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## Alcohol screening and brief intervention in emergency departments.

**Drummond C., Deluca P.**
**Institute of Psychiatry, King's College London, 2012.**



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*The emergency department arm of the largest alcohol screening and brief intervention study yet conducted in Britain found that the proportion of risky drinkers fell just as much after the most minimal of screening and intervention methods as after more sophisticated and longer (but still brief) alternatives.*

**SUMMARY** This account is based on preliminary findings released by the SIPS project in the form of factsheets and conference presentations rather than peer-reviewed publication in academic journals. In respect of the effectiveness of the brief interventions tested in the trial, these documents have now been partially superseded by formal journal publication of the results, a report also analysed for the Effectiveness Bank. Some of the preliminary reports to which links are provided may no longer be available on the SIPS project web site.

SIPS was funded by the UK Department of Health in 2006 to evaluate the effectiveness and cost effectiveness of different ways of identifying risky drinkers through routine screening, and different forms of brief advice to help them cut back. Other aims were to assess the feasibility of implementing such procedures in typical practice settings, and to discover what made these more or less likely to succeed.

Conducted in three English regions (London, the South East, and the North East), the project took the form of three randomised controlled trials in different types of settings: nine emergency departments; 29 GP surgeries; and 20 probation offices. After summarising common features across the three trials, this account focuses on the emergency department study, relying largely on a factsheet produced before formal publication of the findings.

All three trials involved random allocation of practices, departments or offender managers to different variants of screening and intervention. Staff seeing adult patients or offenders for usual purposes in these settings asked them to consent to screening and basic data collection. Those who screened positive were further asked to join the study of the interventions, usually to be delivered by the same staff after training by the study. To assess changes in their drinking and related issues, patients and offenders who were eligible for and agreed to participate in the intervention study were followed up six and 12 months later.

### Screening methods

Three quick ways to identify risky drinkers were tested for feasibility and accuracy, the latter defined by how well they duplicated corresponding results from the AUDIT screening questionnaire, widely used to determine whether someone is probably drinking at hazardous, harmful or possibly dependent levels.

Single question: The simplest and quickest method was to ask, "How often do you have eight (or for women, six) or more standard drinks on one occasion?" Monthly or more was considered a positive screen, meaning the respondent would be offered a brief intervention to help them cut back.
FAST Alcohol Screening Test: As used in the study, this begins with the question above and registers a positive screen if the response is weekly or more often. Otherwise three further questions are asked. Scores in response to the four questions are summed to determine whether to proceed with intervention.
Paddington Alcohol Test (PAT): Used only in the emergency department study, this version of a set of screening questions developed for this setting first asks the clinician whether the patient is a repeat attendee or has any of nine complaints most often found among alcohol-related emergency attendees. If not, the screen is negative and no further action is taken. If yes, the patient themself is asked the single question above (monthly is considered positive) and also whether they feel their attendance is drink-related (if so, the screen is positive). This form of screening is considered 'targeted' because only selected patients are questioned.

### Interventions and assessing their impacts

Patients or offenders identified as risky drinkers by these methods were all offered advice of some kind, so the study could not assess the absolute impact of this advice, only how the impacts of one variant differed from those of another. The main yardsticks were the proportions of patients or offenders who six and 12 months later did not score as hazardous (or worse) drinkers on the AUDIT questionnaire, which assesses alcohol intake and other indicators of harmful or dependent drinking. Other assessments included drink-related problems, quality of life, and use of services. Crime and health service costs before the study and over the 12-month follow-up were used to assess cost effectiveness in terms of gains in quality-adjusted years of life per £ change in costs to society.

All the patients and offenders in the intervention trial were given a standard alcohol information and advice booklet, supplemented by a sticker with contact information for local alcohol treatment services. At issue was whether also offering different types and degrees of advice would make a difference to later drinking.

Brief feedback: At its most basic, the booklet was accompanied only by very brief feedback from the health care or criminal justice practitioner who did the screening that the screening test had indicated

health care or criminal justice practitioner who did the screening that the screening test had indicated the patient or offender was drinking "above safe levels, which may be harmful to you".
Brief advice: The next level supplemented booklet and feedback with five minutes of advice closely related to the content of the booklet. This was based on a leaflet which the worker left with the drinker after working through it with them according to a standard protocol, including comparison with population drinking levels. Though not always the case, ideally this would be seamlessly delivered by the person who did the screening and handed over the booklet.
Brief lifestyle counselling: The most intensive (but still brief) of the interventions added what was intended to be about 20 minutes of lifestyle counselling to the brief advice described above. This too was based on a leaflet, but practitioners could adapt the intervention to the needs of the drinkers and their willingness to think about further controlling their drinking. Staff were trained to use techniques from motivational interviewing and health behaviour change counselling to lead the drinker to consider the pros and cons of their drinking and their readiness to cut down, before if appropriate formulating a plan for doing so and overcoming possible obstacles. This counselling was done at an appointment made after the brief advice phase of the intervention.

