



Cost-effectiveness of screening and referral to an alcohol health worker in alcohol misusing patients attending an accident and emergency department: A decision-making approach

Barbara Barrett*, Sarah Byford, Mike J. Crawford, Robert Patton,
Colin Drummond, John A. Henry, Robin Touquet

King's College London, Institute of Psychiatry, Box P024, De Crespigny Park, London SE5 8AF, UK

Received 29 November 2004; received in revised form 11 May 2005; accepted 11 May 2005

Abstract

We present the cost and cost-effectiveness of referral to an alcohol health worker (AHW) and information only control in alcohol misusing patients. The study was a pragmatic randomised controlled trial conducted from April 2001 to March 2003 in an accident and emergency department (AED) in a general hospital in London, England. A total of 599 adults identified as drinking hazardously according to the Paddington Alcohol Test were randomised to referral to an alcohol health worker who delivered a brief intervention ($n = 287$) or to an information only control ($n = 312$). Total societal costs, including health and social services costs, criminal justice costs and productivity losses, and clinical measures of alcohol consumption were measured. Levels of drinking were observably lower in those referred to an AHW at 12 months follow-up and statistically significantly lower at 6 months follow-up. Total costs were not significantly different at either follow-up. Referral to AHWs in an AED produces favourable clinical outcomes and does not generate a significant increase in cost. A decision-making approach revealed that there is at least a 65% probability that referral to an AHW is more cost-effective than the information only control in reducing alcohol consumption among AED attendees with a hazardous level of drinking.

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Keywords: Cost-effectiveness; Alcohol misuse; Brief intervention; Accident and emergency department

1. Introduction

Alcohol misuse is implicated in up to 30% of adult Accident and Emergency Department (AED) attendances at a massive cost to both individuals and society (Cabinet Office, 2004). A recent report by the British Prime Minister's Strategy Unit estimated that the annual financial burden of alcohol misuse on society was between £18 and £20 billion, including £510 million in AEDs (Cabinet Office, 2003).

Descriptive cohort studies of people offered brief intervention for alcohol misuse suggest they may be beneficial (Wright et al., 1998). To date, the literature has mainly focussed on the clinical rather than the economic bene-

fits of brief interventions. Studies dedicated to understanding the economic benefits of addiction interventions are rare (McCollister and French, 2003), but are of increasing importance since financial constraints and scarce health care resources dictate that we should consider the cost-effectiveness of health care interventions as well as their clinical effectiveness. There are a few published economic evaluations of brief interventions for alcohol misuse. Fleming et al. (2000, 2002) compared monetary reductions in adverse drinking outcomes with the cost of treating alcohol misuse with brief intervention in a primary care setting. The per-patient benefit of the programme was estimated at \$1151 over 12 months and \$7985 over 48 months. One study evaluated screening and brief intervention in the AED setting: Kunz et al. (2004) randomised 294 individuals to brief intervention or control treatment in an AED in a poor, multi-ethnic inner city area. Evidence from this pilot study indicated that

* Corresponding author. Tel.: +44 207 848 5091; fax: +44 207 7701 7600.
E-mail address: b.barrett@iop.kcl.ac.uk (B. Barrett).

screening and brief intervention was relatively low in cost and potentially cost-effective.

Attempts to conduct a randomised trial of brief intervention in an AED have proved difficult (Peters et al., 1998), although evidence is accumulating that brief intervention for alcohol misuse in AEDs may have clinical benefit (Longabaugh et al., 2001; Monti et al., 1999; Wright et al., 1998). In a recent study, opportunistic identification and referral to an alcohol health worker (AHW) in an AED was demonstrated to be feasible and associated with lower levels of alcohol consumption over the following year (Crawford et al., 2004). This paper examines data from this most recent study, reporting a cost-effectiveness analysis of referral to an AHW delivering a brief intervention versus an information only control, in people attending an AED with a hazardous level of drinking.

