicates alcohol dependency (Babor *et al.*, 2001).

established custody scheme in place, such as a Drug Interventions Programme (DIP) may smooth the way for delivery and create efficiencies in the management and running of the schemes.

### **The AAR sessions**

The AAR intervention included elements of motivational interviewing, information giving and advice. Respondents across all staff groups interviewed reported that the AAR is unique, compared with other alcohol brief interventions, in that it is more 'criminal justice' in tone, emphasising the risks of further offending.

### **Key findings – outcome assessment**

#### **Impact on re-arrest: intervention group compared with comparison group**

Overall, AAR does not appear to be effective at reducing re-offending (as measured by changes in arrest rates) for those receiving the intervention compared with a matched comparison group. The intervention group had 6 per cent more arrests than the comparison group and this was a statistically significant finding. This result also held for de facto alcohol related offences (where the presence as a factor was more controlled for) and under regression analyses.

Analysis at a scheme level found Scheme A was the only scheme to that found a statistically significant reduction in re-arrests post intervention (6 per cent fewer arrest in the intervention compared with the comparison group). However, this result did not hold up under regression analyses (the result remained in the positive direction but was no longer statistically significant). All other schemes had higher re-arrest rates in the intervention compared with the comparison group.

A series of hypotheses were tested using logistic regression analyses to examine differences in re-arrest rates between the intervention group and the comparison group by age, gender and index offence type. This was done to identify any patterns underlying these results. The regression analyses confirmed that those receiving the intervention were significantly more likely to be re-arrested in the six months post-intervention than those in the comparison group. However, there were no clear sub-groups for whom the scheme appeared to be more effective.

#### **Factors associated with re-arrest: intervention group only**

An examination of factors associated with re-arrest for the AAR client group alone (not compared with the comparison group) shows that a history of previous arrest (for any offence type) is strongly associated with the probability of re-arrest, regardless of other variables, such as age, gender or index offence. However, within the intervention sample, there was a low number of arrests generally.

Higher AUDIT and SIP scores were also found to be associated with higher rates of re-arrest as was being unemployed. The duration of the intervention and referral route were not found to be associated with re-arrest.

#### **Impact on alcohol consumption**

There were statistically significant reductions in alcohol consumption between the time of the intervention and follow up for those receiving the intervention and with whom contact could be made. However, this finding should be treated with caution as there was no comparison group and the finding was based on small numbers.

#### **Cost of the schemes**

The average cost per intervention was £170, with a range of £62 to £826. A break-even analysis indicated that a reduction of 4.7 per cent in re-arrest would be required

for schemes to break even. Only one scheme appeared to demonstrate a sufficient reduction in arrest to break even (Scheme A). This analysis did not take account of the other potential cost benefits of the AAR scheme, which would potentially include health benefits.

### **Conclusion and points for consideration**

The key finding from this study is that, overall, the AAR intervention appears to be ineffective for this client group in terms of reducing re-offending. There was some evidence of a reduction in overall AUDIT scores (which measures alcohol consumption) in line with research in health care settings (Kaner *et al.*, 2009). Furthermore, the scale of criminal justice impacts required to break even in cost terms is such that they have the potential to be cost effective ways of delivering brief interventions. However, their effectiveness may be more beneficial for health purposes than criminal justice ones. Thus, the research presents arguments for custody-based interventions, which screen for alcohol needs and refer clients to appropriate support.

## 1. Introduction

Alcohol is frequently involved in violent offences; victims believed the offender to be under the influence in 44 per cent of incidents of violent offences (Chaplin *et al.*, 2011). It is estimated that alcohol-related crime costs the economy of England and Wales between £8 billion and £13 billion per year (Home Office, 2010). Research has consistently shown links between crime and disorder, 'binge' drinking and the night-time economy (Allen *et al.*, 2003; Hobbs *et al.*, 2003; Matthews and Richardson, 2005)<sup>5</sup>.

Post-sentence interventions already exist to tackle alcohol-related offending. The Criminal Justice Act 2003 allows judges and magistrates to issue community sentences requiring offenders to attend treatment for alcohol-misuse problems. The Alcohol Arrest Referral (AAR) scheme operates at an earlier point in the criminal justice process, at the point of arrest.

The AAR scheme was introduced by the Home Office to explore ways of tackling the link between alcohol and offending, and involves offering a brief intervention to those arrested and under the influence of alcohol. Brief interventions were supported through the *National Alcohol Harm Reduction Strategy* (Cabinet Office, 2004) and the next steps in the strategy (Department of Health and Home Office, 2007) as a means of helping people to identify their harmful or hazardous drinking patterns and advising on ways of reducing alcohol consumption. Brief interventions are characterised primarily by their short length, and may be delivered in one or more sessions, but usually not beyond five (Babor *et al.*, 2006). They usually involve motivational interviewing as part of an assessment of needs (Raistrick *et al.*, 2006). Part of the logic behind brief interventions for alcohol is that when people have just experienced problems linked to alcohol they may be more receptive to changing their behaviour.

There is strong evidence for the effectiveness of brief interventions for reducing alcohol consumption in problematic drinkers for males in primary care settings, such as GP surgeries and emergency care (Kaner *et al.*, 2009). The AAR pilot intended to establish whether the successes of brief interventions could be replicated in a criminal justice context, specifically to reduce re-offending. The first AAR pilots were located in four police forces in England; these took place and were evaluated between October 2007 and October 2008 (Kennedy *et al.*, 2012). The second phase of pilots were located in eight different police force areas in England and were funded between November 2008 and September 2010. The evaluation included clients accessing the AAR schemes between March 2009 and June 2010, with a six month follow-up period lasting until December 2010.

As with the first phase pilots, the AAR scheme comprised a brief intervention session with an AAR worker and, in some cases, 'follow-up' sessions arranged for a later date, if deemed necessary by the worker. Clients were offered the intervention if they were deemed by a police officer to be under the influence of alcohol at the time of the arrest. If the client was assessed as having additional needs they may have been referred to other services outside of the AAR scheme.

The main elements of the AAR intervention can be summarised as:

- the client's drinking patterns and needs are assessed;
- information about the risks of alcohol consumption is provided to the client;

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<sup>5</sup> Binge drinking is defined in many ways, but typically refers to people drinking more than 6 to 8 units (equivalent to 2 to 3 pints of average strength lager, or 3 to 4 175ml glasses of wine) of alcohol in a single session, even if they do not exceed recommended weekly amounts (Raistrick *et al.*, 2006).

- the client is offered practical advice and techniques for reducing their alcohol consumption and managing the risks of drinking;
- if necessary, following assessment, the client is referred either for a follow-up session or to another agency for further assessment/treatment.

The main aims of the evaluation were:

- to analyse the profile of those engaged by the schemes;
- to establish whether alcohol interventions had an effect on clients' re-offending;
- to provide evidence on the cost effectiveness of the schemes;
- to seek evidence of any change in alcohol consumption and wellbeing indicators for those receiving alcohol interventions;
- to identify implementation and delivery lessons that can be applied to any future AAR schemes.

### **Structure of report**

The rest of the report is structured as follows. Section two provides details of the methodology used in the evaluation and the limitations of the design. Further details are also provided in Appendix A. Section three provides an overview of each of the pilot schemes including the throughput of cases and section four discusses the characteristics of clients accessing the schemes. Section five presents the findings from the outcome assessment and addresses the following questions: are the pilot schemes effective in reducing re-offending rates; what models of AAR intervention or client characteristics are associated with better outcomes, if any, and; what are the costs of the pilot schemes and any potential savings? Section six then details the key findings from the process assessment before the conclusions and discussions in section seven.

The remaining appendices provide additional results from the outcome analyses (appendix B) and further information on client characteristics (appendix C). A copy of the Alcohol Intervention Record (AIR) is included at appendix D and there are detailed references and bibliography lists.

## 2. Methodology

The evaluation aims were addressed using a mixed methods approach using both qualitative and quantitative data. The evaluation was broadly structured around process and outcome (including cost) assessments. The evaluation took place between March 2009 and June 2010, with six month follow-up data on clients being collected until December 2010. Further details of the methods used are provided in Appendix A.

This section details the main sources of data that were used, methods of data collection and analyses, and the limitations of the study.

### Process evaluation

The process evaluation assessed the effectiveness of the schemes' delivery and key factors associated with successful implementation. Data were obtained from a number of sources, including monitoring data from Alcohol Intervention Records (AIRs), interviews with partners from pilot sites and observations of interventions.

#### Qualitative data

A range of strategic and delivery partners were purposively selected for interview from each of the schemes, at three points during the evaluation:

- time 1, at the beginning of the pilots (to gain a wider perspective of the role of AAR within areas);
- time 2, towards the middle of the pilots; and
- time 3, towards the end of the pilots.

Some respondents were interviewed more than once. In total, 163 interviews were conducted:

- 87 with operational staff delivering interventions;
- 49 with senior AAR leads responsible for delivering the schemes; and
- 27 with external strategic partners.

Table A1 (Appendix A) details the breakdown of interviews by participant group across the three time periods.

A small sub-sample of purposively selected AAR clients were also interviewed, in-depth, to establish their experiences and views of the AAR scheme. The evaluation team interviewed 50 AAR clients; all had received just one AAR session. The interviews were conducted up to one month after the client had their first contact with the AAR scheme.

A total of 16 AAR brief intervention sessions were observed, using a structured observation record over two points, towards the beginning and towards the end of the evaluation period. The purpose was to establish if and how the main processes identified in interviews with scheme staff were put into practice.

#### Quantitative data

The main source of quantitative data on AAR clients was the AIR (a copy of the AIR form is included at Appendix D), which all schemes completed for each of the clients they saw. The AIR included data relevant both to the intervention and for monitoring and evaluation purposes. The AIR was completed at the client's first appointment with an AAR worker, and was based on a version introduced during the first phase pilots. The AIR comprised:

- part one – details of the client, including name, date of birth, gender and contact details;
- part two – gathers information on:
  - client's alcohol consumption patterns, using the Alcohol Uses and Disorder Identification Tool (AUDIT<sup>6</sup>),
  - behavioural and attitudinal issues associated with alcohol, using the Short Inventory of Problems (SIP<sup>7</sup>), and
  - self-reported offending history over the previous six months and the offence they were arrested for;
- part three - provides information about any onward referrals;
- consent section – for clients to give their agreement to be included in the evaluation.

Amendments to the AIR form were made during early implementation of the schemes. In order to have comparable records that were consistent across all schemes for the whole evaluation period, a 12-month sample of cases was used as the basis for analysis from May/June 2009 to June 2010.

Completed AIRs for this time period were forwarded to the evaluation team under an agreed protocol, and entered into secure databases for analysis. A total of 5,928 AIR forms were forwarded. After removing duplicate AIRs (277), those where consent was incomplete (830) and those which could not be matched to police records (82), 4,739 AIRs remained to be included in the analyses. The intervention group sample represented 80 per cent of the total number of AIRs received by the evaluation team for the evaluation period.

The proportion of valid AIRs varied between schemes, from 66 per cent in Scheme H to 91 per cent in Scheme F (see Table A2, Appendix A). The number of invalid cases removed from the sample did affect the distribution of throughput of cases by scheme. For example, Scheme H submitted the second highest number of AIRs, but almost one-half of the records were removed from the sample as invalid records (primarily due to lack of consent to share data) so they were third in terms throughput of valid cases. Unless stated otherwise, analyses in the report are based on the 4,739 cases as the quality of these data could be verified.

## Outcome analysis

The outcome analysis addresses three key questions.

- *Is the AAR scheme effective in reducing re-offending?*
- *Which, if any, models of AAR intervention or client characteristics are associated with better outcomes in the AAR scheme?*
- *What is the cost of the scheme and what are the potential savings?*

The methods used to address each of these questions are presented below.

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<sup>6</sup> AUDIT is a validated and standardised measure that comprises a set of ten questions about alcohol consumption and the individual's experiences through alcohol. The responses are summed and, depending on the score, drinkers may be classified as being hazardous (8–15 points), harmful (16–19 points) or dependent drinkers (20-plus points). Those scoring 0–7 are classified as 'no risk' for the purposes of the study (Babor *et al.*, 2001).

<sup>7</sup> SIP is a validated tool that collects information about the psycho-social consequences of drinking. The SIP is a short version of the Drinker Inventory of Consequences (DrinC), which was developed to assess the consequences of drinking in five domains among non-dependent drinkers presenting for treatment (Forcehimes *et al.*, 2007).

### **Is the AAR scheme effective in reducing re-offending?**

The impact of alcohol interventions on re-offending was assessed using arrest rates as a proxy measure for re-offending<sup>8</sup>. This was done by examining anonymised police custody records for 4,739 AAR clients (the intervention group) six months prior to their intervention, and comparing this with the number of arrests in the six months<sup>9</sup> following the intervention. The difference in the arrest rates between the two times were compared with the difference for those of a retrospectively matched comparison group (comprising 4,711 individuals).

#### ***Constructing the comparison group***

Intervention group clients were matched to their own arrest records by using their initials and date of birth. The comparison group was constructed from arrestees from within the same police force area in a 24-month period up to September 2008 (i.e. at least 12 months prior to the start of the AAR pilot). The 24-month period was to allow a sufficient number of cases from which to match to the intervention group.

The comparison group was matched to the intervention group on a case-by-case basis, using offence type, gender, age band and month of arrest, and (for offences that were not de facto alcohol related such as drink driving) the time of arrest had to occur between 9 p.m. and 6 a.m. (as a proxy for alcohol-related offending in the night time economy). The date of the matched index offence was classed as the dummy intervention date to allow comparisons before and after the specified offence.

The offences detailed in police databases were mapped on to the same offence categories as used in the Alcohol Intervention Record (AIR) data analyses<sup>10</sup>. For both the intervention and comparison groups, all arrests (except for the index offence) prior and subsequent to the index offence were taken into account in the analysis, regardless of the time of arrest or offence type. See section 3 of Appendix A for further details of the process of selecting a comparison group).

### **Which, if any, models of AAR intervention or client characteristics are associated with better outcomes in the AAR scheme?**

A number of statistical analyses, including examination of correlations and regression analyses to determine which characteristics of the intervention group were associated with higher or lower re-arrest rates were performed. These analyses could only be performed on the intervention group as comparable information was not available for the comparison group.

In addition, to the above analyses follow-up telephone interviews were attempted with AAR clients six months after the AAR took place. The interviews included re-assessing individuals AUDIT and SIP scores to see whether the AAR intervention

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<sup>8</sup> Data on arrests were used as a proxy measure for offending. There are limitations with arrest rates as arrests do not equate to the actual number of offences being committed and are susceptible to police activity and enforcement. In addition, arrests may occur outside of the police area, which would not be included in the analysis. However, data on convictions are subject to delays in being recorded and do not include incidents for which no further action may be taken but which nevertheless may constitute an offence.

<sup>9</sup> A period of six months pre-intervention and six months post-intervention or dummy intervention was used, as with the phase one study, because this provided the minimum time needed to examine post-phase data whilst allowing sufficient throughput of AAR clients to construct the intervention sample.

<sup>10</sup> There was a wide variety of offences described within police databases and many were recorded too infrequently to warrant separate variables for analysis so they were mapped on to the same eight categories as used in the AIR analyses. For example, those within the 'violence' category include listings such as 'GBH', 'ABH', 'violence', 'violence against the person', 'aggression', 'assault', and 'common assault'. Offences coded as 'drunk and disorderly' included police descriptions such as 'disorderly conduct' (where a note of alcohol was also found in the data), 'drunk and rowdy', 'drunk and incapable' and 'disorderly behaviour'. Public order offences included 'section 4', 'section 5', 'Public Order Act', 'public order' and 'causing disruption'. Acquisitive offences included listings such as 'theft from vehicle', 'burglary', 'theft from shop', and 'shoplifting'.

had impacted on the individual's level of alcohol consumption and related psycho-social problems.

A total of 667 clients were able to be followed-up and therefore included in analyses. Of the 4,739 individuals in the intervention group sample, 1,943 consented to take part in interviews and provided telephone numbers. From those contacts the achieved response rate was 34 per cent (n = 667). See section 3 of Appendix A for more details.

### **What is the cost of the scheme and what are the potential savings?**

The eight schemes provided retrospective cost data relating to the implementation and running of schemes, including start-up costs and ongoing costs. This information was used to calculate the cost per intervention being delivered. The potential benefits of reductions in offending were calculated using costs of crime estimates (based on a Home Office report (2005)<sup>11</sup>). Then a break-even analysis was performed to assess the reductions in arrests that would be required for the value of the benefits to match the costs of the schemes (see section 4, Appendix A for more details).

### **Limitations of the design**

A limitation of this study is that it was not possible to construct a comparison group from within the police force areas for the same time period as the intervention that also included data on alcohol consumption. Attempts were made to construct a more robust comparison group, for instance of those eligible for AAR but who, for some reason, were not offered it. But these failed, because data on arrestees' alcohol use were not available routinely or were logistically too difficult to obtain (see section 2, Appendix A for further details of feasibility work undertaken). Furthermore, during the time of the AAR programme, schemes reportedly either made an offer of, or delivered brief interventions to, all eligible clients, leaving none available to include in a comparison group

In order to increase the likelihood that offences were alcohol related a proxy indicator for alcohol-related offending of the timing of the offence between 9 p.m. and 6 a.m. was included within the matching criteria, as this is when alcohol-related offending is most likely to occur. This was not a perfect measure, but in the absence of specific data on alcohol use of comparison group individuals it was felt to provide some screening. The evidence is strengthened somewhat by analyses performed on de facto alcohol-related incidents (drink driving and drunk and disorderly) for the intervention and comparison group, in which the presence of alcohol as a factor in the offence is more robustly controlled for.

In addition to problems around the construction of the comparison group, the achieved response rate of 34 per cent for the follow-up interviews with clients was low. All individuals providing consent and contact details were contacted, but problem attrition was due overwhelmingly to either invalid telephone numbers being provided or simply no one picking up the telephone. Attempts were made to improve the response rates by increasing the number of times a researcher attempted to make contact with the client before they were removed from the contact list. However, this did not improve response rates.

An analysis of the characteristics of the interview group found that the 667 clients were generally representative of the intervention group in terms of age range, gender, ethnicity and offending history. However, the low response rate compared

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<sup>11</sup> Home Office On Line Report 30/05 *The Economic and Social Costs of Crime of Crime Against Individuals and Households 2003/04*. Available at <http://rds.homeoffice.gov.uk/rds/pdfs05/rdsolr3005.pdf>.

with the total population receiving AARs, and the lack of comparison group, means that the findings should be treated with caution.

### **Analysis of data**

Qualitative data were analysed based on a framework approach: data are organised and grouped according to analytic themes, which are themselves based on the research questions. Data from interviews with delivery partners and AAR clients were transcribed and coded using coding software (WEFT QDA<sup>12</sup>). The coding was used to group the data according to themes.

Quantitative data from AIR forms were manually inputted or submitted electronically by schemes and collated onto a database. The data were then assessed for relationships between variables and the main outcomes of interest. Police custody data were sorted and coded using Excel. Statistical analyses of quantitative data were performed using STATA software.

Throughout this report, the term 'significant' means that the result was statistically significant using the appropriate statistical test.

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<sup>12</sup> WEFT QDA is a qualitative analysis software package that allows transcripts of interviews to be coded according to a researcher-defined coding system. The software then allows different elements of the transcript to be grouped according to the codes given.

### 3. Overview of the AAR pilot schemes

This section describes the processes involved in the AAR.

#### Scheme characteristics

Pilot sites were given a degree of autonomy in setting up their AAR schemes to best meet their local needs. Details of schemes' referral routes, the location of first AAR sessions and the average length of the first session are included in Table 1 and discussed in more detail below.

**Table 1 Referral routes and processes used by scheme**

Scheme reference	Primary referral route	Primary location for first intervention	Maximum number of sessions offered	Average length of first session (minutes)
A	Voluntary	Police custody	1	20
B	Voluntary	Police custody	2	53
C	Mandatory (conditional bail)	Non-custody venue	3	35
D	Voluntary	Police custody	3	42
E	Voluntary	Non-custody venue	3	26
F	Voluntary	Non-custody venue	3	48
G	Voluntary	Police custody	2	36
H	Voluntary	Police custody	3	18

(n=4,284)

**Note**

- The main location for the intervention delivery is based on where the initial Alcohol Intervention Record (AIR) form was undertaken, which was gleaned from interviews with scheme partners.

#### Referral routes

Schemes used two main referral routes, broadly described as voluntary or mandatory. Clients were offered the intervention if they were deemed by the arresting officer or custody sergeant to be under the influence of alcohol when arrested. First interventions that were delivered in custody were done on a voluntary basis as they occurred before an arrestee was 'disposed' from custody; at this point the Alcohol Intervention Record (AIR) was completed. Mandatory type routes involved a client being referred as a 'condition' of a conditional caution or conditional bail. Mandatory routes tended to be used for clients who were referred to an appointment outside of custody, particularly second appointments, although voluntary referrals may also be made to 'outside' appointments. Voluntary referrals were the most common, used in 75 per cent of cases.

#### Operating hours

All schemes employed AAR workers in custody but custody coverage differed between schemes. For example, one scheme had full-time AAR workers whilst others had more part-time arrangements, such as three days a week. If a client was arrested when a worker was available, the first intervention tended to be delivered in custody on a voluntary basis. When a worker was not available, appointments were generally made for a later date by custody staff, usually away from the custody suite.

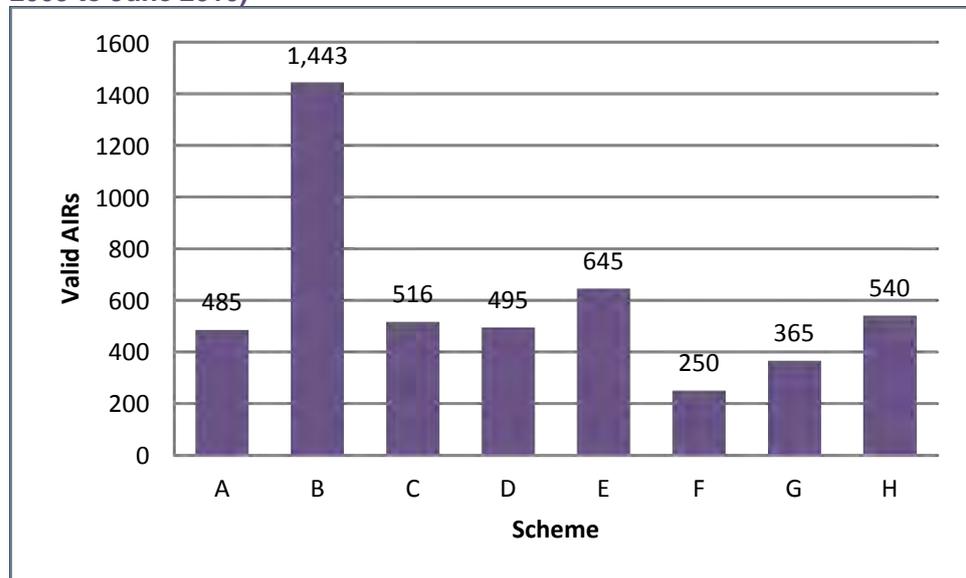
### Number and length of sessions

Only Scheme A limited their AAR scheme to a maximum of one session. Other schemes offered one or two further sessions if deemed appropriate by the AAR worker. First sessions lasted on average between 18 and 53 minutes, with the range of session length from 3 to 170 minutes.

### Throughput of the AAR schemes

Figure 1 shows the breakdown of case throughput by scheme for the 12-month sample of valid AIR cases<sup>13</sup> used in analyses from May/June 2009 to June 2010<sup>14</sup>. Scheme B has by far the highest throughput of cases at 1,443 (30 per cent of all valid AIRs). There do not appear to be any particular scheme set-up differences that would account for the varying levels of throughput (as detailed in Table 1). All schemes achieved target throughput numbers as stated on their service level agreements.

**Figure 1 AAR schemes throughput as measured by number of valid AIRs (May/June 2009 to June 2010)**



(n= 4,739)

<sup>13</sup> As noted in section 2 Methodology, the distribution of valid cases is slightly different to that based on all AIRs submitted. As the evaluation team could only verify the quality of the valid returns figures are based on valid AIRs. See Table A2 Appendix A for throughput based on AIR returns for the 12-month sample period.

<sup>14</sup> For the whole pilot period November 2008 to June 2010 a total of 11,357 first appointments were reported to the Home Office for monitoring purposes. However, monitoring data were often incomplete and as the evaluation team were not responsible for quality assuring these data, the analyses presented in the report are based on the valid AIR forms returned for the 12-month period May/June 2009 to June 2010 when the AIR form remained unchanged. During the same period, 740 second appointments were reported to the Home Office; however, second appointments were recorded extremely inconsistently and cannot be assumed to represent the actual number of second appointments delivered.

## 4. Characteristics of clients accessing the AAR scheme

This section examines the profile of Alcohol Arrest Referral (AAR) clients in terms of the offences they were arrested for and demographic characteristics, such as age, gender and ethnicity. The information is taken from the database of 4,739 valid Alcohol Intervention Record (AIR) forms. However, base numbers for different analyses will vary due to missing data fields.

### Demographics and offending profile

#### Client demographics

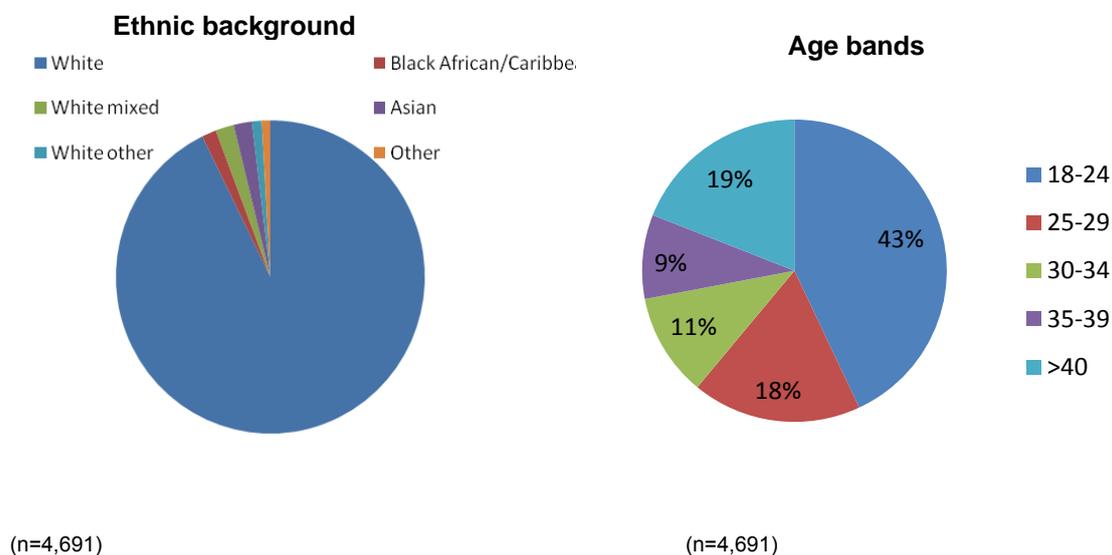
The overwhelming majority of clients were male (86 per cent) and White (92 per cent), with the average age across schemes being 31, and the largest proportion of clients being in the 18- to 24-year-old age band (43 per cent) (see Table 2 and Figure 2). This was a similar profile to clients in the phase one pilot and there were no significant variations between the eight schemes in phase two in terms of age, gender or ethnic background of clients.

**Table 2 Gender breakdown for AAR clients, by scheme**

Scheme	A	B	C	D	E	F	G	H	Overall
<b>Male (%)</b>	86	82	81	91	89	84	83	88	<b>86</b>
<b>Female (%)</b>	14	18	19	9	11	16	17	12	<b>14</b>

(n=4,739)

**Figure 2) Ethnic backgrounds and age bands of clients, all schemes**



#### Index offences

Data on the offence the client was arrested for (the index offence) were gathered via a free text question on the AIR form, which the AAR worker completed based on clients self-report. This was then coded and mapped to one of the following broad offence categories:

- violence;
- criminal damage;
- drink driving;

- drugs;
- drunk and disorderly;
- other, public order and acquisitive crime.

Table 3 shows the breakdown of index offence types for the AAR group.

The highest proportion (36 per cent) of offences was in the ‘violence’ category (which included for example: assault, common assault, attempted murder and violent disorder). Specific alcohol-related offences of drink driving and drunk and disorderly accounted for just over one-quarter of offences (27 per cent)<sup>15</sup>.

**Table 3 AAR clients’ arrest offences**

Index offence type	Violence	Criminal damage	Drink driving	Drugs	Drunk and disorderly	Other	Public order	Acquisitive
<b>Total</b>	1,713	462	487	154	782	305	167	562
<b>Percentage of total (%)</b>	36	10	10	3	16	6	4	12

(n=4,632)

### Self-reported offending histories

Data on clients’ self-reported offending in the six months prior to their arrest were also obtained in the AIR. These are useful additional data on offending levels because they were given in confidential settings and refer to incidents that might not have been detected in police data.

Self-reported offending was based on six offence types listed in the AIR, including:

- abusive to intimate partner;
- threatened someone verbally;
- threatened someone with a weapon;
- kicked or punched someone;
- attacked someone using weapon; and
- deliberately damaged property.

These data are shown in Table 4. The most frequently occurring offence in the six months prior to arrest was: being abusive to a current or past intimate partner, including verbal and physical abuse (12 per cent of all offences)<sup>16</sup>.

Clients were also asked if they had been drinking at the time of the self-reported offence. The offence with by far the highest rate of drinking at the time of the offence was ‘Kicked or punched someone’. Around 12 per cent of offences of ‘Attacked someone with a weapon’ and ‘Damaged property’ were committed whilst drunk and around 10 per cent of ‘threatened someone with a weapon’. But these were not the most frequently occurring offences reported by AAR clients.

<sup>15</sup> The proportion of clients with different Alcohol Uses and Disorder Identification Tool (AUDIT) categories was analysed by offence type. The AUDIT profile was broadly similar across all index offence types with the exception of slightly higher numbers for those with acquisitive crime offences in the dependent category (see figure C1 in Appendix C for further details).

<sup>16</sup> It is not possible to compare offence types (at the time of referral) with previous self-reported offending data, as these were recorded in different ways.

**Table 4 AAR clients' self reported offences**

Self-reported offence type	Total offences (%)	Mean number of offences per AAR client	Number 'always drinking' at time of incident (% of total)	Clients 'sometimes or always drinking' at time of incident (% of total)
Abusive to intimate partner	12.0%	2.30	8.4%	3.0%
Threatened someone verbally	10.4%	2.00	4.7%	1.5%
Threatened someone with a weapon	4.0%	0.79	10.2%	7.4%
Kicked or punched someone	1.4%	0.28	44.0%	13.1%
Attacked someone with a weapon	1.1%	0.22	12.2%	2.2%
Damaged property	1.7%	0.34	12.2%	3.5%

(n=4,739)

### What 'types' of drinkers are referred?

#### AUDIT scores

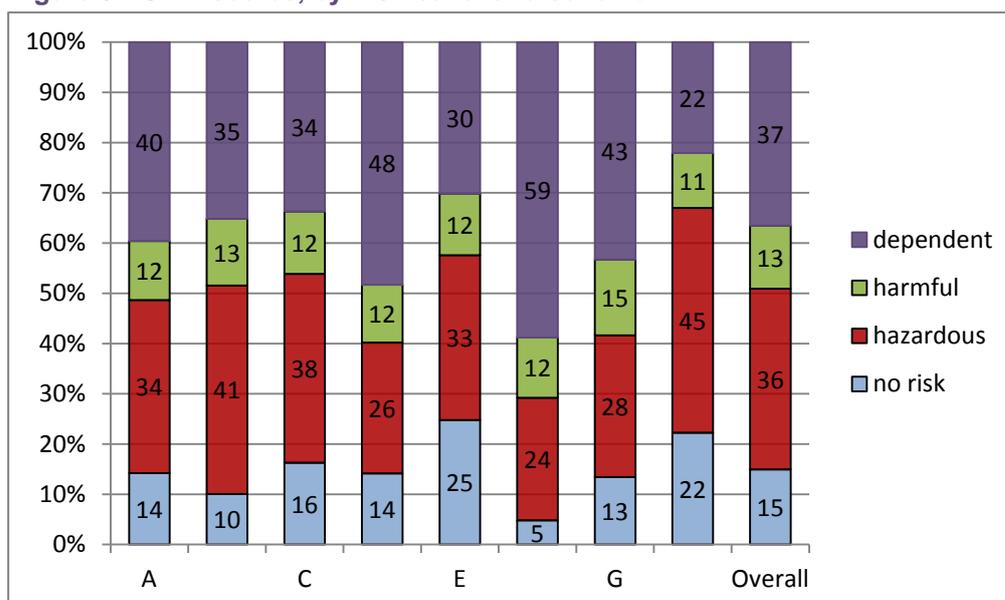
Alcohol Uses and Disorder Identification Tool (AUDIT), a standardised test for measuring alcohol consumption and risk, was included as part of the AIR to determine into what category of drinker clients fell. Scores of between 8 and 15 (inclusive) are considered 'hazardous' drinkers; between 16 and 19 inclusive, 'harmful' and 20-plus, 'dependent'. Those scoring 0 to 7 inclusive are considered to have 'no risk'.

Overall, the largest proportion of clients (37 per cent) was in the dependent drinker category, followed closely by hazardous drinkers (36 per cent). Harmful drinkers made up 13 per cent of clients and 'no risk', 15 per cent. There was little variation in proportions in each AUDIT category across schemes (Figure 3 provides the breakdown of AUDIT scores, by risk band and scheme). The overall profile is similar to that identified in the phase one evaluation<sup>17</sup>.

Evidence from other studies on brief interventions for alcohol based in health settings suggests that they are most effective for those in the harmful/hazardous category and not effective for dependent drinkers or those with more severe alcohol problems (Raistrick *et al.*, 2006). The target audience of harmful and hazardous drinkers accounted for just under half (49 per cent) of clients across the AAR schemes.

<sup>17</sup> The evaluation of the first phase pilots found that 38 per cent of clients were in the 'dependent' category, 35 per cent were 'hazardous', 11 per cent were in the 'harmful' category and 16% were 'no risk'.

**Figure 3 AUDIT scores, by 'risk band' and scheme**



n = 4,737

### Alcohol-related consequences

The Short Inventory of Problems (SIP) tool is designed to assess (in more detail than the AUDIT) psycho-social alcohol-related consequences. The highest average scoring SIP item, across all schemes, was item 6, indicating most client agreement with the following: *'When drinking, I have done impulsive things that I regretted later'*. The lowest average scoring SIP item was item 13, *'My drinking has damaged my social life, popularity, or reputation'* (average scores for individual questions can be found in Table C1, Appendix C).

A large positive correlation was found between the total average AUDIT score and the total SIP score, demonstrating that clients with more risky drinking behaviours were also likely to experience psycho-social problems.

### Overview of Alcohol Arrest Referral schemes key points

- AAR schemes were given a degree of autonomy in how to set up and run their pilots. Five schemes preferred to deliver interventions in police custody whilst three used non-custody venues. The majority of referrals (75 per cent) were on a voluntary basis, but schemes met service level agreements for use of mandatory routes. The number and length of sessions varied between schemes.
- The AAR scheme was developed to address mainly night-time economy type of offences, such as drunk and disorderly offences or alcohol-related violence. It was anticipated that most referrals would involve occasional binge drinkers scoring in the harmful and hazardous range on AUDIT.
- In practice, clients referred to AAR schemes had much higher AUDIT scores, with a higher percentage of dependent drinkers (37 per cent) than anticipated. The most common arrest offence for AAR clients was violence (36 per cent), followed by drunk and disorderly (16 per cent).
- AAR clients were overwhelmingly White (92 per cent) and male (86 per cent), with a large proportion aged under 29.

## 5. Outcome assessment

This section details the findings of the outcome assessment. The main aims of the outcome evaluation were to examine the potential effects of AAR schemes on reducing alcohol consumption and reducing re-offending. By quantifying these benefits (to individuals and society) in financial terms and looking at the cost of delivering AAR schemes, it is possible to assess whether the AAR schemes represent value for money. The questions below sought to address the above outcome evaluation aims and they are answered in turn in this section.

1. *Is the AAR scheme effective in reducing re-offending rates?*
2. *Which, if any, models of AAR intervention or individual client characteristics are associated with better outcomes in the AAR scheme?*
3. *What is the cost of the scheme and what are the potential savings?*

### Is the AAR scheme effective in reducing re-offending rates?

The overall conclusion from the analysis of re-arrest rates (used as a proxy for re-offending) was that AAR did not appear to reduce re-arrest rates for those receiving the intervention, compared with a matched comparison group. The combined intervention group (for all schemes) had 6 per cent more arrests post-intervention than the comparison group and this result was statistically significant. This result held true during regression analysis and for de facto alcohol-related offences only.