2. Methods

2.1. Economic evaluation

A cost-effectiveness analysis was undertaken, involving the identification, measurement and valuation of both the costs and outcomes of an intervention and a comparator (Drummond et al., 1997). Costs included all services used, criminal justice resources and lost productivity. Outcomes were measured in terms of units of alcohol consumed per week.

2.2. Hypothesis

The primary economic hypothesis was that opportunistic identification and referral to an AHW is a more cost-effective approach to reducing alcohol consumption compared with opportunistic identification and an information only control.

2.3. Experimental design and sample

We conducted a single-blind pragmatic randomised controlled trial among patients attending the AED at St. Mary's hospital, London between March 2001 and April 2002. St. Mary's is an inner city hospital serving a population of around 450,000 residents that are younger, more ethnically diverse and more mobile than other parts of Britain (Office for National Statistics, 2003).

Adults attending the AED were selectively screened for alcohol misuse as part of clinical practice using the Paddington Alcohol Test (PAT) (Patton et al., 2004). Any man drinking more than eight units of alcohol in any one session at least once a week, any woman drinking more than six units of alcohol in any one session at least once a week and any person who believed their attendance in the AED could be related to alcohol are PAT positive and judged to be misusing alcohol (Smith et al., 1996). Study participants had to be

alert and orientated, aged 18 or over, able to speak English sufficiently well to complete study questionnaires and be resident within Greater London. Individuals already in contact with alcohol services, those already included in the study and those who specifically requested help with alcohol problems were excluded. PAT positive patients were told they were drinking alcohol at a level that might be detrimental to their health and asked if they would be willing to receive brief intervention. Patients who accepted the offer were asked to give consent and were randomised by means of sequential sealed envelopes.

Patients randomised to the experimental treatment received the information leaflet "Think About Drink" (Health Education Authority, 1999) with contact details for local and national alcohol agencies and an appointment card asking the participant to re-attend for an appointment with an AHW. Patients randomised to the control treatment received the information leaflet and a blank card of the same dimensions and weight as the appointment card. Since the patient had been identified as drinking dangerously, receipt of the leaflet was considered the minimum intervention that could be offered.

2.4. Intervention

AHWs have been employed in St. Mary's AED since 1994. They deliver a brief intervention lasting between 30 and 50 min that establishes the patients' drinking history, establishes their current level of alcohol consumption and determines what further help may be appropriate, including onward referral to alcohol treatment services.

2.5. Outcome measures

Outcomes data have been reported previously (Crawford et al., 2004). Baseline data was limited to demographic and clinical data collected as part of routine pragmatic clinical practice because recruitment had to take place without impeding the work of clinicians in the AED. Follow-up assessments were carried out at 6 and 12 months following randomisation either in person or by telephone by a researcher blind to allocation status. The primary outcome measure was units of alcohol consumed per week, which was self-reported in interview using FORM90AQ (Miller, 1996) and the Steady Pattern Grid (Sobell and Sobell, 1979).

2.6. Costs

For the purpose of the economic evaluation, a broad cost perspective was taken to assess the impact of the intervention on each individual's use of all possible services and each individual's contribution to the economy in terms of their ability to be in productive employment.

The AHW team collected data on contacts with AHWs by study participants. The AHW service was already established at the AED of St. Mary's hospital and AHWs were experi-

enced mental health nurses employed by the local National Health Service (NHS) Mental Health Trust. Sessions lasted 45 min and AHWs estimated they spent an additional 10 min on referral and paperwork per session. The cost of the intervention was estimated as the long-run marginal opportunity costs employing methods developed and recommended by the Personal Social Services Research Unit at the University of Kent (Netten et al., 1998). The cost was based on the mid-point of the relevant AHW salary scales and included all employer costs (National Insurance and superannuation contributions) and appropriate overhead costs (capital, administration, managerial etc.).