One scheme, A,<sup>18</sup> did have a positive impact showing a statistically significant reduction in arrest following the intervention, but this was overshadowed by the negative or null results in the other seven forces, and the result did not hold up during regression analyses.

An examination of the offending histories of both the intervention and comparison groups found that the population of clients identified within the pilot do not tend to have a substantial histories of offending. The results of the analyses of offending histories, difference-in-difference analyses and regression results are presented in turn below.

### Offending histories of the intervention and comparison group

This research question was addressed through a comparison of police recorded arrests for the sample of AAR clients (n=4,739) with a retrospectively matched comparison group from within the same eight police force areas (n=4,711).

The arrest data obtained from police records revealed that the majority of individuals in both the intervention and comparison groups had not been arrested in the six months before or the six months after the arrest leading to the intervention or dummy intervention – between 54 per cent for the intervention group and 61 per cent for the comparison group. This finding was similar to phase one which found that over 60 per cent of individuals had no arrest history, and is consistent with a study of arrests around licensed premises in the West Midlands, which found that around 40 per cent of those arrested for one or two violent offences had no other criminal involvement over a period of several years (Donkin and Birks, 2007). In addition, only a few individuals had over five offences in either the pre- or post-phase.

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<sup>18</sup> Scheme A reduced re-arrests for drink driving and drunk and disorderly offences, in particular.

Given that AAR schemes targeted a large number of arrestees coming through custody suites, data on AAR clients provide a good picture of the population of alcohol-related offenders. These findings indicate that, in general, the population studied does not tend to have a substantial history of offending (at least for the six-month pre- and post-intervention periods examined) and when they do they are not generally prolific. It also precludes the possibility that any observed changes in overall rates of arrests would be driven by a minority of people.

#### **Changes in overall numbers of offences pre- and post-intervention**

A breakdown of simple numbers and changes in pre- and post-intervention offences, for both intervention and comparison group samples, are provided in Tables 5 and 6. Overall, there were a higher number of arrests in the post-phase for the intervention group (2,946), compared with the pre-phase (2,793) (a negative result), but fewer arrests in the comparison group (a fall of 151 offences from 2,615 to 2,464).

For the intervention group, increases were seen in the number of arrests for acquisitive, drugs, drunk and disorderly, and 'other' offences, whilst the remaining categories had decreased. The overall increase in arrests was heavily affected by a markedly higher number of post intervention arrests in the 'other' category, which increased by 278 offences.

The diversity of the 'other' category rendered analysis of the individual offence types within it impractical. However, as individuals in both the comparison group and the intervention group had arrests in a range of categories (in both the pre- and post-phases) it is unlikely that any particular offence types were driving changes in overall re-arrest rates. It is interesting to note that the number of arrests between the pre- and post-phases for 'other' offence types increased in both the intervention and comparison samples, suggesting that changes in local police enforcement policy or other contextual factors were not responsible for the differences observed.

**Table 5 All pre- and post-index arrests (intervention group)**

	Acquisitive	Criminal damage	Drink driving	Drugs	Drunk and disorderly	Public order	Violence	Other	Total
<b>Number of pre-arrests</b>	689	249	63	76	188	313	570	645	<b>2,793</b>
<b>Proportion of all pre-arrests (%)</b>	25	9	2	3	7	11	20	23	
<b>Number of post-arrests</b>	748	193	28	88	207	261	498	923	<b>2,946</b>
<b>Proportion of all post-arrests (%)</b>	25	7	1	3	7	9	17	31	
<b>Difference between pre- and post-phases (percentage change)</b>	+59 (8.7%)	-56 (22.5%)	-35 (55.6%)	+12 (15.8%)	+19 (10.1%)	-52 (16.6%)	-72 (12.6%)	+278 (43.1%)	<b>+153 (5.4%)</b>

(n=4,739)

**Table 6 All pre-and post-index arrests (comparison group)**

	Acquisitive	Criminal damage	Drink driving	Drugs	Drunk and disorderly	Public order	Violence	Other	Total
<b>Number of pre-arrests</b>	764	245	80	71	108	243	490	614	<b>2,615</b>
<b>Proportion of all pre-arrests (%)</b>	29	9	3	3	4	9	19	23	
<b>Number of post-arrests</b>	724	165	69	49	109	195	407	746	<b>2,464</b>
<b>Proportion of all post-arrests (%)</b>	29	7	3	2	4	8	17	30	
<b>Difference between pre- and post-phases (percentage change)</b>	-40 (5.2%)	-80 (32.8%)	-11 (13.8%)	-22 (31.0%)	+1 (9.0%)	-48 (19.8%)	-83 (17.0%)	+132 (21.5)	<b>-151 (5.8%)</b>

(n=4,711)

## Exploration of changes in arrest rates: Intervention group compared with comparison group

### *Difference-in-difference analyses*

A difference-in-difference analysis was used to determine whether the changes in arrest rates (pre- and post-intervention for both groups) were statistically significant. Table 7 provides a breakdown of the results, which show the following.

- Overall, the intervention group had more arrests post-intervention than the comparison group and the difference-in-difference (between the two groups and pre- and post-phases) was 6 per cent. This result was statistically significant (in the 'negative' direction).
- These findings are slightly different to findings in phase one, which found a small non-significant reduction in re-arrest rates in the intervention group, compared with the comparison group overall.
- Scheme A showed a lower number of arrests post-intervention than the comparison group and the difference-in-difference of 6 per cent was statistically significant in the 'positive' direction.

**Table 7 Summary difference-in-difference in re-arrest rates between intervention and comparison groups, by scheme**

Scheme	Comparison (C) or intervention (I) group	Difference in arrest rate	Difference-in-differences	Statistically significant (S) non-significant (NS)	Direction
A	C	0.31	0.06	S	Positive
	I	0.25			
B	C	0.31	-0.02	NS	Negative
	I	0.34			
C	C	0.19	-0.11	S	Negative
	I	0.31			
D	C	0.23	-0.04	NS	Negative
	I	0.28			
E	C	0.12	-0.11	S	Negative
	I	0.24			
F	C	0.19	-0.17	S	Negative
	I	0.37			
G	C	0.26	-0.07	S	Negative
	I	0.34			
H	C	0.177	-0.08	S	Negative
	I	0.26			
Overall	C	1.787	-0.06	S	Negative
	I	2.39			

#### Notes

- The results are presented before adjusting for demographics, offending histories, index offence type, scheme area, and other key variables.
- A positive direction indicates fewer re-arrests amongst the intervention group compared with the comparison group; a negative direction indicates the reverse.

The intervention population for Scheme A did not differ significantly from other schemes in terms of Alcohol Uses and Disorder Identification Tool (AUDIT) profile, age, gender, offending histories and index offence profile. So the apparent deviation in results cannot be explained on these grounds. However, there were two key

differences in the way Scheme A operated, the effects of which have not been empirically tested. Firstly, interventions were shorter (on average 20 minutes) and limited to one intervention session. Only one other scheme had shorter sessions, but in this scheme a maximum of three intervention sessions were offered. Qualitative data from Scheme A revealed that where clients were identified as having high-level alcohol needs, a referral was made to an external alcohol treatment agency. The content or length of any onward referral is not known and therefore could, potentially, have an impact on individuals.

The second factor was that the socio-economic profile of Scheme A clients differed from other schemes, with clients more likely to be in employment. An analysis of outcomes amongst the client group testing a number of different scheme and client characteristics found that unemployment at baseline was linked statistically to higher chances of re-arrest (see later discussion on what if any models of AAR interventions or client characteristics are associated with better outcomes). Qualitative data from staff respondents suggest that being in employment may provide stronger motivation to change behaviour, as for these clients, there is 'more to lose' by being involved in anti-social or criminal behaviour. However, the conclusions that may be drawn from this are limited, as the comparison group was not matched on employment status and so the differential impact of employment status on outcomes of the AAR intervention cannot be tested empirically. This may be an area for future exploration.

### ***Logistic regression***

Logistic regression, examining the effects of age, gender, and month of index offence, index offence type and number of 'pre-intervention' arrests on arrest rates for intervention and comparison groups was performed to identify any patterns underlying the results. Regression analysis provides a more realistic assessment of impacts, compared with a series of single significance tests, because it takes account of all relevant variables in examining the independent variable of interest in turn (in this case the likelihood of re-arrest)<sup>19</sup>.

The regression analyses confirmed that, overall, those receiving the intervention were more likely to be re-arrested in the six months post-intervention than those in the comparison group and this was still statistically significant (see Table 8). The positive result for Scheme A was, however, no longer statistically significant.

### ***Analyses for de facto alcohol-related offences only***

Difference-in difference and regression analyses were undertaken for drunk and disorderly and drink driving index offence types only. These were done to identify if results were different if only individuals arrested for de facto alcohol-related offences were included - where the presence of alcohol as a factor in the arrest was more fully controlled for. Tables B1 and B2 in Appendix B show the results.

Overall, the impact of the schemes was still in a negative direction, i.e. more arrests following the interventions, and this was statistically significant. However, Scheme A had a 'positive' result, which was statistically significant, even after controlling for key variables.

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<sup>19</sup> This analysis approach was preferred over a comparison of means because the effects of age, gender and offence type are model estimates based on the entire sample, rather than the individual sub-group, therefore the effect of random variation is reduced.

**Table 8 Adjusted odds ratios for arrest outcomes between intervention and comparison groups, controlling for key variables**

Scheme	Odds ratios	p value	Statistically significant (S), non-significant (NS)	Direction
<b>A</b>	0.7841696	0.164	Ns	Positive
<b>B</b>	1.17266	0.081	Ns	Negative
<b>C</b>	1.676483	0.001*	S	Negative
<b>D</b>	1.300654	0.144	Ns	Negative
<b>E</b>	7.607259	<0.001*	S	Negative
<b>F</b>	2.633263	<0.001*	Ns	Negative
<b>G</b>	1.411244	0.104	Ns	Negative
<b>H</b>	2.019085	<0.001*	S	Negative
<b>Overall</b>	<b>1.420845</b>	<b>&lt;0.001*</b>	<b>S</b>	<b>Negative</b>

**Notes**

- Adjusted odds ratios (ORs) describe how much more likely it is that an individual who has received the intervention will be re-arrested (compared with those not receiving the intervention) after taking account of a number of key variables – in this case, age, gender, month of index offence, index offence type and pre-arrest offending history.
- An adjusted OR greater than one indicates that those receiving the intervention are more likely to be re-arrested than those who have not.
- The 'p value' provides a test of the statistical significance of the result – the closer the figure is to zero the more likely it is to be a genuine difference.
- Direction describes the direction of the effect.

**Re-arrest rates by age and gender**

Re-arrest rates for the intervention and comparison groups overall were examined for differences in age and gender combined (e.g. males aged 18 to 29), gender only, and age only, to see if there were any particular differences in the impact of the intervention on these groups (see Table B3 and Figures B2 and B3, Appendix B for the full results). The results of the analysis were as follows.

**For age and gender combined**

The only group that showed a positive (but not statistically significant) impact of the intervention was females aged 60 and above. All other groups were negative as in the combined analyses, but again not statistically significant. The only statistically significant results were higher re-arrest rates amongst the intervention group, compared with the comparison group, for males aged 40 and below.

**For gender alone**

Overall, the higher rate of re-arrest amongst the intervention group (negative) was found for males (statistically significant) and females (not statistically significant). So there were no particular differences for gender alone.

**For age alone**

Across all age groups, re-arrest rates were higher amongst the intervention group compared with the comparison group, but this was only statistically significant only for those aged 40 or below.

**Re-arrest rates by different index offence types**

Re-arrest rates for the different index offence categories were examined for the intervention and comparison group overall to identify any differences in outcomes for

specific offence types. However, there were no statistically significant differences between offence categories identified.

### **Which, if any, models of AAR intervention or client characteristics are associated with better outcomes in the AAR scheme?**

The question above is addressed using two sources of data. Firstly regression analyses using data from the intervention group sample and secondly using data from a small sample of follow-up interviews conducted with clients six months after the intervention.

The analyses for the intervention group only found that higher AUDIT and SIP scores and a baseline history of previous arrest were associated with higher rates of post-intervention arrest. No scheme-related factors, such as referral route and duration of session, were found to be associated with higher re-arrest.

Data from the small sample of follow-up interviews indicate a statistically significant reduction in alcohol consumption between the time of the intervention and follow-up and a large proportion of clients also experienced a reduction in SIP scores.

#### **Client and scheme characteristics associated with re-arrest (intervention group only)**

A series of hypotheses about whether any particular characteristics of the intervention group or schemes would impact differently on changes in re-arrest rates pre- and post-intervention were tested using regression analyses for the 4,739 intervention group individuals'. Analysis of client characteristics included: age, gender, AUDIT and Short Inventory of Problems (SIP) scores, index arrest and offence type were. Scheme characteristics of referral route and the duration of the intervention were also tested.

It should be noted that despite attempts, it was not possible to collect similar data for the comparison group so results are based on the intervention group only. This means that any changes observed cannot be attributed specifically to the AAR intervention – but are still of value to explore in order to gain a greater understanding of AAR.

#### **Client characteristics**

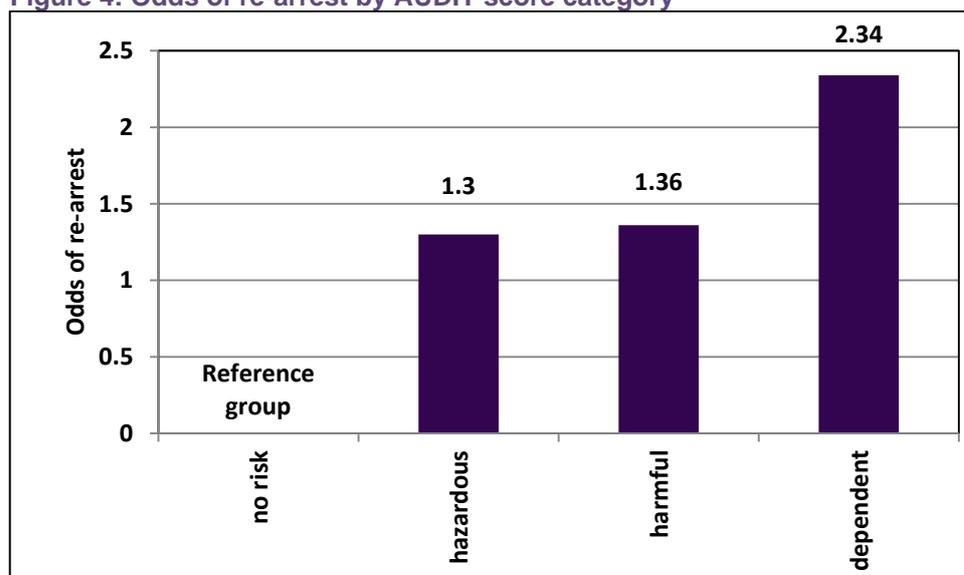
##### ***History of previous arrests***

A history of previous arrest (for any offence type) was strongly associated with a probability of re-arrest, regardless of clients' AUDIT or SIP scores, scheme area or any demographic variable. The odds of re-arrest increased by approximately 80 per cent for every additional offence in a client's six-month previous history. Re-arrest was also strongly positively correlated with AUDIT scores at baseline.

##### ***AUDIT***

When AUDIT scores were split into four categories of increasing risk, those in the highest risk category (dependent drinkers scoring 20-plus) had 2.34 times greater odds of re-arrest than those in the no risk category (scoring 0–7), even after adjusting for the relative impacts of age, gender, index offence type and scheme area. Figure 4 shows the odds of re-arrest for each AUDIT score category, using those in the lowest risk as the reference group.

**Figure 4: Odds of re-arrest by AUDIT score category**



*n* = 4,737

### ***SIP scores***

Baseline SIP scores were found to be positively correlated with re-arrest rates. In an analysis that adjusts for age, gender, offending history, index offence type and scheme area, the odds of re-arrest increased by around 2.4 per cent for every additional point an individual scored on the SIP scale.

SIP scores were further analysed according to the different SIP ‘consequences of drinking’ domains, which are: physical; interpersonal; intra-personal; impulse control; and social responsibility. Each domain of the SIP instrument was independently and statistically significantly correlated with the higher probability of re-arrest, with correlations of similar strengths.

### ***Employment and re-arrest rates***

Clients who were unemployed were almost twice as likely to be re-arrested as those who were in employment (38 per cent compared with 20 per cent) overall. After adjusting for differences in age, sex, offending history, index offence types and scheme area, the odds of re-arrest increased to around 77 per cent for those who were unemployed.

### ***Motivation to reduce alcohol consumption and re-arrest rates***

AAR clients were asked to assess their motivation to reduce alcohol consumption, based on a ladder of 0 to 10, 0 being ‘not at all motivated’ and 10 being ‘extremely motivated’. Although not a validated means of assessing motivation, it was used as a talking point during the intervention and was a useful indicator of clients’ attitudes towards their consumption.

A simple analysis of client motivation to reduce alcohol consumption and re-arrest shows that clients with higher levels of motivation were also more likely to be re-arrested. However, clients who were more motivated to reduce their consumption tended to have more severe alcohol-related problems, meaning that they were also at higher risk of offending. Importantly, when differences between clients underlying probabilities of re-arrest were accounted for (through baseline AUDIT or SIP scores, or a combination thereof) motivation was not found to be associated with the probability of re-arrest.

### ***Role alcohol played in arrest and re-arrest rates***

Clients were asked to assess the role that alcohol played in their offence on a scale of 1 to 5: 1 meaning 'no role at all' and 5 meaning a 'very big role'.

- The largest proportion of clients said that alcohol played a 'very big role' (54 per cent) followed by those who said 'no role at all' (16 per cent).
- The relationship between the 'role alcohol played' variable and re-arrest rates appears to be u-shaped, with higher re-arrest rates (over 30 per cent) for those who reported their offences to be completely unrelated and those who reported them to be strongly related, compared with those in the middle with arrest rates between 22 and 25 per cent.

This finding is potentially interesting for practitioners given that a central purpose of motivational interviewing is to identify clients' ambivalence and to direct them towards a change in attitude (Rollnick and Miller, 1995; Miller and Rollnick, 2009). The effect of client ambivalence on the AAR's effectiveness may prove an interesting area for further exploration.

### **Scheme characteristics**

#### ***Duration of the intervention***

The duration of the intervention was not found to be associated with either a higher or lower likelihood of re-arrest. Interestingly, the duration of the first intervention session was positively correlated with baseline AUDIT and SIP scores, i.e. clients who had higher AUDIT and SIP scores tended to receive longer interventions.