Information on hospital and community health and social services including social services provided accommodation, medication and contacts with the police and the courts were collected at 6 and 12 months follow-up using a questionnaire designed for the study, but based on previous work carried out by the Health Promotion and Addiction group of the Centre for Health Economics, University of York (Parrott, 2001). Self-report service utilisation by patients misusing alcohol is considered a good measure of actual service use. Killeen et al. (2004) assessed the accuracy of self-report utilisation of services compared to service record extraction and found that the level of agreement between the two was good for most services, although there was less agreement for AED visits. Information collected in the service use questionnaire on re-attendance to St. Mary's AED was corroborated with data from electronic patient records held at the hospital.

In order to calculate total costs, unit costs were applied to each service. Costs were taken from local and national sources for the financial year 2001/02 and published costs were inflated to 2001/02 where necessary using the Hospital and Community Services index (Netten and Curtis, 2002). Hospital costs were taken from Trust Financial Returns (CIPFA, 2002) and NHS Reference Costs (Department of Health, 2003). Contacts with the police were costed using the Metropolitan Police Ready Reckoner (Metropolitan Police, 2000) and time spent in prison using cost data contained in the Prison Service Annual Report (HM Prison Service, 2002). It was not possible to calculate other costs on a local basis; instead national unit costs were used (British Medical Association & Royal Pharmaceutical Society of Great Britain, 2002; Finn et al., 2000; Harries, 1999; Netten and Curtis, 2002; Weiner, 2001). These costs were weighted where possible to take into consideration the higher costs associated with services in London. Discounting was unnecessary as neither costs nor benefits were recorded beyond 12 months.

To measure the impact of the intervention on patients working patterns, productivity and the economy, we collected information on the number of days taken off work that the individual attributed to alcohol misuse. Productivity costs were calculated using the human capital approach, which involves multiplying the number of days taken off work due to alcohol consumption by the individual's gross daily

salary. The human capital approach is criticised because of its inability to consider characteristics of the labour market that are acknowledged by the friction cost approach. Specifically, that workers can be replaced from the pool of unemployed labour, colleagues may cover for those off work and individuals may catch up on work missed on their return to work (Koopmanschap and van Ineveld, 1992). Thus, the human capital approach will tend to overestimate productivity losses. For this reason, the impact of productivity losses on the main results of the study was examined in a sensitivity analysis by varying productivity losses from the maximum level as calculated by the human capital approach to a minimum of zero.

2.7. Statistical methods

Sample sizes were calculated on the basis of the power required to demonstrate differences in clinical outcomes (Crawford et al., 2004). There was no power calculation for costs. All analyses were carried out on an intention-to-treat basis using a statistical plan drawn up prior to the collection of follow-up data. Initially, traditional statistical tests for differences in costs were undertaken. Despite the skewed distribution of the cost data, parametric tests were used on untransformed costs, because this method enables inferences to be made about the arithmetic mean (Thompson and Barber, 2000). Non-parametric bootstrapping was used to assess the robustness of confidence intervals to non-normality of the cost distribution (Barber and Thompson, 2000). The primary analysis was of total cost over 12 months, but results are also reported for 6 months.

A number of study participants did not complete the service use questionnaire. Complete case analysis was used in the first instance and was based on subjects with full data available for both 6 and 12 months follow-up. However some commentators have suggested that this approach reduces the potential power of analysis and could bias results if the complete cases differ significantly from the original sample (Briggs et al., 2003). Consequently, in a sensitivity analysis we explored the impact of including data on participants for whom only 6-month follow-up was available in order to increase the follow-up rate and sample size. Their 12-month follow-up data was estimated using the last value carried forward (LVCF) technique, which assumes that costs in the second 6-month period were equal to costs in the first 6 months (Briggs et al., 2003).

Domestic accommodation is sometimes included in studies involving patients who spend a relatively significant amount of time in hospital, prison or supported accommodation. The costs of these facilities include living expenses, which are excluded from the cost of individuals in domestic accommodation, thus potentially introducing bias against those in service provided accommodation. In order to test for this, we included the cost of domestic accommodation in a sensitivity analysis.