#### ***Referral routes and re-arrest rates***

Over three in four clients received the intervention through a voluntary (rather than mandatory) referral. When tested to see whether the referral route would impact on the likelihood of re-arrest it was not found to be significantly associated with a different likelihood of re-arrest. This suggests that referral route alone is not a determinant of the intervention's effectiveness.

#### ***Changes in client measures (follow-up clients only)***

A small sample of clients (n = 667) were able to be followed up six months after the intervention. Measures used on the Alcohol Intervention Record (AIR) were re-tested during the interview and provided useful information on psycho-social changes following the intervention. However, as this only represents a small proportion of all clients accessing the AAR schemes, the findings should be treated with caution. The main findings were as follows.

#### ***Alcohol consumption***

There was a mean reduction of 5.2 points (range - 40 to + 25) in the AUDIT score between baseline and follow up. Three in four clients experienced a reduction in AUDIT scores. This is statistically significant but based on low numbers. This is similar to the phase one evaluation findings which identified a statistically significant reduction in AUDIT scores.

#### ***SIP scores***

A large proportion (70 per cent) of clients experienced a reduction in overall SIP scores, with a mean reduction of 5.3 points observed in this sample (range - 45 to + 20); this is statistically significant. Older age was associated with a greater reduction in SIP scores.

### ***Self-reported offending***

One in two clients reported a reduction in their self-reported offences between baseline and follow up. Just over one-third (35 per cent) reported no change in offending and around one-sixth (15 per cent) reported an increase. A mean reduction in self-reported offending between baseline and follow up of 1.6 was observed (range - 129 to + 46).

### ***Gender and health differences for all outcomes***

Women achieved larger average reductions in AUDIT, SIP and self-reported offending than men (- 7.1 compared with - 4.8 in AUDIT scores; - 6.7 compared with - 5.1 in SIP scores; and - 2.3 compared with - 1.5 in self-reported offending history). However, only the difference in AUDIT scores was statistically significant.

Clients in better health experienced better outcomes (in terms of AUDIT, SIP and self-reported offending rates) than those in fair or poor health, once other factors are accounted for. This finding was consistently statistically significant across all three outcome measures.

### **What is the cost of the scheme and what are the potential savings?**

The total annual direct cost of running eight schemes for one year was £1,156,507, ranging from £43,315 in Scheme C to £271,749 in Scheme B. The average cost per intervention (including first and second sessions) overall was £170 ranging from £62 to £826. This was closely linked to the number of interventions delivered. The break-even analysis found that all schemes, except Scheme A, did not break even. A detailed breakdown of costs and the break-even analysis are provided below.

#### **Costs of running schemes**

The costs of delivering AAR were gathered from schemes using a specially developed pro-forma for cost information. The annual costs have been calculated from data provided on monthly costs and staffing multiplied by 12. Implementation costs were taken from the first month of the schemes' operation following receipt of funding. Direct comparison of costs between schemes are difficult because all schemes utilised 'in-kind' resources, e.g. police time spent supervising custody staff on how to make referrals was not charged, and these are likely to vary by scheme. Indirect costs were too inconsistently reported to include. So it is likely that the costings do not reflect the true cost of the schemes' operation. Table 9 provides a breakdown of the costs per scheme and overall.

The total annual direct cost of running all eight schemes for one year was £1,156,507. Total costs per scheme per annum ranged from £43,315 in Scheme C to £271,749 in Scheme B, with an average of £144,541<sup>20</sup>. The average cost per intervention (including first and second sessions) overall was £170 with the highest average cost per intervention session at £826 and the lowest at £62. The variation in average cost per intervention appears to be correlated, in most cases, to the volume of interventions delivered, i.e. the higher the number delivered, the lower the cost per intervention, as would be expected.

As with the phase one evaluation, differences in training costs (which ranged from £0 to £38,736) were the result of different approaches to funding, with some including staff time costs as part of general staff costs, and others counting this separately.

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<sup>20</sup> It should be noted that in addition to funds provided by the Home Office to run the AAR pilot schemes, additional funding was obtained by some schemes from other local sources, such as the Primary Care Trust or core Community Safety Partnership funds. Home Office funding provided on average around 41 per cent of total AAR scheme funding, ranging between 14 per cent and 95 per cent of the scheme's total annual costs.

**Table 9 Direct costs of AAR schemes, by scheme**

Scheme	Implementation costs (£)	Running costs per annum (£)			TOTAL per annum** (£)	Average monthly cost (£)	Average number of AARs per month ***	Average cost per intervention **** (£)
		Staff costs (£)	Number of full-time staff *	Training /travel, etc (£)				
A	5,304	47,953	1.2		<b>53,257</b>	4,438	45.3	<b>98.0</b>
B	21,011	244,038	4.4	6,700	<b>271,749</b>	22,646	136.6	<b>165.8</b>
C	1,120	42,195	3.5	-	<b>43,315</b>	3,610	57.85	<b>62.4</b>
D	834	122,778	4	-	<b>123,612</b>	10,301	57.8	<b>178.2</b>
E	14,930	136,204	4	22,344	<b>173,478</b>	14,457	103.6	<b>139.5</b>
F	11,390	213,445	9	4,013	<b>228,848</b>	19,071	23.1	<b>825.6</b>
G	6,687	96,492	3.1	38,736	<b>141,915</b>	11,826	40.2	<b>294.2</b>
H	2,787	116,571	2.1	875	<b>120,333</b>	10,019	103.5	<b>96.8</b>
<b>Totals</b>	<b>£64,063</b>	<b>£1,019,676</b>	<b>31</b>	<b>£72,668</b>	<b>£1,156,507</b>	<b>£96,376</b>	<b>568</b>	<b>£169.7</b>

Base: 12,097 first and second appointments over 20 months from November 2008 to June 2010, including 11,357 first appointments and 740 second appointments recorded.

**Notes**

\* Full-time staff numbers have been calculated from weekly hours input for any member of staff directly employed within the scheme and summed to provide the number of full-time equivalent staff hours.

\*\* Includes implementation costs, staff and training/travel for a 12-month period from the start of the scheme.

\*\*\* Includes first and second appointments.

\*\*\*\* Monthly costs have been taken from a 20-month period and averaged to cover 12 months of operation.

**Break-even analysis**

A cost effectiveness analysis was originally planned but due to the negative or null results from the impact studies this was not possible, so a break-even analysis was undertaken to indicate the impact that would be needed in order for AAR interventions to represent value for money.

The costs per intervention were examined, together with estimates of the costs of relevant crime, to establish the reductions in numbers of arrests necessary for the schemes to break even. The cost of crime data were provided by the Home Office, together with multipliers for the numbers of recorded crimes underlying each arrest and the numbers of actual offences underlying each recorded crime. Using these values, the average costs of crime were established for the mix of alcohol-related offences recorded for the intervention group across all schemes.

The average cost of an intervention on each scheme was then compared with the reduction in arrests that would be needed per 100 interventions for each scheme to break even. Results are provided in Table 10, and further details about methods used are provided in Appendix A, section 4.

As with the phase one evaluation, most schemes appeared not to break even, except in Scheme A, which demonstrated a comparative reduction in re-arrests of 6 per cent. Moreover, as the other schemes appear to demonstrate an increase in arrests amongst AAR clients, a break-even analysis is no longer relevant.

**Table 10 Reductions in arrests needed per 100 interventions to break even**

	A	B	C	D	E	F	G	H	Overall
<b>Reduction in arrests needed to break even</b>	2.7	4.6	1.7	5.0	3.9	23.1	8.2	2.7	<b>4.7</b>
<b>Actual reduction in arrests observed per 100 interventions*</b>	6	-2	-11	-4	-17	-11	-7	-8	<b>-6</b>

\*The average reduction in arrests observed is taken from the unadjusted difference-in-difference analysis for each scheme. A negative sign indicates an increase in arrests observed for the client group.

In order for schemes to break even, increases in the rate of arrest reductions per 100 clients would need to be between 6 and 34 points. This could only be achieved by improving the outcomes that schemes deliver for clients and not, e.g. by improved efficiencies. However, only a 4.7 per cent reduction in re-arrest would be needed for the overall scheme to break even, which should not discourage future efforts to devise schemes to address this offender group, if implementation and running costs were similar to the AAR. Moreover, the cost analysis ignores potential health benefits and related savings. Were these to be included, the break-even point for an AAR intervention may be lowered even further.

### Outcome assessment key points

The impact assessment examined the question of whether the AAR scheme reduced re-arrest rates compared with a comparison group, and also what, if any, characteristics may be associated with any differences. The cost and break-even point for schemes were also calculated.

- The key finding was that overall AAR appeared to be ineffective for the client group in reducing re-offending. There was a higher rate of re-arrest amongst the intervention group, compared with the comparison group.
- However, a large proportion of arrestees had no previous and no post history of arrests indicating that this is not a particularly prolific offending population.
- Only one scheme, scheme A, appeared to have a statistically significant reduction in arrests compared with the comparison group. This held true for de facto alcohol-related offences but not during regression analyses.
- There were no clear sub-groups from age, gender or index offence for whom the scheme appeared to be more effective.
- Client group characteristics associated with higher rates of post-intervention arrest (not compared with a comparison group) were higher AUDIT and SIP scores at the baseline; a history of (any) previous arrest and being unemployed. Referral route and duration of intervention were not associated with higher re-arrests.
- Examining a smaller sample of AAR clients who provided baseline and six-month follow-up data, a statistically significant reduction was found in overall AUDIT scores, SIP scores and self-reported offending. However, these findings should be treated with caution given the low sample sizes compared with the whole intervention group.
- An examination of the cost of the schemes showed that the average cost per intervention was £170, with scheme costs ranging from £62 to £826.
- A break-even analysis found that only one scheme appeared to demonstrate reductions in arrests sufficient to break even. As all other schemes did not demonstrate a reduction in re-arrests compared with a comparison group, efficiency improvement alone is unlikely to improve the value for money of the schemes.

## 6. Process assessment

The process assessment addresses two main questions which are discussed together under the thematic headings below.

- *What models of brief intervention and referral mechanisms had pilot schemes implemented?*
- *What were the main barriers and levers to the schemes' successful implementation?*

### Rationale for the AAR schemes locally

The AAR scheme was seen frequently by practitioners interviewed to supplement existing routes for identifying and targeting problematic drinkers, and was felt to be part of a wider 'package' of initiatives for addressing alcohol-related problems in the local area. Alcohol-related disorder in the night-time economy was frequently raised as a high priority for police, and respondents from health and alcohol-treatment agencies cited a need to address the health implications of excessive consumption as a reason for supporting the local AAR scheme.

### Implementing the AAR Scheme

Staff respondents from all schemes reported that the type of 'drinker' being referred through the scheme was different to what was anticipated. It was generally anticipated that clients would be young male binge drinkers who were unlikely to have alcohol dependency problems, and who scored less than 20 on the Alcohol Uses and Disorder Identification Tool (AUDIT) tool. This was different from the client types that were actually referred (see characteristics of clients accessing the AAR scheme, section 4 above).

Treatment agencies that provided or managed the AAR schemes were responsible for determining the content of the interventions. This was done by drawing from the agencies' internal expertise in delivering alcohol interventions, as well as through the Home Office-funded training that was provided during the course of the pilot.

Initial training for AAR workers was funded by the Home Office and provided by staff from an AAR scheme operating in Gloucestershire. Although it was not possible to observe this training, AAR workers who attended reported that in addition to the health risks of alcohol consumption, the training stressed the importance of emphasising the potential criminal justice implications associated with excessive consumption to clients. Further training was provided around six months after the initial training and was funded in part by the Home Office and in part by the schemes. The training lasted one day and focused on motivational interviewing techniques in the context of brief interventions. It was provided by a leading academic in the field of motivational interviewing<sup>21</sup>.

Those involved in developing the scheme were asked to report the key mechanisms that they thought their AAR scheme used to tackle alcohol-related disorder. The mechanisms described were both procedural – exploiting opportunities to engage clients who would not otherwise be engaged – and 'behaviour changing' – through information giving, motivational interviewing and emotional support to bring about changes in attitudes towards alcohol consumption. It was felt that a combination of these mechanisms would be necessary to bring about change amongst clients. Responses were similar between earlier and later interviews.

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<sup>21</sup> Steve Rollnick, Professor of Criminal Psychology, Cardiff University.

Respondents across all staff groups perceived the AAR scheme as unique, compared with other alcohol brief interventions, in that it was more ‘criminal justice’ in tone, emphasising the risks of further offending. This criminal justice tone was observed during session observations. However, the in-depth narrative interviews with AAR clients found that the link between alcohol and risks of further offending was not as frequently recalled as discussions about the health implications or practical advice on how to cut down alcohol consumption.

### Attendance via mandatory and voluntary referral processes

As was the case in phase one, many schemes experienced difficulties in implementing mandatory conditional caution and conditional bail routes. Local resistance from the Crown Prosecution Service (CPS) and to a lesser extent, the police, was cited as problematic and this was linked to concerns about the enforceability of conditions. Despite these concerns, schemes succeeded in meeting the prescribed numbers of mandatory referrals outlined in service level agreements<sup>22</sup>. Where conditional bail or conditional cautions were the main referral processes, the police in these areas were closely involved in the scheme’s development from the schemes’ inception, including the appointment of a police scheme lead.

Generally, across all eight schemes, attendance at appointments outside of custody was low unless it was through a ‘mandatory’ type route, which corresponded with phase one findings. For example, in the two areas where the AAR scheme was primarily delivered away from the custody suite, there was a much higher attendance rate for the scheme using mainly ‘mandatory’ referral routes (65 per cent) compared with the one with mainly voluntary referrals (28 per cent). However, the voluntary referral scheme had higher attendance at subsequent appointments, with 62 per cent of appointments attended compared with 34 per cent for the ‘mandatory-route’ scheme. This suggests that once those referred turn up on a voluntary basis, they may be more motivated to engage in treatment than those referred on a mandatory-route basis. Staff interviews suggested that attendance at follow up appointments for mandatory-route schemes may have been low because clients became aware that it was unlikely that action would be taken against them for non-compliance.

### Duration of the AAR brief interventions

The duration of first appointment sessions was recorded on the Alcohol Intervention Record (AIR) form. Analysis of these data is presented in Table 11. First appointment interventions most frequently lasted between 31-40 and 41-50 minutes (21 per cent each), whilst just over one in ten (13 per cent) lasted 20 minutes or less.

**Table 11 Duration of first AAR sessions**

Length of first session (minutes)	<20	21–30	31–40	41–50	51–60	>60
Proportion of AARs at that length ( per cent)	13	20	21	21	8	17

(n=4,284)

Session observations suggested that the completion of the AIR form took between 15 and 20 minutes. Thus, for sessions 20 minutes and below very limited information and advice could be given about the risks associated with alcohol consumption, and

<sup>22</sup> Scheme H began to use Penalty Notices for Disorder (PNDs) on the street towards the middle of the evaluation period as another alternative method of delivering AAR. PNDs were introduced under the Criminal Justice and Police Act 2001. Under the scheme, the police may issue anyone (in this case aged 18 or over) who has committed a specified penalty offence with a fixed penalty. These notices issue fines for the disorder-type offences and under the scheme, could be waived provided the recipient attended a brief intervention clinic. Unfortunately few data were available on the take up of interventions referred in this way so its effectiveness as a referral route cannot be commented upon at this stage.

the opportunity for providing 'motivational talk' was very small. Previous studies on brief interventions for alcohol use in healthcare settings have been inconclusive as to whether longer interventions have a more significant impact than shorter ones (Bien *et al.*, 1993; Moyer *et al.*, 2002; Babor *et al.*, 2006; Nilsen *et al.*, 2008). However, a recent review concluded that there was no evidence that longer interventions result in significantly greater reductions in alcohol consumption, and claimed that the content and structure of the intervention was more important (Kaner *et al.*, 2009). Therefore it should not be assumed that shorter interventions would necessarily be less effective.

Generally, across schemes, workers hoped to have longer conversations with AAR clients so that they might begin to motivate clients to change their drinking behaviour. Data from observation of sessions and interviews with AAR workers suggest that clients who had not engaged with the conversation tended to have sessions that were under 20 minutes (even at times as short as 5 minutes); in these cases staff felt that the sessions would be of little benefit. This underlines the importance of the worker's skill in motivating and engaging the client during the session. In some session observations clients who were visibly resistant at the beginning of the intervention became more interested as the conversation progressed in response to the dialogue from the AAR worker. It was also observed that the setting of the intervention could inhibit the flow of the conversation; e.g. in one case a session took place in a cell where the worker could not sit down.

### **Ensuring police custody co-operation with the AAR schemes**

All schemes reached monthly intervention targets contained in the service level agreements for the pilots. As in phase one, police custody officers played a key role in the delivery of the AAR scheme – whether it was to screen and refer clients to the alcohol workers or to allow alcohol workers to interview clients in the custody suite. This phase of the research identified more detail on the functions needed to support an effective AAR scheme.

According to AAR scheme managers and senior police interviewees the appointment of a police officer as scheme lead, and maintaining senior police engagement during the development phase of the scheme, was perceived as important for securing effective relationships between AAR staff and police custody staff. Phase one also identified the usefulness of police involvement at an early stage of the scheme development to embed the AAR more successfully within custody suites.

Senior police staff endorsing the scheme and providing feedback to officers about the successes of the scheme, with examples of clients who have changed their drinking patterns, was perceived by senior police and AAR manager respondents to be helpful in overcoming scepticism among custody staff. AAR workers also reported that having senior police assistance to endorse the scheme in custody suites was helpful in this regard. Large staff turnover and shift teams mean that such communication between police leads and custody staff should be regularly repeated, with support from custody inspectors being particularly important.

For many staff respondents there was an advantage in having Drug Interventions Programme (DIP)<sup>23</sup> arrest referral workers already functioning from custody suites, as this was said to make it easier for police custody staff to accept the presence of another arrest referral worker. This reflects findings from phase one that DIP established the principle that the custody suite can act as the point for referral into assessment and treatment, and that this may be important in facilitating closer working between police and alcohol workers.

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<sup>23</sup> DIP is part of the national strategy for tackling drug use. It aims to divert drug-using arrestees into treatment and includes, in DIP-intensive areas, mandatory drug testing for specific offences and drug arrest referral.

In three of the four scheme areas where DIP was already in operation, the AAR intervention was contracted to the same agency that delivered DIP. Thus, the two schemes shared administrative and managerial staff. As with phase one, some of the interviewees recognised that pooling of resources benefited the alcohol work through the greater funding available through DIP. However, during phase one some stakeholders also felt that drug and alcohol work should be kept separate, as they address different issues and combining them ran the risk of the alcohol work becoming lost in the larger DIP agenda. This was not reported during the study.

### **AAR client recollections of the AAR intervention**

The following findings are based on a small sample of 50 AAR clients who were purposively selected to represent a broad range of arrest offence types, scheme area, age and gender, for in-depth follow-up interviews. These were conducted shortly after they had received interventions, in order to gain a more detailed understanding of the clients' experiences. The findings discussed here are supported by data from observation of AAR sessions.

Compared with phase one findings, where memories of the content of the session were often vague, even after prompting, and in a small number of instances, clients could not remember the session at all, the majority of AAR clients interviewed did recall a number of elements of their conversations with AAR workers. Most frequently recalled was the assessment of their alcohol intake. The next most frequently recalled element was the practical advice given by the worker and the encouragement to reduce their consumption of alcohol.

A majority of the 50 client respondents reported that they felt that the conversation with the AAR worker was adapted to their particular circumstances. In cases where a client reported drinking heavily prior to the intervention, the conversation with the AAR worker tended to centre on advice on reducing intake or health implications. Where the respondent reported that the alcohol they had consumed was responsible for their offence, the conversation with the AAR worker tended to centre on the link between alcohol and risk of more serious criminal histories. Again this is different to findings at phase one, where workers asked about reasons for arrest, but on only a few occasions did clients report, or observations suggest, that a clear link was made between alcohol and offending.

Overall, the impression given by the AAR clients was that the AAR workers were able to identify and make use of motivational levers. This was in contrast to the first phase findings, which suggested that the interventions did not seem to identify or make use of motivational levers.

One particular aspect of the 'advice' given by AAR workers that was frequently recalled was information about the length of time a unit of alcohol takes to leave the body. This was particularly the case for those arrested for drink driving offences, who claimed not to have realised, prior to the intervention, that alcohol remains effective for as long as it does.

AAR clients responding to narrative interviews generally found the intervention helpful when they had themselves identified a need to reduce their intake of alcohol before the intervention. For those who did not feel they had a 'problem' with alcohol, the benefits of the conversation were less obvious. This finding is similar to those from session observations where clients expressing ambivalence about their alcohol use seemed more responsive and interested in the advice being provided by the worker, compared with those who remained certain that they did not have problematic drinking habits

### Process assessment key points

- Police co-operation is important for securing referrals – particularly the assistance of custody inspectors in ensuring custody staff are well briefed and supported to make appropriate referrals,
- The presence of DIP teams seemed to support the smoother running of the AAR model. For example, the presence of DIP workers habituates custody staff to working with non-police staff, and where the same provider delivers both DIP and AAR work managerial and administrative resources can be pooled.
- Comparing two schemes that delivered interventions outside of a custody setting, the scheme that employed mainly mandatory-type routes had higher attendance rates for the first appointment (65 per cent mandatory compared with 28 per cent voluntary), but they experienced lower attendance rates at follow-up appointments. This suggests that once clients have attended on a voluntarily basis in the first place, they may have a higher motivation to continue engaging. This could be important information for practitioners who may need to do more to build mandatory-type clients' motivation to engage.
- AAR workers and managerial staff felt that the brief intervention delivered in this context differed from health-based brief interventions because there was more of a focus on the criminal justice implications of alcohol consumption. However, this element was not particularly well recalled by AAR clients.

## 7. Conclusions and discussion

The key finding from this study was that overall, across all schemes, the AAR intervention appeared to be ineffective for the client group in terms of reducing re-offending. This was similar to the phase one evaluation. Although the results were less significant after adjusting for age, gender and index offence type, the direction of the results was still against the intervention. This also means the AAR scheme does not appear to be cost effective (in criminal justice terms).

There was a key exception to the overall weight of the evidence, which poses interesting questions for further research. Notably, Scheme A resulted, in some analyses, in reductions in arrests compared with its comparison group. Whilst this initial positive result was rendered statistically non-significant following further controls for age, gender and other key variables, the headline analysis was for significant reductions, compared with the comparison group.

Whilst the evaluation found no evidence of a reduction in arrest rates amongst the intervention group overall, an analysis of intervention group characteristics indicated other potential benefits of the scheme, outside of criminal justice measures. Most notably and similar to the phase one findings, an examination of a sub-sample of AAR clients who provided baseline and six-month follow-up data (n=667), found a statistically significant reduction in overall Alcohol Uses and Disorder Identification Tool (AUDIT) scores at follow up. There was also a significant reduction in Short Inventory of Problems (SIP) scores, which measures psycho-social consequences of alcohol consumption and self-reported offending. However these results should be treated with caution as it was not possible to compare these reductions with a comparison group, and so findings could not be attributed to the AAR intervention specifically and not, for example, to the event of being arrested. However, the data does suggest that there may be potential health related benefits that could render an intervention in custody settings cost effective and beneficial, if assessed on health benefit grounds. The potential health benefits of custody-based interventions for alcohol require further research that would control for alcohol consumption levels.

There were some limitations with the evaluation that have been highlighted, mainly the fact that the comparison group could not be specifically matched for their level of alcohol consumption or alcohol 'risk' as these data are not available for comparison group members. A proxy measure for alcohol-related offending was used, i.e. a similar 'index' offence type occurring during night-time hours associated with alcohol-related offending. This was not a perfect match as the extent to which the control group's offending was linked to alcohol could not be verified, and this should be taken into consideration when interpreting the results.

The findings are strengthened somewhat because a similar overall finding of 'no effect' was found for de facto alcohol-related offending (drink driving and drunk and disorderly offences), where alcohol was certainly a factor in the arrest for intervention and comparison groups. The study was also protected against potential selection bias whereby only those with high-level alcohol issues would be 'selected' for the intervention. This was because the AAR intervention was widely offered to any arrestee where alcohol was deemed a factor in their arrest, regardless of offence type and perceived level of intoxication.

### **Profile of alcohol-related arrestees**

The evaluation provides useful data on the characteristics of those arrested for alcohol-related incidents, which could usefully inform the development of custody-based interventions of this nature. Key characteristics include the following.

- The overwhelming majority of arrestees were White (93 per cent) and male (86 per cent).
- The largest proportion (37 per cent) of arrestees was assessed as being alcohol-dependent, i.e. scoring 20-plus on the AUDIT measure.
- Arrests were most frequently for violence offences (36 per cent).
- A large proportion of arrestees (54 per cent, AAR clients and 61 per cent comparison group) had been arrested only once during a 12-month period. This indicated that this was not a particularly prolific offending population, at least in terms of their arrest.

The research also showed a strong positive correlation between the AUDIT score and re-arrest. Within the intervention group, those in the 'dependent' AUDIT category were more than twice as likely to re-offend as those in the lowest risk category, while hazardous and harmful drinkers were between 30 and 36 per cent more likely than those in the lowest risk AUDIT category. Given that large proportions of people arrested for alcohol-related offences scored within the 'dependent' category across all index offence types, the research indicates that custody suites may be good locations for targeting a potentially costly population group that has a high likelihood of re-offending. It further suggests that alcohol dependency may play a large role in many offence types and not just those that are de facto associated with alcohol. This finding provides a potential justification for targeting interventions at alcohol-dependent arrestees, even if it is not a brief intervention such as used in the AAR scheme.

### **Implementing custody-based alcohol interventions**

The AAR pilot scheme provided useful lessons for implementing custody-based alcohol interventions. The schemes generated a large throughput of clients over a 12-month period. Referrals or signposting to the AAR worker were done by police and other custody staff so co-operation and trusting working relationships were necessary for this to be achieved. A key lesson for implementation of such a custody-based scheme was that the co-operation and support of senior police officers and police leaders within the custody setting was essential to motivate custody staff on whom referrals were dependent.

The existence of Drug Interventions Programme (DIP) workers already present within a custody setting for some of the schemes did appear to assist with the introduction of the AAR scheme, as this habituated custody staff to working with external agencies. In three of the four schemes where DIP workers were already present the AAR scheme was delivered by the same agency, which provided opportunities for sharing management and administrative resources.

The AAR pilot also provided an opportunity for testing the viability of using mandatory referral routes for targeting alcohol-based interventions. Analysis of the intervention group found that the referral route (mandatory or voluntary) made little difference to the likelihood of re-arrest. The research did find, however, that mandatory routes were more difficult to put in place than voluntary routes for procedural reasons, particularly in the case of conditional bail. Moreover, what seemed to be apparent from the research was that schemes that were based in the custody setting were more successful in securing larger throughputs, although this depended on the coverage of AAR staff in the custody suite. For two schemes that offered interventions primarily outside of the custody suite, attendance was better for the mandatory-type scheme compared with the other voluntary based scheme, for the first appointment but not, however, for the second.

Overall, this suggests that custody-based schemes (where the client is seen in custody) may be better for ensuring throughput than where the intervention is voluntary. However, mandatory-type schemes outside of the custody setting may obtain less motivated clients, even if attendance at the first appointment is improved.

### **Points for consideration**

Evidence from this study found that overall the AAR scheme did not achieve the desired effect, which was to reduce levels of alcohol-related re-offending. However, as with phase one, there was some evidence that the brief intervention resulted in reductions in AUDIT scores, and this mirrors international evidence on brief interventions in other non-criminal justice settings. Despite the evidence for a reduction in alcohol consumption, offending behaviour did not appear to be reduced following the intervention. The reasons for this require further exploration because in this study, a comparison group could not be assessed for reductions in alcohol consumption. Possible avenues for investigation on this question may include the wider levers for anti-social behaviour in night-time cultures, including complex social and psychological factors (Winlow and Hall, 2006). One key consideration in this is being able to collect comparable data from a comparison group as these data are not routinely collected in custody.

The high number of those in the dependent category of alcohol risk amongst AAR clients, as in the phase one evaluation, raises important considerations. International evidence suggests that alcohol brief interventions are not effective for those with high-level alcohol needs. Indeed, dependent drinkers were found to have the greatest odds of re-arrest compared with the other AUDIT categories. But, evidence from this study suggests that those with higher needs also tended to be more motivated to change and had longer AAR sessions, probably as a result of this higher motivation. Although motivation and duration of session were not found to be related to lower re-arrest rates, the generally high levels of motivation among higher AUDIT scoring individuals suggests that an AAR scheme could be an effective way of identifying and referring those with alcohol needs and a desire to be treated further. This finding is supported by another study of alcohol brief interventions, which recommended that screening and not brief interventions for alcohol needs should be introduced in magistrates' court settings (Shepherd and Watt, 2005).

Alcohol-related offending is a seriously harmful problem for both society and individuals, and the principle of basing an intervention in custody settings appears to be supported through the experience of the AAR programme. Whilst the overall direction of the evidence does not support the continuation of the AAR process in its current form or for the current outcome measures, the research presents arguments for custody-based interventions that screen for alcohol needs and refer clients to appropriate support.

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## Appendix A: Methods in more detail

The evaluation of the Alcohol Arrest Referral (AAR) pilot schemes involved three main elements: process evaluation, outcome assessment and cost assessment. More detailed information about each of these elements is described below along with information about feasibility work conducted around the outcome assessment and information on data handling.

### Section 1: Process assessment

The process assessment comprised:

- a review of information provided in AAR schemes' service level agreements:
- interviews with delivery partners - project staff, managers and others with an interest in the running of the AAR scheme locally - to establish the aims and objectives for the AAR (n=163):
- observations of brief intervention sessions (n=16):
- narrative interviews with AAR clients (n=50):
- analysis of data on AAR clients based on their Alcohol Intervention Records (AIR) submitted to the evaluation team (further details are provided in section 3 – on the outcome assessment (n=4,739):
- the establishment of a password-protected website and networking mini-site for AAR project staff to share ideas and ask each other questions.

#### Interviews with delivery partners

A total of 163 interviews were conducted with partners from across the eight pilot schemes at three different points in time. Interview participants were selected from a broad range of agencies involved in different aspects of the AAR delivery including those providing brief interventions, police officers who processed referrals and other custody and police staff whose services were directly affected by the scheme. Interview participants are categorised as follows.

- *External strategic partners*: management level, local staff not directly involved in service delivery but with an active interest in the scheme's progress, for example, public health lead at a Primary Care Trust (27 interviews).
- *Senior partners*: management level staff directly involved in the scheme's delivery, for example, a service manager within the brief intervention delivery agency (49 interviews).
- *Operational partners*: staff working directly either delivering the brief intervention itself (project workers) or handling referrals, for example, AAR project workers or police custody staff (87 interviews).

#### Interview timings

Interviews were conducted over three different time periods over the course of the evaluation. Time one interviews were conducted towards the beginning of the evaluation period, time two interviews towards the middle and time three towards the end of the evaluation period.

Table A1 shows the breakdown of delivery partner interviews over the three time periods. Fewer interviews were conducted at times two and three as these were targeted at those with continued and active involvement with the AAR project, whilst time one interviews were focused on gaining a wider perspective of the overall aims of the AAR scheme. This means that some partners were interviewed on more than one occasion.

**Table A1) Breakdown of interviews by participant group across the three time periods**

Scheme	Time 1			Time 2	Time 3
	External strategic partners	Senior partner AAR leads	Operational staff	Operational staff	
<b>A</b>	4	9	5	5	3
<b>B</b>	4	5	6	3	3
<b>C</b>	3	7	4	4	3
<b>D</b>	4	4	5	4	3
<b>E</b>	5	9	6	3	2
<b>F</b>	3	6	6	3	2
<b>G</b>	2	5	5	2	2
<b>H</b>	2	4	3	3	2
<b>Total</b>	<b>27</b>	<b>49</b>	<b>40</b>	<b>27</b>	<b>20</b>

### **Interview content and recording**

Interviews were based on semi-structured interview scripts and were recorded using digital audio devices. The interview scripts covered the following main elements:

- What were the underlying theories about how projects were supposed to work and in what ways?
- What types of client were the schemes intending to target?
- What were the desired outcomes for the schemes?
- What, if any, obstacles did schemes experience around implementation?
- What were the key working relationships within each scheme and which were critical to the scheme's success?
- What were the main elements of the AAR brief intervention conversation and how was it hoped these would influence clients' behaviour?

Recordings from the interviews were transcribed and then coded according to a coding tree itself derived from the key research questions and the interview script. Analysis identified key themes and messages emerging from the data. Comparisons were made across different sets of respondents to see whether these differed.

### **Observations of interventions**

AAR sessions were observed twice in all eight project areas: once six months after the projects received funding and again six months after this. In all, 16 observations were recorded.

The purpose of the observations was to establish if and how the main processes identified in interviews with delivery partners were put into practice. They were also used to identify differences in the style of delivery as well as differences in duration. The second set of observations were undertaken to identify any major changes in the content of the brief intervention that could alter the outcomes experienced by AAR clients.

Sessions were observed and recorded using a paper-based observation sheet (as audio recording was felt by researchers to be too intrusive in the AAR session). The observation sheet contained ten semi-structured questions about the intervention being observed for researchers to address through comments under each question

heading. Researchers wrote up their observations into a narrative format following the broad lines of the question sections on their observation document.

### Narrative interviews with AAR clients

Narrative interviews were conducted with AAR clients up to one month following their intervention. A total of 50 participants were purposively selected and represented a similar range of arrest offences, ages, gender and voluntary and mandatory-type referral routes as that of the whole client group. The purpose was to gain in-depth insight into clients' perceptions of the AAR session, and to match their recollections to what delivery partners identified as being important mechanisms of the AAR. The interviews were conducted on the telephone, were semi-structured and lasted between 15 and 25 minutes. The interviews were recorded using a digital recording device and transcripts were then coded using qualitative analysis software (WEFT QDA).

### Purdah and the suspension of evaluation research

In May 2010 a General Election was called in the UK, which meant that all public-funded research was suspended. As a result a delay was experienced in the data collection for the AAR evaluation and in order to make up lost time, session observations that were planned towards the autumn of 2010 were cancelled. However, additional interviews and informal telephone conversations with project staff allowed the evaluation team to assess if any relevant changes had occurred in the content of the brief intervention. No significant changes in the content of the brief intervention were detected either in the session observations or in interviews with project staff.

### AAR client sample

Data on AAR clients were obtained from AIRs submitted by pilot schemes to the evaluation team for a 12-month period within the pilot period. A total of 5,928 forms were submitted for analysis by schemes. Invalid AIRs (duplicate records or records where client consent had not been fully obtained) were excluded from the analysis. Clients for whom no match could be found in police datasets were then removed (see section 3, Appendix A and table A4 for further details of the matching process). This resulted in 4,739 valid AIR forms being included in the analyses. A breakdown per scheme is provided in Table A2.

**Table A2 Total AIRs included in the analysis by scheme**

Scheme	A	B	C	D	E	F	G	H	Total
<b>All AIRs submitted</b>	565	1,815	576	581	864	273	430	824	5,928
Invalid AIRs: non-consents	70	297	33	69	111	6	25	219	830
Invalid AIRs: duplicates	10	75	27	17	47	17	40	44	277
<i>Invalid AIRs: no police records</i>	0	0	0	0	67	0	0	15	82
<i>Total non valid AIRs</i>	80	372	60	86	225	23	65	278	1,189
<b>Total valid AIRs used in analysis</b>	485	1,443	516	495	639	250	365	546	4,739
Valid AIRs used in analysis as percentage of AIRs submitted	85%	79%	89%	85%	73%	91%	84%	66%	80%

## Section 2: Feasibility work

### Options appraisal for the impact assessment

The original research brief for the AAR evaluation stated that the impact assessment should meet at least level 3, though preferably level 4, on the Maryland Scientific Methods Scale (SMS)<sup>24</sup>. The evaluation brief outlined a quasi-experimental difference-in-difference approach, which involved comparing the re-offending rates between the intervention group and a comparison group (matched on a number of key characteristics) who had not received the intervention. This represented a level 3 design on the SMS. It replicated the method used in the evaluation of the phase one AAR pilot, but a feasibility study was also commissioned to determine whether a more robust methodology would be practical and workable in the phase two pilot sites.

A number of options were appraised in the feasibility study for establishing a more robust comparison group. The findings of this appraisal are summarised in Table A3.

The retrospective comparison sampling method was finally selected as a result of the above options appraisal. This method was selected because it avoided the selection and heterogeneity issues detailed in the table above and allowed the comparison group to be matched to the intervention group on age, gender, index offence type and geographical area. However, a major limitation was that data on alcohol consumption could not be collected for the comparison group. This meant that the two groups were not matched on levels of alcohol consumption and that changes in alcohol consumption between the pre- and post-intervention stages could not be measured. Another limitation with the study was that the intervention and comparison groups were selected from different years, thus changes in contextual factors, e.g. changes in police policy towards alcohol-related offending, were not 'controlled' for.