2.8. Cost-effectiveness

Cost-effectiveness is concerned with the joint difference in costs and effects between interventions and was assessed over the 12-month period through the calculation of incremental cost-effectiveness ratios (ICER) (Van Hout et al., 1994; Briggs, 2001). The ICER is the ratio of differential average costs of the two interventions to the differential average effects. Once an ICER has been calculated, one treatment can be defined as more cost-effective than its comparator if: (a) it is less costly and more effective (dominance); (b) it is more costly and more effective, and the additional cost per extra unit of effectiveness is considered worth paying by decision-makers; or (c) it is less costly and less effective and the additional cost per extra unit of effectiveness for the alternative intervention is not considered worth paying. The primary cost-effectiveness analysis used the primary outcome measure to explore the relative impact of the interventions on the level of alcohol consumed per week.

Cost-effectiveness acceptability curves are a relatively new method of representing the uncertainty surrounding the summary measure of cost-effectiveness, the ICER. They also incorporate the uncertainty regarding the maximum amount that a decision-maker would consider acceptable to pay for a unit improvement in outcomes. The curves are calculated by repeat resampling of the costs and effectiveness data (bootstrapping) to generate a distribution of mean costs and effects for the two treatments (Efron and Tibshirani, 1993). These distributions are then used to calculate the probability that each of the treatments is the optimal choice, subject to a range of possible maximum values (ceiling ratio) that a decision-maker might be willing to pay for a unit improvement in outcome. A cost-effectiveness acceptability curve is presented showing the probability that the brief AHW intervention is more cost-effective than the information only control for a range of possible values of the ceiling ratio (Van Hout et al., 1994; Fenwick et al., 2001).

3. Results

3.1. Patients

Five hundred and ninety nine patients were randomised to the experimental treatment ($n = 287$) or the control treatment ($n = 312$). Full service use data for both 6 and 12 months follow-up were available for 131 of the experimental treatment group and 159 of the control treatment group (48% of the total). Comparison of available baseline characteristics in Table 1 reveals that there were no significant differences in clinical characteristics between patients for which there is full service use information and patients for which service use information is missing. Analysis of demographic details revealed that women were more likely to have full service use information than men.

Table 1

Comparison of baseline characteristics for patients with missing and available economic data over 12 months

Baseline variable	Available ($n = 290$)	Missing ($n = 309$)
Gender*		
Male %	74	84
Age		
Mean	43.41	44.17
Repeat attendee		
Yes %	25	30
PAT units at baseline		
Mean	21.07	21.35
PAT drinking frequency at baseline		
Once a week or more %	94	94
PAT trigger attendance related to alcohol		
Yes %	74	63

* $p < 0.05$.

3.2. Outcomes

At 6 months follow-up, for participants with service use information, the difference in the mean number of alcohol units consumed per week was statistically significantly lower in the experimental group (experimental treatment = 59.7, control treatment = 83.1; $p = 0.02$). By 12 months follow-up the number of units consumed per week remained lower in the experimental group, but the difference was no longer significant (experimental treatment = 56.20, control treatment = 67.20; $p = 0.09$).

3.3. Resource utilisation

Table 2 details the resources used by study participants in the experimental and control groups over the 12 month follow-up period, alongside the unit costs applied to each service. Among those referred to an AHW, only 41 of 131 (33%) attended a session. In addition, in this pragmatic trial a small number of participants who were randomised to treatment as usual appear to have received the active intervention. Whether this was due to participants making independent contact with AHWs, or staff in the AED providing informal information about the AHW service to those in the control arm of the trial is unknown. Thirty three percent of the experimental group and 31% of the control group used other alcohol treatment services during follow-up, these included community treatment and support services and hospital-based detoxification as an inpatient, day patient or outpatient. Study participants in both treatment groups used a wide range of health, social and voluntary sector services. In each group 30% had had some contact with the police or the criminal justice system over the follow-up period.