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<sup>24</sup> The Maryland SMS is a grading system used to assess the quality of evaluation research. There are five grades on the scale, the higher the grade the more controls are included in the research design to ensure that the outcomes can be attributed to the intervention being evaluated.

**Table A3 Options appraisal for comparison group construction: Rejected approaches**

Method	What it involves	Outcome measures	Reason for rejection
<b>Multiple A-B design</b>	Measuring a baseline phase of offending for the time preceding the initiation of the AAR (A) and comparing this with the treatment phase (B) in each site, which would begin at a later point	Offending and re-offending, possibly alcohol consumption data	<p>Lack of control over extraneous variables (such as changes in alcohol policy) or individual variables (such as reductions in alcohol consumption) if not able to collect primary data from the non-intervention group</p> <p>Logistical problems in getting police forces who are not involved in the pilot collecting comparable data for the evaluation</p> <p>Potential ethical objections if it is necessary to delay the introduction of an intervention in areas designated to act as comparison areas</p>
<b>Multiple A-B-A</b>	Similar to the A-B design. Sites would start (A) and stop (B) and then re-start the intervention (A) to assess the differences in outcomes for participants in the different phases (A-B-A design). Different sites would start and stop at different times	Offending and re-offending, possibly alcohol consumption data	As with the A-B design
<b>Randomisation</b>	Randomly assigning clients suitable for intervention either to treatment or no treatment, and comparing outcomes between each group	Alcohol consumption, offending and re-offending rates, personal difficulties relating to alcohol consumption	<p>Concerns over throughput of cases, as found in phase one of the AAR pilot, meant that this option may not be viable</p> <p>Timing of pilot meant that it would not have been possible to introduce and train police and detention officer staff to undertake the process of randomisation</p> <p>Ethical issues may have precluded the study, e.g. not offering the intervention may put arrestees at a disadvantage in terms of health and legal outcomes</p>
<b>Comparison of arrestees matched</b>	Groups of AAR clients matched to a group of arrestees from	Alcohol consumption, offending and re-offending	Lack of funding and the inability of police forces to participate in research if they were not directly involved in piloting the AAR

<b>and selected from other non-participating areas.</b>	outside of pilot sites, who are matched in key ways, such as age, gender and offence type	rates, personal difficulties relating to alcohol consumption	scheme
<b>Construction of a 'natural' comparison or 'administrative drop out' group</b>	Those who are suitable for an AAR (i.e. appeared under the influence at the time of arrest) but were not offered an intervention for administrative reasons, such as non-presence of an AAR worker	Alcohol consumption, offending and re-offending rates, personal difficulties relating to alcohol consumption	<p>Following testing with pilot schemes, it was established that the majority of those identified as being suitable for AAR were given the opportunity to see an AAR worker, even if at a later date. Therefore, there was potential heterogeneity in the intervention and comparison groups: namely that only those refusing an intervention could be included in the comparison group and these people would potentially be less motivated than the intervention group</p> <p>Only one area offered interventions at specific times of the week, leaving other arrestees with 'no offer' at other times. Attempts were made to gain the contact and consent details for arrestees likely to be suitable for an intervention at those other times. However, only four names were collected over a three-week period, thus sample sizes would have been too small to use as a natural comparison group</p>
<b>Time series analysis</b>	Comparing outcomes of AAR clients receiving the intervention at different points during the schemes' development, therefore treating those in earlier phases of development as a comparison	Alcohol consumption, offending and re-offending rates, personal difficulties relating to alcohol consumption	Following investigation with pilot scheme areas it was established that there were little or no differences in the content of the interventions being delivered over time
<b>Comparison of individuals receiving different doses of intervention</b>	Comparing outcomes of those with a low dose of intervention e.g. very short intervention, with those receiving longer or more intervention	Alcohol consumption, offending and re-offending rates. personal difficulties relating to alcohol consumption	After examining the impact of the length of intervention on re-arrest outcomes, it was established that there was no correlation, either positive or negative, between 'dose' of intervention and the outcome. Therefore, it made no sense to use this as the comparison

### **Section 3: Outcome assessment**

This section provides details about the processes for selecting and matching the intervention and comparison groups and describes the analyses conducted.

The outcome assessment comprised the following.

- a comparison of arrest data six months prior to an AAR intervention and six months following the intervention, compared with a comparison group who had not received the intervention.
- an analysis of client characteristics and their pre- and post-intervention arrest rates, to identify characteristics associated with different outcomes.
- an analysis of 667 AAR client characteristics pre- and post-intervention to identify characteristics associated with different outcomes.

The main dataset used for the impact assessment included baseline data from a sample of 4,739 AAR clients taken from AIR forms submitted to the evaluation team, and data on arrests taken from police custody databases called NSPIS.

#### **Selection of the comparison group**

The retrospective comparison group was matched to the intervention group on a case-by-case basis on: offence type, age and gender. The comparison group was selected from within the same pilot area one year prior to the commencement of the AAR pilot in that area.

#### **Matching processes**

Police databases provided the evaluation team with anonymised arrest records for all clients in the force area over the AAR pilot evaluation period as well as up to two years prior to the pilot commencing (for the retrospective sample). Police entries that were duplicates and those with incomplete consents were removed from all datasets before analysis.

The first step was to 'match' AAR clients to their own arrest record on the police dataset. Where the AAR arrest offence was not found on the police dataset, but another arrest was found for the same person that occurred within the evaluation period, the client was still included in the analysis (these clients became known as non-index matched); for these clients, the date of the AAR intervention was used as the index offence date.

Non-index matched client arrest rates were compared with index matched arrest rates, to ensure that there were no systemic differences between the two groups. It was found not to make a difference. Thus, all matched and non-index matched clients were included in the analysis provided some record of them, confirming their date of birth and initials, existed on the police custody system.

'Match rates' for AAR clients (the number of cases matched to police records from the number of pre-index matched valid AIRs) are detailed in Table A4. The overall rate for AIRs being matched to the index offence was 88 per cent; the overall rate for AIR individuals being matched to any police arrest record (i.e. index and non-index matches) and therefore included in the analysis was 98 per cent.

#### **Identifying a comparison group**

The second step was to identify the comparison group. The anonymised police databases included the year of birth and initials of arrestees from the police force area 12 months prior to the start of the AAR pilot schemes. Police datasets covered a sufficient time span so that six months pre- and post-'dummy intervention' arrest records could be examined for the selected comparison group.

Police datasets and the AAR client datasets were formatted and merged, and then sorted according to offence type, age and gender. AAR clients were then paired with the closest match in the comparison group, thus providing a match according to offence type, age and gender. This match would then form part of the retrospective comparison group. A total of 4,711 individuals were found to match a comparable individual in the intervention group (99 per cent of the intervention group were matched to a comparison group individual).

**Table A4 Match rates of AAR clients to their police records**

Scheme	Number of valid AIRs used for matching	Number of valid AIRs index matched	Match rate to index offence	Number of valid AIRs non-index matched	Total match rate for all AIRs (index and non-index)
<b>A</b>	485	473	98%	12	100%
<b>B</b>	1,443	1,438	100%	5	100%
<b>C</b>	516	423	82%	93	100%
<b>D</b>	495	428	86%	67	100%
<b>E</b>	706	581	82%	58	91%
<b>F</b>	250	202	81%	48	100%
<b>G</b>	365	292	80%	73	100%
<b>H</b>	561	409	73%	137	97%
<b>Overall</b>	<b>4,821</b>	<b>4,246</b>	<b>88%</b>	<b>493</b>	<b>98%</b>

#### **Arrest data**

Arrest records for both the intervention and comparison groups were highlighted and these were sorted using Excel formulas into six months 'pre-index' offence arrests and six months 'post-index' offence arrests.

Arrest records do not distinguish alcohol related offences in a consistent or reliable manner. A proxy indicator of 'time of offence' (offences occurring between 9 p.m. and 6 a.m. only) was therefore used for the comparison group to identify cases that may be alcohol related. Although imprecise, this was the best indicator to use and consistent with the phase one AAR pilot evaluation, although it is recognised that this does represent a weakness in the data source.

#### **Initial results and verification of 'index' offence data**

Initial analysis of pre- and post-arrest data for intervention and control group samples suggested that the intervention group was more likely to be rearrested than the comparison group. In order to ensure that this result was not due to data processing errors further checks were run to ensure that each step along the process was accurate. One possible explanation for the initially surprising result was that AAR workers may, in some cases, have recorded the 'arrest date' of their client as the date of the intervention, which may have occurred some days following the initial arrest. Thus, it could be possible that two 'arrests' were recorded for each client when only one had taken place.

A manual trawl of the dataset was undertaken to identify AAR clients with a record of more than one arrest within three days of the intervention date. The 'extra' arrest offences were then compared with the 'intervention arrest' offence type and any further case notes were examined to check for any double counting. Where it appeared that the arrest had been double counted this was highlighted and two researchers agreed whether to eliminate the record. In all 120 records were identified as possible double-counting incidents and 97 of these were subsequently eliminated

from the dataset as duplicates. This resulted in 5,739 arrest records, excluding the index offence, for the intervention group and 5,079 for the comparison group being included in the analyses.

The initial analysis of pre- and post-arrest rates was re-run. However, the initial results were still confirmed and so the findings reported in the outcome assessment were considered to represent genuine differences (see Appendix B for results of this analysis).

### **Outcome analyses**

The data were assessed for differences in probability of re-arrest between intervention and control groups, overall and by project – a difference in difference design. The data were also analysed as follows.

- Regression analyses on the whole sample, to detect changes in re-arrest data and compare these changes between the intervention and comparison groups.
- Comparison of means (two-tailed t-test), as well as linear and logistic regression analyses on changes in arrest rates for whole sample.
- Regression analyses assessing re-arrest rates for different clients within the intervention group alone (not to the comparison group) in relation to offending history and demographic characteristics, and to the role clients perceived alcohol played in their offence at the time the intervention was undertaken.

### **Comparison of outcomes amongst a smaller sample of AAR clients for whom follow up interviews were undertaken at six months (n=667)**

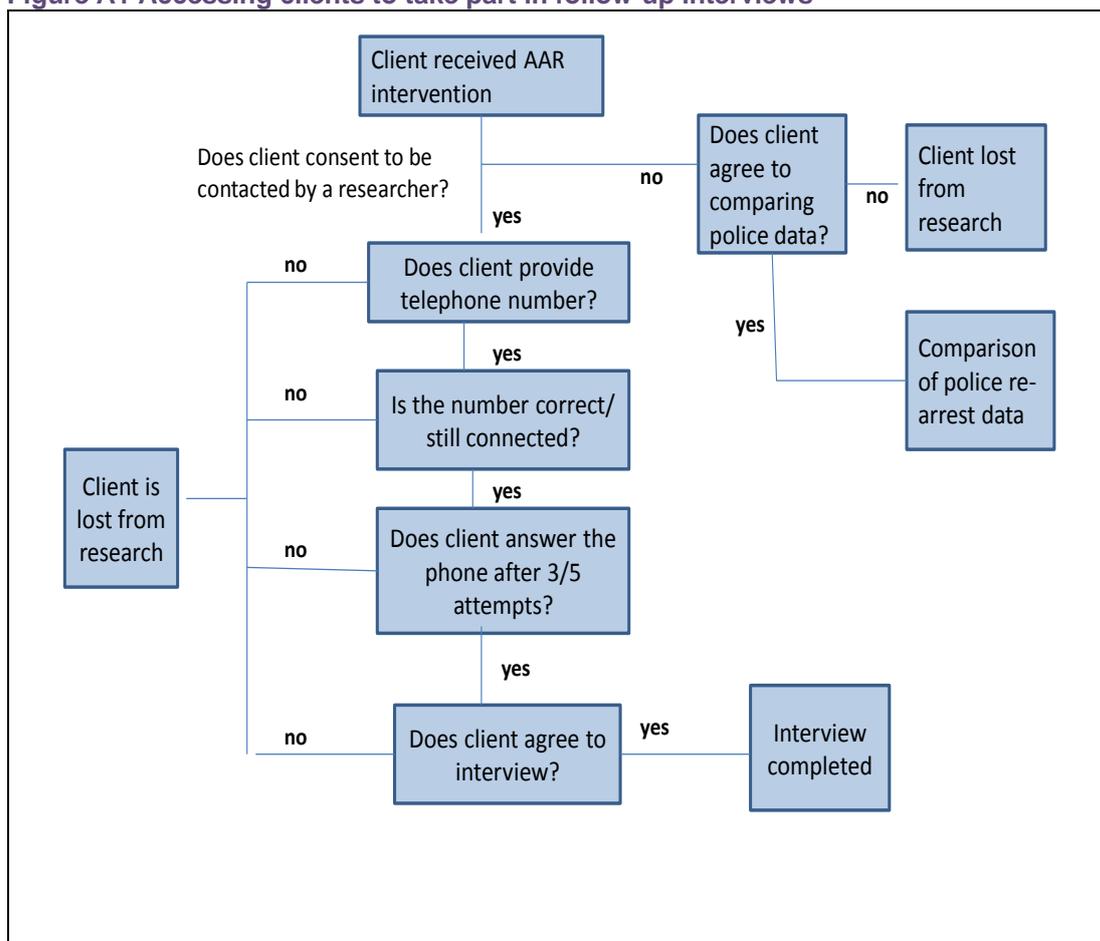
In addition to data on arrest rates an attempt was made to follow up clients who had received an intervention six months later to participate in an interview. The purpose was to gain more insight into the impacts on the individual and particularly to gather data on alcohol consumption and related psycho-social problems. Clients' consent was sought during the initial intervention to be contacted by researchers for a follow-up interview post-intervention, 3,081 clients provided consent for this.

Given the poor response rates to postal surveys for the phase one pilot evaluation, the approach in phase two was to attempt telephone interviews only. Thus, it was only possible to attempt follow-up research with those who had provided telephone numbers, in addition to their consent. Of the 3,081 who consented to be contacted, only 1,925 provided telephone numbers. Of these, 700 were finally contacted, but after excluding incomplete interviews (n=33) 667 completed interviews were included in the analysis (35 per cent of those providing consent and telephone numbers).

Attrition from the research of the 1,925 was due overwhelmingly to either invalid telephone numbers or simply no one answering the telephone. Invalid phone numbers e.g. when the number was dialled it resulted in a dead tone or a recorded message saying that the number was invalid) constituted 30 per cent of the non-responses. The remainder was due to no one answering. However, it is not possible to say how many of the no answers were also invalid or incorrect phone numbers.

Attempts were made to improve the response rates by increasing the number of times a researcher attempted to make contact with the client before they were removed from the contact list, from three to five times. However, this did not improve response rates. Figure A1 details the processes involved in completing follow-up interviews.

**Figure A1 Accessing clients to take part in follow-up interviews**



### Interviews

The interviews were structured and lasted approximately ten minutes. Responses were recorded onto an electronic record as the researcher was talking to the respondent. Interviews were not audio-recorded. The interview script was based on the fields in the AIR form and included:

- the Alcohol Uses and Disorder Identification Tool (AUDIT) - past six months;
- the Short Inventory of Problems (SIP) - past six months;
- self-reported offending history - past six months.

Regression analyses were conducted within this group of 667 to identify characteristics that were associated with changes in alcohol problems (through the AUDIT and SIP) and re-arrest rates. Offending behaviour was measured through self-reported offending behaviour.

The analysis provides a useful insight into changes that occurred within a fairly large sample of clients receiving the intervention. However, given the low response rates and the fact that the measures were not compared with a comparison group of non-intervention individuals, the findings should be treated with caution.

### Section 4: Cost Assessment

The cost assessment comprised the following.

- The collation of cost data based on specially designed forms distributed to project managers and follow-up telephone interviews.

- An analysis of the average cost per intervention for each scheme, including first and second interventions.
- A break-even assessment comparing the cost per intervention with the cost per crime, and providing the number of arrests that needs to be reduced in order for the scheme to break even.

Cost of crime data for each offence type included in the analysis of the 4,739 AAR clients were supplied by the Home Office Economic and Resource Analysis (ERA) department. The unit costs of crime were estimated with the following approaches.

- Costs were derived from the Home Office report (2005) - *The economic and social costs of crime against individuals and households 2003/4*.
- All costs were updated to provide 2008 prices.

The following unit costs for relevant crime categories were assessed as follows.

- For **criminal damage**, the unit cost was **£1,058** based on 2008 prices.
- For **public order, drink driving, and drunk and disorderly**: the criminal justice system component of the costs of crime was used. This provided a unit cost **£143** based on 2008 prices based on public order costs). However, this was a best estimate and did not necessarily include all the costs associated with these offences.
- For the **violence and acquisitive offence** categories, a weighted average of the cost of crime figures was used, giving **£2,083 for 'violence'** and **£1,587 for 'acquisitive'** type offences, based on 2008 prices. However, as these were weighted averages containing very different types of offences, e.g. violence includes common assault and GBH and acquisitive includes shoplifting and burglary, the figures must be treated with caution. The estimates were the lower end of potential costs rather than at the upper end.
- For **'other' offences** a weighted average was used based on the closest matches to arrest categories recorded for AAR clients. However, many of the AAR arrest offences had no recognised cost unit, therefore the costs were taken from the criminal justice system component of criminal damage from OLR 30/05, updated to 2008 figures. The cost of **'other' offences was taken as £980**. This method lacks rigour and so the figure must be treated with caution.

An estimate of the number of crimes 'represented' by each arrest was necessary to identify the total crimes represented by the AAR clients' arrests (pre intervention). For this recorded crime multipliers from OLR 30/05 were used as follows:

- **criminal damage, public order, drink driving, drunk and disorderly, and other** use criminal damage = 4.3.
- **violence** use total violence multiplier = 3.9.
- **acquisitive** use total acquisitive multiplier = 2.5.

The following assumptions and caveats apply when using the multipliers.

- AAR clients were assumed to have the same ratio of total crimes to arrests as the national offender average (they were no more or less likely to be arrested than any other person).
- The ratio of total crimes to arrests was assumed to be unaltered by the intervention itself. That is, the assumption was that the intervention did not influence future chances of an individuals' offences being detected.
- It was also assumed that an arrest did not typically result in a long prison sentence, relative to the periods of analysis.

Estimates of the cost of crime across the pilot schemes were made based on the average cost of crime and estimates of the number of crimes committed for the AAR client group over a six-month period (prior to the intervention) and a weighted average cost of crime across schemes based on the mix of offence types clients were arrested for.

A break-even analysis was done using the following basic calculation: the average cost of an intervention per scheme divided by the weighted average cost of crime (for all pilot schemes) = the reduction in the number of arrests per person that would be required to achieve a break-even point over a six-month period.

Thus the average reduction in arrests required to break even R is as follows:

$$R = I_c / C_c.$$

where:

$I_c$  - is the average cost of an intervention for that scheme, and;

$C_c$  – is the weighted average cost of crime (estimated across all schemes).

For example, for Scheme A:

$$\begin{aligned} R &= \text{£}98/\text{£}3,574 \\ &= 0.27 \text{ fewer arrests per person} \\ &= 2.7 \text{ fewer arrest per 100 people.} \end{aligned}$$

The average reduction in arrests achieved in Scheme A was 2.7 per 100 people suggesting, that it did break even if taking the unadjusted figures for reduction in arrests into account.

## Section 5: Data Handling

Data security protocols were developed by the evaluation team to ensure the safe transit and storage of client level data from the AIR and police datasets. This included ensuring that all computers where data were processed were password protected and suitably protected by anti-virus software.

All researchers read and signed data security protocols and agreed to adhere to their conditions as a requisite for working on the AAR evaluation project. This ensured that all data were password-protected, that datasets were only stored on one master computer and backup hard drive. Electronic police and project level data were sent through a secure website (CJSM.net).

Pilot schemes sent AIR forms to the evaluation team by post using a provider endorsed by the Home Office on a 24-hour or less courier service basis. When AIR forms were processed at the evaluation office, different sections of the forms were stored separately so that clients' information could not be matched to personal data. Upon completion of the evaluation all AIR data, both electronic and paper-based will be destroyed.

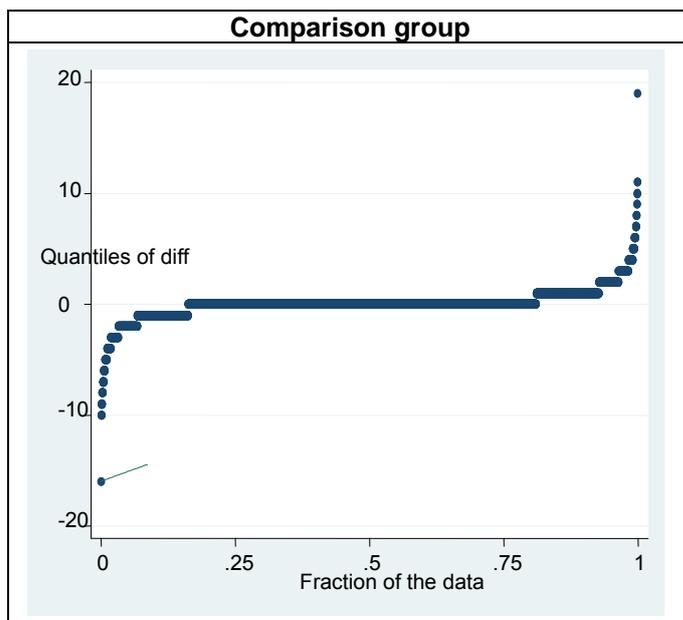
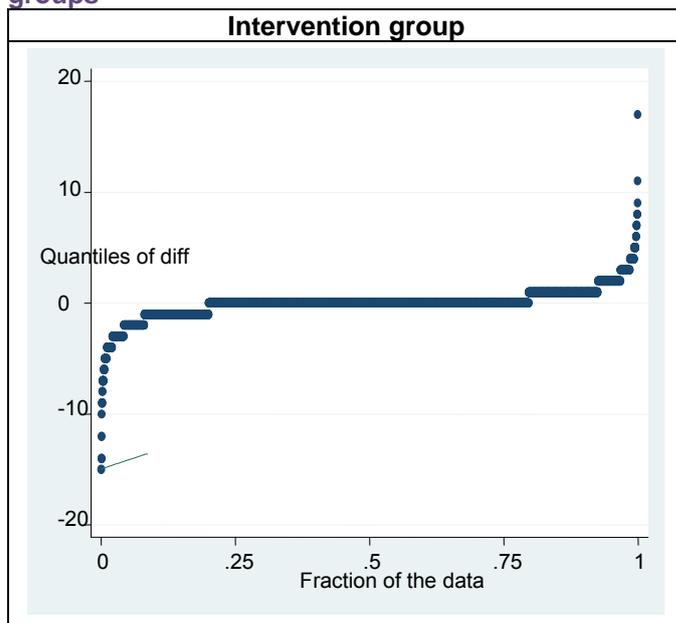
## Appendix B: Further results of analyses

The appendix provides additional details of results of analyses presented earlier in the report.

### Arrest rates for intervention and comparison groups

Figure B1 provides distribution charts of arrest rates for the intervention and comparison groups. This analysis was done to identify potential 'outliers' - individuals with significantly higher numbers of arrests who might distort the picture of arrest rates for the whole group. The figures show very similar levels of pre- and post-'intervention' arrests, with very few individuals having more than five arrests in either time period.

**Figure B1 Distribution of pre- and post-intervention arrests for intervention comparison groups**



### Difference in difference analysis for alcohol related offences

Table B1 details the results of difference-in-difference analysis between the intervention and comparison groups, pre- and post-intervention, for alcohol-related offences only: drunk and disorderly and drink driving. This was done to identify if results were different if only individuals arrested for de facto alcohol-related offence types were included. The results show that, overall, the impact of the scheme was in a negative direction and this was statistically significant. At a scheme level, the results were different for scheme A, which is in the positive direction and statistically significant.

**Table B1 Summary difference-in-difference of re-arrest rates by scheme for de facto alcohol-related offences only**

Scheme	Control (C) or Intervention (I) group	Difference in arrest rate	Difference-in-differences	Statistically significant (S) non significant (NS)	Direction
<b>A</b>	C	0.037	0.022	S	positive
	I	0.014			
<b>B</b>	C	0.045	-0.011	NS	negative
	I	0.056			
<b>C</b>	C	0.04	-0.01	NS	negative
	I	0.05			
<b>D</b>	C	0.012	0	NS	negative
	I	0.022			
<b>E</b>	NA				
<b>F</b>	C	0.02	-0.02	NS	negative
	I	0.05			
<b>G</b>	C	0.03	-0.06	S	negative
	I	0.1			
<b>H</b>	NA				
<b>Overall</b>	<b>C</b>	0.029	<b>-0.008</b>	<b>S</b>	<b>negative</b>
	<b>I</b>	0.037			

Further regression analyses were done on arrest rates for de facto alcohol-related offences only, to control for the effect of age, gender, month of index offence, and number of 'pre-intervention' arrests on arrest rates for the intervention and comparison groups (see Table B2). The adjusted odds ratios (ORs) describe the likelihood of arrest after adjusting for key variables. The 'p value' column provides the test statistic for statistical significance whilst the final columns describe the direction of the effect and the whether the result is significant.

The results indicate no change in the results of the difference-in-difference analysis between the intervention and comparison groups for de facto alcohol-related offences.

**Table B2 Adjusted odds ratios for arrest outcomes for de facto alcohol-related offences only between intervention and comparison groups, controlling for key variables**

Scheme	Odds Ratio	P value	Statistically significant (S) non significant (NS)	Direction
<b>A</b>	<b>0.2528625</b>	<b>0.02</b>	<b>S</b>	<b>positive</b>
<b>B</b>	1.186903	0.352	NS	negative
<b>C</b>	1.326513	0.361	NS	negative
<b>D</b>	2.014381	0.25	NS	negative
<b>E</b>	NA	NA		
<b>F</b>	1.745552	0.339	NS	negative
<b>G</b>	<b>3.512196</b>	<b>0.005</b>	<b>S</b>	<b>negative</b>
<b>H</b>	NA	NA		

Difference-in-difference analysis for the whole intervention and comparison groups were undertaken to examine age and gender as combined variables. This was done to identify how the relationship between age and arrest variables differed between men and women (and how gender patterns differed in different age groups).

Results are given in Table B3. The results show that overall, there was a ‘negative’ effect of the intervention that is statistically non-significant, except for females aged 60 and above for whom the intervention appears to be positive (statistically non-significant). However, for males aged 40 and under there was a significant negative effect of the intervention.

**Table B3 Difference-in-differences of arrest rates between intervention and comparison by age and gender combined groups**

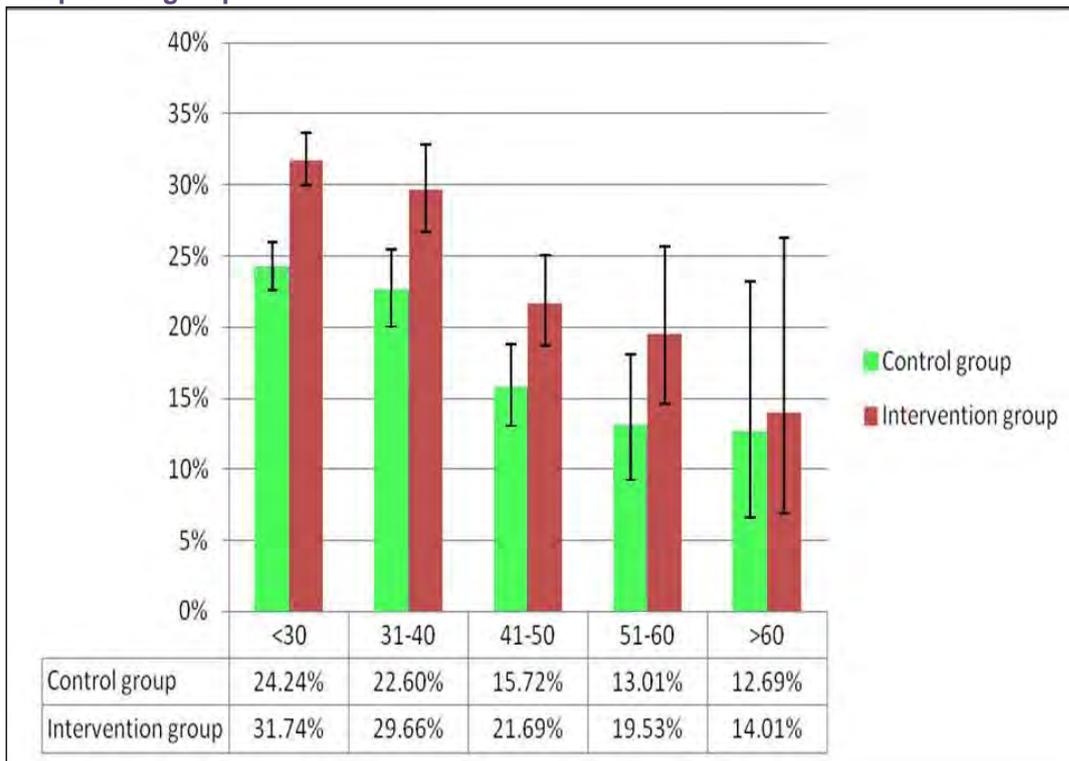
Age group	Male	Female
18-29	-0.077 (S)	-0.028 (NS)
30-39	-0.069 (S)	-0.029 (NS)
40-49	-0.052 (NS)	-0.015 (NS)
50-59	-0.05 (NS)	-0.021 (NS)
60 +	-0.01 (NS)	+0.015 (NS)

**Notes**

- A negative sign (-) indicates a negative effect of the intervention.
- S = significant, NS = non-significant

Figures B2 and B3 show the results of the difference-in-differences of arrest outcomes analysis comparing the whole intervention and comparison groups, which treat age and gender as separate variables. This was done in addition to analyses included in the main report, which combined age and gender variables. The figures show a higher rate of re-arrest amongst the intervention group both for males (statistically significant) and females (statistically non-significant). Across all age groups, re-arrest rates were higher amongst the intervention group compared with the comparison group, but this was statistically significant only for those aged 40 or less.

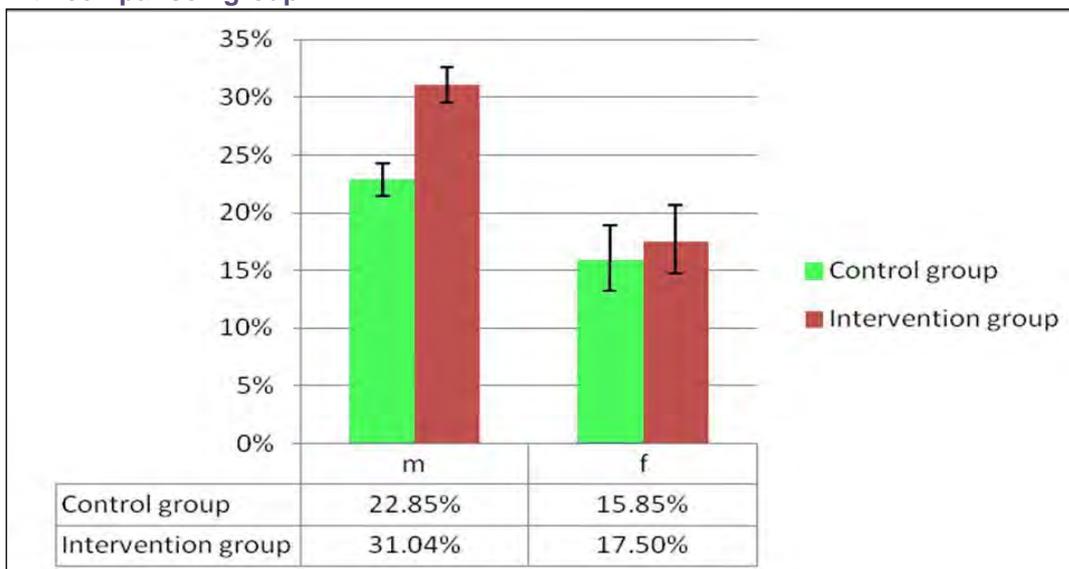
**Figure B2 Difference-in-difference in re-arrest rates by age, intervention compared with comparison group**



Intervention group: n = 4,739

Comparison group: n = 4,711, nb. referred to as control group in figure.

**Figure B3 Difference-in-difference in re-arrest rates by gender, intervention compared with comparison group**



Intervention group: 4,739.

Comparison group: 4,711, nb. referred to as control group in figure.

## Appendix C: Additional client characteristics

Table C1 provides details of Short Inventory of Problem (SIP) average scores for the whole intervention group. SIP is a questionnaire designed to assess the psycho-social consequences of drinking. It is a 15-item questionnaire; respondents give a score between 0 and 3 to signal their agreement with the statement provided for each item. The higher the score, the stronger the agreement with the statement. Table C1 shows low average scores for each item, the most agreed with item is item 6.

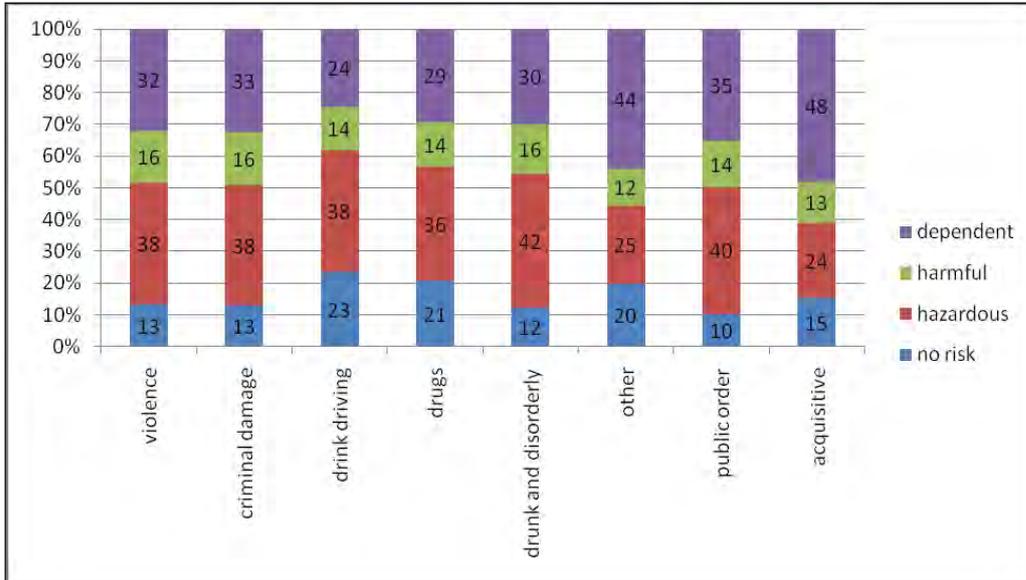
**Table C1 Average score for Short Inventory of Problems items**

Item	SIP question	Average score
1	I have been unhappy because of my drinking	0.85
2	Because of my drinking, I have not eaten properly	0.79
3	I have failed to do what is expected of me because of my drinking	0.62
4	I have felt guilty or ashamed because of my drinking	0.85
5	I have taken foolish risks when I have been drinking	0.87
6	When drinking, I have done impulsive things that I regretted later	0.94
7	My physical health has been harmed by my drinking	0.7
8	I have had money problems because of my drinking	0.63
9	My physical appearance has been harmed by my drinking	0.57
10	My family has been hurt by my drinking	0.77
11	A friendship or close relationship has been damaged by my drinking	0.79
12	My drinking has gotten in the way of my growth as a person	0.63
13	My drinking has damaged my social life, popularity, or reputation	0.55
14	I have spent too much or lost a lot of money because of my drinking	0.83
15	I have had an accident while drinking or intoxicated	0.85

**AUDIT score by offence type**

Figure C1 shows the proportions of AAR clients in different Alcohol Uses and Disorder Identification Tool (AUDIT) score bands, by index offence type. It shows that the AUDIT profile of clients is broadly similar across index offence types, with the exception of a slightly higher number of those with acquisitive index offences in the dependent category.

**Figure C1 AUDIT category profile, by index offence types**



# Appendix D: Alcohol Intervention Record

Unique ID Number:

## Alcohol Arrest Referral Scheme:

### Revised Alcohol Intervention Record

#### PART ONE) Client details

**INSTRUCTION:** In this PART ONE, please take the following basic details from the client before going into more detail about their arrest and alcohol consumption, in parts Two and Three.

**INSTRUCTION:** Ensure that this Part One is stored securely, separate from all other sections of the AIR (see data protection guidance notes for more detail), to ensure confidentiality.

**INSTRUCTION:** Ensure that you complete the Unique Identification Number at the top of each separate sheet of paper. This is to ensure that the records can be matched if necessary. The number should include a number for the client (different for each one) and number for the custody suite, if known.