3.4. Treatment cost

The cost of a one-to-one 45-min session with an AHW, plus 10 min for paperwork and onward referral was estimated to be £19. The total cost per patient was only £6 as a result of

Table 2
Use of resources during the 12-month follow-up period

Service (unit)	Use of resources, mean (S.D.)	
	Experimental treatment (n = 131)	Control treatment (n = 159)
Alcohol Services		
AHW intervention (number)	0.31 (0.46)	0.03 (0.16)
Inpatient (day)	3.74 (19.36)	3.79 (23.76)
Outpatient (attendance)	0.79 (8.74)	0.01 (0.11)
Day patient (attendance)	0.00 (0.00)	0.35 (3.86)
Other alcohol support (contacts)	8.46 (28.87)	5.81 (23.52)
Hospital Services		
Accident and emergency (attendance)	0.90 (1.84)	0.97 (1.91)
Emergency ambulance (call outs)	0.56 (1.49)	0.54 (1.28)
Inpatient (day)	2.96 (7.25)	3.79 (14.15)
Outpatient (attendance)	1.72 (3.40)	1.66 (8.87)
Day patient (attendance)	0.05 (0.38)	0.04 (0.27)
Primary care		
GP (contact)	6.47 (10.40)	4.65 (6.56)
Practice nurse (contact)	0.43 (1.21)	0.98 (3.03)
District nurse (contact)	0.79 (6.16)	0.96 (7.31)
Community psychiatric nurse (contact)	0.24 (2.37)	0.35 (1.83)
Psychiatrist (contact)	0.50 (2.03)	0.30 (1.34)
Psychologist (contact)	0.52 (2.99)	0.13 (0.71)
Occupational therapist (contact)	0.07 (0.56)	0.04 (0.34)
Counsellor (contact)	1.27 (7.44)	0.88 (5.13)
Other social and non-statutory services		
Social worker (contact)	0.89 (3.87)	0.65 (2.80)
Social work assistant (contact)	0.40 (3.76)	2.96 (19.60)
Home help (contact)	6.38 (33.90)	3.70 (29.00)
Advice service (contact)	1.74 (4.99)	1.52 (4.98)
Solicitor (contact)	0.91 (2.93)	0.42 (1.78)
Fire service (call out)	0.05 (0.31)	0.04 (0.19)
Other community service (contact)	1.37 (6.38)	0.60 (3.81)
Criminal Justice		
Police (contact)	0.79 (2.83)	7.34 (79.71)
Probation officer (contact)	0.78 (4.97)	0.41 (3.37)
Prison (nights)	0.34 (2.88)	0.70 (7.32)
Court (days)	0.25 (1.15)	0.17 (0.73)

the small number of participants in the experimental group who attended the AHW session.

3.5. Cost of visits to accident and emergency departments

The average cost of visits made by study participants to AEDs over the 12-month follow-up was £132 in the experimental group and £152 in the control group. The difference in cost of £20 was not statistically significant ($p = 0.49$).

3.6. Total cost of all resources

Table 3 details the average total costs by service providing sector. The average total cost of all resources incurred by individuals in the trial over the 12-month follow-up was

£5454 in the experimental group and £5207 in the control group. The difference in cost was not statistically significant ($p = 0.85$). The biggest proportion of total costs was borne by the health sector (49 and 53% of total costs in the experimental and control groups respectively) and social services (38 and 36% of total costs in the experimental and control groups respectively). Productivity losses were small in both groups and not significantly different (experimental group £119, control group £94; $p = 0.56$). Total costs at 6 months were similar in the two groups and not significantly different (experimental group £3068, control group £3122; $p = 0.95$).

3.7. Cost-effectiveness

The observed data suggests that the experimental treatment generated slightly higher costs alongside improved effectiveness, with an ICER of £22 per unit reduction in the amount of alcohol consumed per week (experimental treatment minus control treatment, incremental mean cost £247, incremental mean effect 11 units of alcohol). The cost-effectiveness acceptability curve (Fig. 1) illustrates the uncertainty associated with the costs and effects of the interventions and demonstrates that the brief AHW intervention dominates the control treatment for the full range of potential values of the ceiling ratio. The curve shows that there is a greater than 65% probability that the brief AHW intervention is more effective than the control treatment for all values a decision-maker may be willing to pay for a unit reduction in alcohol consumption.

3.8. Sensitivity analyses

A number of assumptions were tested in sensitivity analysis and are detailed in Table 4. Varying productivity losses to zero did not change the results. Costs specific to London were replaced with national UK unit costs to test the generalisability of the results, but the difference in cost remained insignificant. Using the LVCF technique to impute missing data increased the number of cases included in the cost analysis, but still the difference between the two groups remained

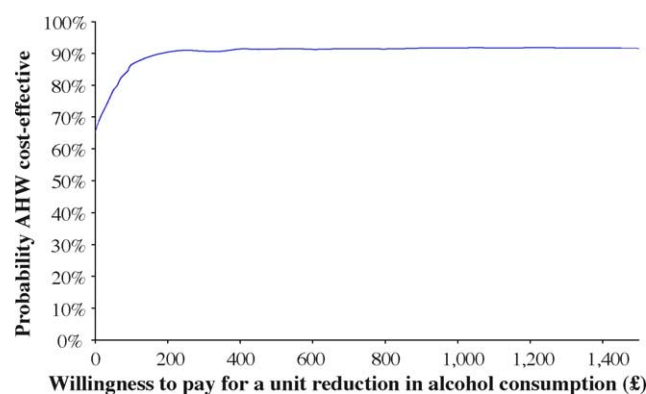


Fig. 1. Cost-effectiveness acceptability curve of referral to AHW versus control treatment.

Table 3
Total cost of all resources used over 12-month follow-up period (£)

	Experimental treatment (n = 139)			Control treatment (n = 159)			Mean Difference (95% CI)	P
	Mean	S.D.	%	Mean	S.D.	%		
Health	2647	5603	49	2775	7692	53	−128 (−1713 to 1458)	0.87
AHW	6	9	0	0	3	0	5 (4 to 7)	0.00
Other hospital costs	2385	5478	44	2576	7635	49	−192 (−1758 to 1375)	0.81
Primary care	257	482	5	198	370	4	59 (−40 to 157)	0.24
Social services	2082	7897	38	1876	7148	36	206 (−1535 to 1946)	0.82
Voluntary services	106	265	2	54	148	1	52 (3 to 100)	0.05
Fire services	190	1110	3	134	681	3	56 (−153 to 265)	0.60
Criminal justice	310	1524	6	274	1324	5	36 (−294 to 365)	0.83
Productivity losses	119	401	2	94	345	2	25 (−61 to 111)	0.56
Total	5454	11,065	100	5207	10,419	100	247 (−2242 to 2735)	0.85

Table 4
Sensitivity analysis of total cost of all resources used over 12-month follow-up period (£)

Sensitivity analysis	Experimental treatment	Control treatment	P	ICER
Productivity losses to zero (n = 290)	5335	5113	0.86	20
National unit costs (n = 290)	3077	2986	0.90	8
LVCf missing data (n = 369)	6272	6506	0.88	−21
Including domestic accommodation (n = 290)	21,105	19,659	0.49	131

similar. Exploring the costs borne by public services alone (excluding productivity losses) revealed total 12-month costs of £5335 in the experimental group and £5113 in the control group ($p=0.86$). Similarly, the inclusion of domestic accommodation did not alter the findings. These sensitivity analyses suggest that the primary cost result, that differences in total cost between the experimental and control groups are small and statistically insignificant, is robust to the underlying assumptions made.

4. Discussion

Despite the well-documented burden of alcohol misuse on AED workloads (Cabinet Office, 2004), there has been very little research into the cost-effectiveness of interventions whose aim is to reduce levels of drinking among those attending an AED.

The study participants in both treatment groups used a wide range of health, social and voluntary sector services, as well as having a substantial level of contact with the criminal justice system. Although total costs were slightly higher in the experimental group, the small cost difference was not statistically significant.