Unique Identification number for this client (see above Instruction)

Date of arrest (e.g. 01/01/08):     /     /

Today's date:     /     /

First Name/ \_\_\_\_\_ Middle name/ \_\_\_\_\_ Last name \_\_\_\_\_

Gender (tick one) Male  Female

Date of Birth (e.g. 01/01/08)     /     /

OR, if not known, age at last birthday: \_\_\_\_\_

**INSTRUCTION:** please collect contact details from the client verbally to ensure that all sections are completed.

Current address

Post code \_\_\_\_\_

Is this a temporary address Y/N? \_\_\_\_\_  
(If Yes take an alternative address):

Post code \_\_\_\_\_

No fixed abode Y/N? \_\_\_\_\_

**Client's telephone number:** Home \_\_\_\_\_ (can we leave message? Y/N)

Mobile: \_\_\_\_\_ (can we leave message? Y/N) \_\_\_\_\_

Alternative mobile 1 \_\_\_\_\_ (can we leave message? Y/N) \_\_\_\_\_

Unique ID Number:

Alternative mobile 2 \_\_\_\_\_ (can we leave message? Y/N)\_\_\_

Work \_\_\_\_\_ (Can we contact you at work? Y/N) \_\_\_\_\_

Other \_\_\_\_\_ (Can we leave message? Y/N) \_\_

**Client's email address: (NOTE) only take email addresses that can be used to contact the client for the purposes of the AAR i.e. ensure that privacy is adequate.**

\_\_\_\_\_@\_\_\_\_\_

**Preferred method of contact (tick one) (*Please encourage telephone contact*)**

Email  Tel home  Tel mobile  Post

What is the best time of day to call you? \_\_\_\_\_

Name and address of GP

NOTE: if the client would like to find out how to find a local GP they can contact NHS Direct on 0845 4647

Refuses  Not known

**BEFORE PROCEEDING TO PART TWO: 'Client Background', PLEASE ENSURE THE CLIENT IS INFORMED ABOUT THE INTERVENTION AND CONSENTS TO IT (see '*Guidance for AAR workers*' document for further advice and information).**

**Please ensure the client is given the '*Simple Information about the Alcohol Arrest Referral and Evaluation*' document**

**Once clients understand and agree to the intervention, they should sign consent 1 on the next page.**

Unique ID Number:

### Consent 1) Agreeing to the Alcohol Arrest Referral and monitoring

Name of client _____
Name of project: _____
Date: _____
Name of person taking consents _____

Tick if agree

**Consent 1:** I understand and agree to take part in the Alcohol Arrest Referral. I understand that this means that information gathered by the Alcohol Arrest Referral Workers about me on the AIR form will be shared with other agencies and individuals where necessary for the purposes of developing my alcohol intervention. Anonymous data (i.e. not containing my name or other details that can identify me) may also be shared with the Home Office and an external research team to monitor the project.

Signed \_\_\_\_\_

Print name \_\_\_\_\_

Date \_\_\_\_\_

Remove the completed Consent form and store separately from Part Two and Part Three of the AIR form



Unique ID Number:

<p>Ask the client: 'What is your highest educational achievement'? (tick whichever box best reflects their response)</p>	<table border="1"> <tr> <td>GCSE/O level (or equivalent)</td> <td><input type="checkbox"/></td> </tr> <tr> <td>A level</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Degree</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Higher degree</td> <td><input type="checkbox"/></td> </tr> <tr> <td>None of the above</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Not known</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Refuses</td> <td><input type="checkbox"/></td> </tr> </table>	GCSE/O level (or equivalent)	<input type="checkbox"/>	A level	<input type="checkbox"/>	Degree	<input type="checkbox"/>	Higher degree	<input type="checkbox"/>	None of the above	<input type="checkbox"/>	Not known	<input type="checkbox"/>	Refuses	<input type="checkbox"/>
GCSE/O level (or equivalent)	<input type="checkbox"/>														
A level	<input type="checkbox"/>														
Degree	<input type="checkbox"/>														
Higher degree	<input type="checkbox"/>														
None of the above	<input type="checkbox"/>														
Not known	<input type="checkbox"/>														
Refuses	<input type="checkbox"/>														
<p>Ask the client: 'What is your housing status'? (tick whichever box best reflects their response)</p>	<table border="1"> <tr> <td>Owner occupier</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Private rented</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Council/housing association tenant</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Homeless</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Other (<i>please state</i>)</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Not known</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Refuses</td> <td><input type="checkbox"/></td> </tr> </table>	Owner occupier	<input type="checkbox"/>	Private rented	<input type="checkbox"/>	Council/housing association tenant	<input type="checkbox"/>	Homeless	<input type="checkbox"/>	Other ( <i>please state</i> )	<input type="checkbox"/>	Not known	<input type="checkbox"/>	Refuses	<input type="checkbox"/>
Owner occupier	<input type="checkbox"/>														
Private rented	<input type="checkbox"/>														
Council/housing association tenant	<input type="checkbox"/>														
Homeless	<input type="checkbox"/>														
Other ( <i>please state</i> )	<input type="checkbox"/>														
Not known	<input type="checkbox"/>														
Refuses	<input type="checkbox"/>														
<p>Ask the client: 'Are you pregnant'? (tick whichever box best reflects their response)</p>	<table border="1"> <tr> <td>Yes (give date due)</td> <td><input type="checkbox"/></td> </tr> <tr> <td>/ /</td> <td><input type="checkbox"/></td> </tr> <tr> <td>No</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Not known</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Refuses</td> <td><input type="checkbox"/></td> </tr> </table>	Yes (give date due)	<input type="checkbox"/>	/ /	<input type="checkbox"/>	No	<input type="checkbox"/>	Not known	<input type="checkbox"/>	Refuses	<input type="checkbox"/>				
Yes (give date due)	<input type="checkbox"/>														
/ /	<input type="checkbox"/>														
No	<input type="checkbox"/>														
Not known	<input type="checkbox"/>														
Refuses	<input type="checkbox"/>														
<p>Ask the client: 'Do you consider yourself to have a disability'? (tick whichever box best reflects their response)</p>	<table border="1"> <tr> <td>Yes</td> <td><input type="checkbox"/></td> </tr> <tr> <td>No</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Not known</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Refuses</td> <td><input type="checkbox"/></td> </tr> </table>	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Not known	<input type="checkbox"/>	Refuses	<input type="checkbox"/>						
Yes	<input type="checkbox"/>														
No	<input type="checkbox"/>														
Not known	<input type="checkbox"/>														
Refuses	<input type="checkbox"/>														
<p>Ask the client: 'How would you describe your general health'? (tick whichever box best reflects their response)</p>	<table border="1"> <tr> <td>Excellent</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Very good</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Good</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Fair</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Poor</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Not known</td> <td><input type="checkbox"/></td> </tr> <tr> <td>Refuses</td> <td><input type="checkbox"/></td> </tr> </table>	Excellent	<input type="checkbox"/>	Very good	<input type="checkbox"/>	Good	<input type="checkbox"/>	Fair	<input type="checkbox"/>	Poor	<input type="checkbox"/>	Not known	<input type="checkbox"/>	Refuses	<input type="checkbox"/>
Excellent	<input type="checkbox"/>														
Very good	<input type="checkbox"/>														
Good	<input type="checkbox"/>														
Fair	<input type="checkbox"/>														
Poor	<input type="checkbox"/>														
Not known	<input type="checkbox"/>														
Refuses	<input type="checkbox"/>														

Client's Ethnic Group (ask the client which single category best applies and tick)					
White - British	<input type="checkbox"/>	White - Irish	<input type="checkbox"/>	White – other background	<input type="checkbox"/>
Mixed – White & Black Caribbean	<input type="checkbox"/>	Mixed – White & Black African	<input type="checkbox"/>	Mixed – White & Asian	<input type="checkbox"/>
Mixed – Other background	<input type="checkbox"/>	Asian or Asian British - Indian	<input type="checkbox"/>	Asian or Asian British – Pakistani	<input type="checkbox"/>
Asian or Asian British - Bangladeshi	<input type="checkbox"/>	Asian or Asian British – Other background	<input type="checkbox"/>	Black or Black British – Caribbean	<input type="checkbox"/>
Black or Black British – African	<input type="checkbox"/>	Black or Black British – Other background	<input type="checkbox"/>		<input type="checkbox"/>
Chinese or other ethnic group – other group	<input type="checkbox"/>	Prefer not to say/don't know	<input type="checkbox"/>		<input type="checkbox"/>
Other (please state)	<input type="checkbox"/>				

Unique ID Number:

### Clients' perceptions of their drinking, alcohol related behaviour and motivation to change

NOTE: the following series of questions relate to clients' own drinking and behaviour and not drinking and behaviour in general

(For further guidance see notes on how to use measures in 'guidance to AAR workers')

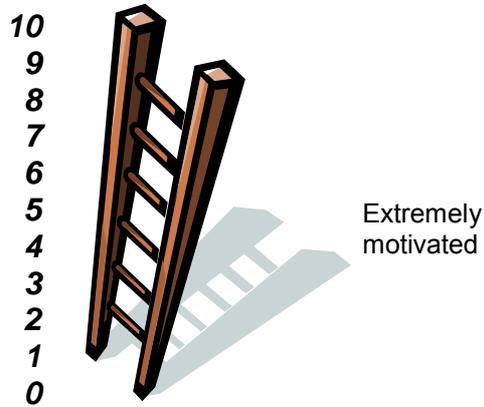
#### Motivation Ladder

**INSTRUCTION:** ask the client to answer the question below and show them the ladder.

How motivated are you to reduce your alcohol consumption? Please **circle a number** from 0-10, where 0 is 'not at all motivated' and 10 is 'extremely motivated'.

Client doesn't know \_\_\_

Client refuses \_\_\_



Ask the client:

'To what extent do you think alcohol had a role to play in why you were arrested'? On a scale of 1-5, 1 being 'no role' to 5 being 'very big role'.

Not at all

motivated

1 (no role)	2	3	4	5 (very big role)

Not known\_\_\_

Refuses\_\_\_

**AUDIT INSTRUCTION:** read out the following questions and response options to the client and make a note of the appropriate score. Scores for each response are shown in boxes to the right of the response. Tick which is most relevant. *Please complete this tool as a whole before discussing individual items.*

**score**    **How often do you have a drink containing alcohol?**

Never (0)	Monthly or less (1)	2 to 4 times a month (2)	2 to 3 times a week (3)	4 or more times a week (4)
-----------	---------------------	--------------------------	-------------------------	----------------------------

**How many standard drinks do you have on a typical day when you are drinking?** (NOTE: a standard drink is half pint of regular beer, lager or cider, 1 small glass of wine, 1 single measure of spirits, 1 small glass of sherry, or 1 single measure of an aperitif).

1 or 2 (0)	3 or 4 (1)	5 or 6 (2)	7 to 9 (3)	10 or more (4)
------------	------------	------------	------------	----------------

**How often do you have 6 or more standard drinks on one occasion?**

Never (0)	Less than monthly (1)	Monthly (2)	Weekly (3)	Daily or almost daily (4)
-----------	-----------------------	-------------	------------	---------------------------

**How often during the last six months have you found that you were not able to stop drinking once you had started?**

Never (0)	Less than monthly (1)	Monthly (2)	Weekly (3)	Daily or almost daily (4)
-----------	-----------------------	-------------	------------	---------------------------

**How often during the last 6 months have you failed to do something that was normally expected from you because of your drinking?**

Never (0)	Less than monthly (1)	Monthly (2)	Weekly (3)	Daily or almost daily (4)
-----------	-----------------------	-------------	------------	---------------------------

**How often during the last 6 months have you needed an alcoholic drink in the morning to get yourself going after a heavy drinking session?**

Never (0)	Less than monthly (1)	Monthly (2)	Weekly (3)	Daily or almost daily (4)
-----------	-----------------------	-------------	------------	---------------------------

**How often during the last six months have you had a feeling of guilt or remorse after drinking?**

Never (0)	Less than monthly (1)	Monthly (2)	Weekly (3)	Daily or almost daily (4)
-----------	-----------------------	-------------	------------	---------------------------

**How often during the last six months have you been unable to remember what happened to you the night before because you had been drinking?**

Never (0)	Less than monthly (1)	Monthly (2)	Weekly (3)	Daily or almost daily (4)
-----------	-----------------------	-------------	------------	---------------------------

**Have you or someone else been injured as a result of your drinking?**

Never (0)	Yes, but not in the last 6 months (2)	Yes, during the last 6 months (4)
-----------	---------------------------------------	-----------------------------------

**Has a relative or friend, doctor or other health worker been concerned about your drinking or suggested you cut down?**

Never (0)	Yes, but not in the last 6 months (2)	Yes, during the last 6 months (4)
-----------	---------------------------------------	-----------------------------------

Scoring: The scores for each question are shown next to each response. The minimum score (for non-drinkers) is 0, and the maximum possible score is 40. Add up all the scores and put the total score in the box below.

**AUDIT TOTAL SCORE**

--

Circle	0 – 7, No Risk	8 – 15, Hazardous	16 – 19, Harmful	20+ Dependent
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## Short Inventory of Problems

Read out the following to the client: *'Here are a number of events that people sometimes experience. Please listen carefully and let me know how often each one has happened to you DURING THE PAST 6 MONTHS'* (Never, Once or a few times, etc.).

List the statements to the client and tick one response from the client

<b><i>During the Past 6 Months, how often has this happened</i></b> <b>Circle one answer:</b>	<b>Never</b>	<b>Once or a few times</b>	<b>Once or twice a week</b>	<b>Daily or almost daily</b>
1. I have been unhappy because of my drinking.				
2. Because of my drinking, I have not eaten properly.				
3. I have failed to do what is expected of me because of my drinking.				
4. I have felt guilty or ashamed because of my drinking.				
5. I have taken foolish risks when I have been drinking.				
6. When drinking, I have done impulsive things that I regretted later.				
<b>Now answer these questions about things that may have happened to you during the past 6 Months. How much has this happened? Tick one answer:</b>	<b>Not at all</b>	<b>A little</b>	<b>Quite a lot</b>	<b>Very much</b>
7. My physical health has been harmed by my drinking.				
8. I have had money problems because of my drinking.				
9. My physical appearance has been harmed by my drinking.				
10. My family has been hurt by my drinking.				
11. A friendship or close relationship has been damaged by my drinking.				
12. My drinking has prevented me from achieving the things I want to achieve in life.				
13. My drinking has damaged my social life, popularity, or reputation.				
14. I have spent too much or lost a lot of money because of my drinking.				
<b>Has this happened to you during the past 6 months? Tick one answer:</b>	<b>No</b>	<b>Almost</b>	<b>Yes, once</b>	<b>Yes, more than once</b>
15. I have had an accident while drinking or intoxicated				

Unique ID Number:

## Alcohol related incidents – self reporting

Please ask the client about previous incidents. Include all incidents regardless of whether the police were aware or not. Make a note of the responses as shown below.

Over the last six months, have you...	Y/N	If yes: How many times approx?	If only once: Were you drinking before hand? Y/N	Were you arrested? (Y/N)	If more than once: Were you drinking before hand:			How often were you arrested?		
					Never	Some times	Always	Never	Some times	Always
Have you been physically or verbally abusive or violent with someone you are, or have been, in an intimate relationship with? E.g. wife or partner										
<i>NOTE: for the discussion that follows from this point, exclude the incidents already recorded above i.e. only include those not involving someone who is, or has been in, an intimate relationship with the client. This is to avoid double counting.</i>										
Got into an argument with someone?										
Threatened someone verbally?										
Threatened someone with a weapon (including broken glass, a glass bottle, stick, knife, gun or other weapon)?										
Kicked or punched someone?										
Attacked someone using a weapon (including a stick, knife, gun, glass bottle, broken glass or other weapon)?										
Deliberately damaged property or set fire to property including vehicles?										
Have you been the victim of any of the above?										

How long did this session with the client last up to now? \_\_\_\_\_ Hours \_\_\_\_\_ Minutes \_\_\_\_

Which session was this: (please tick)?

First \_\_\_

Second \_\_\_

Third \_\_\_

**Additional information (IMPORTANT: do not record personal data that can identify the client)**

Unique ID Number:

### PART THREE) Further Action

Use this Part Three to establish the next steps to be taken with the client

**INSTRUCTION:** use the Unique Identification Number on sheets in this Part. Do not record personal data that can identify the client (e.g. name and address).

Client's Unique Identification Number				
Will the client attend a second AAR session? (tick one)	Yes		If yes, date: _____, time _____	
	No		Location: _____	
	n/a			
Does the client need referral to another service (i.e. if they are being referred to further support beyond the AAR intervention)?	Yes		No	
If yes, which service have they been recommended? (include name and type of service)				
Is this an alcohol misuse service?	Yes		No	
Is this a drug misuse service?	Yes		No	
Has the client <u>accepted</u> referral to another service?	Yes		No	
Is the client already being seen by another alcohol misuse agency?	Yes		If yes, which:	
	No			
Is the client already being seen by another substance misuse (not alcohol) service?	Yes		If yes, which:	
	No			
Does the client require a letter confirming interventions for court purposes?	Yes		No	
If "yes", has a letter been provided?	Yes		No	
Has notification been sent to the police (conditional caution/ bail referral and PND only)	Yes		No	
Does the client need support from services for victims of domestic violence?	Yes		No	
Does the client need additional language support? (Include details)				

### Additional Information

Use this space to write in further notes necessary for the ongoing referral. Do not include personal data that can identify the client.

Unique ID Number:

**Now please ask the client to be part of the National Evaluation and that they understand what this involves.**

**Once the client has understood and agrees to be part of the evaluation, they should sign Consents 2, 3 and 4 on the next page.**

**Please ensure the client is given the '*Simple Information about the Alcohol Arrest Referral and Evaluation*' document**

**(NOTE: There is detailed information about the Evaluation and what it involves in the '*Guidance for AAR workers*' document').**

Unique ID Number:

## Consents 2, 3 and 4 - Taking Part in the Evaluation

Name of client \_\_\_\_\_  
Name of project: \_\_\_\_\_  
Date: \_\_\_\_\_  
Name of person taking consents \_\_\_\_\_

I understand that an evaluation is being conducted of the alcohol arrest referral schemes and that I am being asked for my consent to take part in it.

Tick if agree

<b>2)</b> I agree for my contact details (collected in part one of the form) to be passed to a research team so that they can contact me for an interview about my experiences of the Alcohol Arrest Referral Scheme	<input type="checkbox"/>
<b>3)</b> I agree for the data collected about me as part of my intervention to be passed to a research team to analyse for the evaluation. I understand that it will not be possible to identify me from the data used.	<input type="checkbox"/>
<b>4)</b> I agree for my data to be linked to my police offending record using only my initials, date of birth and gender. I understand that it will not be possible to identify me from this data.	<input type="checkbox"/>

**Signed** \_\_\_\_\_

**Print name** \_\_\_\_\_

**Date** \_\_\_\_\_

Remove the completed Consent Form and store separately from Part Two and Part Three