Statistically insignificant differences in costs and effects would traditionally result in the rejection of the hypothesis that referral to an AHW is more cost-effective than providing the information-only control. However, the development of more sophisticated tools to measure and represent cost-effectiveness has led to criticisms of decision-making based purely on statistical inference (Claxton, 1999). Such judgements could result in the selection of the intervention with the lowest probability of being cost-effective. Instead a decision-making approach is advocated where, in the absence of the

collection of further costly data, decisions are made on the basis of the best available evidence of cost and effects. In this case, the available evidence on the cost and effects of referral to an AHWs was used to plot the cost-effectiveness acceptability curve in Fig. 1, which establishes the dominance of the experimental treatment over the control treatment for all values of a decision-maker's willingness to pay for a unit reduction in alcohol consumption. There is at least a 65% probability that referral to an AHW is the most cost-effective intervention, and a 35% probability that the control treatment is the most cost-effective option.

There were a number of limitations to the study. Trial recruitment took place in a busy AED, using clinical staff to recruit participants pragmatically, so that the collection of baseline data was limited. The lack of baseline data meant that we were unable to adjust for any baseline differences in cost that may have existed between the two groups. However, there were no statistically significant differences between group characteristics at baseline and randomisation was considered successful (Crawford et al., 2004). There was a lower level of economic follow-up data than clinical outcomes data, probably because the service-use questionnaire was last in a fairly long interview schedule. Lower levels of follow-up reduced the power of the economic analysis and may therefore have been inadequate to detect meaningful differences in cost at follow-up. In terms of study validity however, comparison of available baseline characteristics of patients with available economic data and those with missing data demonstrated that the groups were fairly similar, except that women were more likely to have full economic data than men. Low levels of follow-up are not unique to this study and are often found in patients misusing alcohol. A pilot study of brief intervention among attenders at an inner city AED managed only a 66% follow-up at 3 months (Kunz et al., 2004) compared to 48%

over 12 months in this study. It should be noted that the costs of the intervention were based on an established AHW service and there may be short-run cost implications of setting up a similar service in different institutions.

Since excessive alcohol consumption impacts upon not only the individual but many facets of the economy (Cabinet Office, 2004), a strength of this study is the broad cost perspective taken, where costs to all service providing sectors were included as well as productivity losses. An important omission was the personal costs incurred by study participants when attending an AHW session, which may have included travel and childcare costs. However, these costs are likely to be small given the brevity of the intervention and thus unlikely to greatly impact upon the cost differences observed. A second strength of the study was the robustness of the results to sensitivity analysis. For example, the trial took place in the clinical area of a busy London AED and the results, particularly the cost estimates of the intervention, should be viewed in this light. To aid generalisability, unit costs were adjusted to national UK costs in sensitivity analysis but this did not alter the results. Thus, the cost and cost-effectiveness data presented should prove valuable to UK decision-makers outside, as well as within, London.

The recently published Alcohol Harm Reduction Strategy for England (Cabinet Office, 2004) asserts the need for information on programmes to establish whether earlier identification and treatment of those with alcohol problems can lead to long-term savings. In this pragmatic randomised controlled trial of referral to brief intervention for alcohol misuse in those attending an AED, there were no significant differences in costs or effects at 12-months follow-up. However, a decision-making approach to the analysis of relative costs and effects of the intervention, revealed that there is at least a 65% probability that referral to an AHW is the more cost-effective strategy in reducing the consumption of alcohol among AED attendees with a hazardous level of drinking. In addition, the brevity of the treatment, its low cost and short-term efficacy adds to its case for selection.

Acknowledgements

The Alcohol Education and Research Council funded the study. We would like to thank Steve Parrott for advice on the design of the service use questionnaire and Elisabeth Fenwick for advice on the cost-effectiveness acceptability curve. We are grateful to the patients who participated in the study, the alcohol health workers and the doctors—especially in Senior House Officer Teams 30, 31 & 32, and other staff in St. Mary's AED for recruiting study patients.

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