### The emergency department study

This account also draws on a description of the study's methodology and a conference presentation of the findings. Each year over 14 million people are treated in English emergency departments. A third of attendances are related to drinking and others involve risky drinkers, offering a substantial opportunity to intervene. Additional to the project's general aims, the emergency department study tested a 'targeted' screening approach (the Paddington Alcohol Test) developed for emergency departments, which questioned only patients whose complaints or attendance records suggested excessive drinking. The other screening methods were to be applied to all eligible patients. Another feature was that while emergency clinicians would screen and deliver brief feedback and advice options, they were not intended to deliver the most intensive intervention, brief lifestyle counselling. Instead they were to make an appointment (usually for the next day) for the patient to see an alcohol health worker recruited for the study and based at the department who was both appropriately qualified and specially trained.

#### Main findings

Three each of nine departments in the study were randomly allocated to each of the three screening methods. Within these sets, one each was randomly allocated to follow screening with a different intervention. In the event and despite staff enthusiasm, only three departments managed to implement the trial as intended. A conference presentation documents that though staff were keen, implementation of the SIPS screening and brief interventions was "limited" in most departments due to workload pressures, lack of time, perceived lack of importance of alcohol in the emergency department, high staff turnover, competing priorities, and feeling forced to take on extra work. Only three of nine departments could implement the procedures without researchers and alcohol health workers having themselves to help with screening and intervention.

The result was that over 13 months, 5992 patients were screened, of whom 3737 were eligible to participate in the study. Of these, 1491 (4 in 10) screened positive and 1204 agreed to join the intervention study. Typically white men of whom half were single, they averaged 35 years of age and an AUDIT score of 12–13, a medium severity of drinking problems, though about a quarter scored as high severity. Around 70% were followed up six and 12 months later.

In terms of identifying people who screened positive for risky drinking on the AUDIT, the single question was best (81% were identified), followed by the FAST Alcohol Screening Test (80%) and finally the Paddington Alcohol Test (74%). Statistical testing indicated that the single question method was significantly better than the Paddington Alcohol Test at identifying people whose AUDIT scores indicated a medium severity of alcohol problems, the range thought appropriate for brief interventions.

Positive-screen patients were then to be offered one of the advice options. Virtually all allocated to brief feedback or advice received this plus the alcohol advice booklet, the full intended interventions. This was not the case for those allocated to brief lifestyle counselling; though nearly all received the five-minute brief advice and booklet delivered immediately after screening, only half kept an appointment with the alcohol health worker for further counselling.

Six and 12 months later the proportions of patients scoring as at least hazardous drinkers on the AUDIT questionnaire (initially about 78%) had fallen overall by nearly 11% and 16% respectively, but on this measure nor on the other main yardsticks (alcohol-related problems and health-related quality of life) had there been significantly greater changes after one type of intervention than another. The expected extra impacts of more intensive advice and counselling had not materialised; at 12 months the reductions were 19% after the least intensive brief feedback option and 15% after the other two. Neither could it be shown that one intervention was preferable for particularly heavy drinkers.

Where there was a clear difference was in costs, averaging £1.75 for the brief feedback option, £10.27 for brief advice, and £33.87 for lifestyle counselling. Compared to the preceding period, after all three options patients less often attended emergency departments and were less likely to be admitted as hospital inpatients. Over the 12-month follow-up period, health care plus criminal justice cost savings were £1860 greater after lifestyle counselling than after brief feedback. Lifestyle counselling also resulted in greater gains in quality-adjusted life year than the less intensive options, though this finding was not statistically significant and these patients did not end up with a better quality of life than the other patients. Valuing each of these years at £20,000 and taking in to account all costs, not just those of the interventions, it meant there was a 50.4% probability that the lifestyle counselling intervention improved cost-effectiveness relative to the booklet plus very brief feedback of screening results.

#### The authors' conclusions

Though certainly possible, due to the exigencies of emergency care, implementing alcohol screening and brief intervention in these departments will be difficult, generally requiring delivery by specialist alcohol staff. Successful implementation also depends on local clinical and managerial champions and having a small number of staff dedicated to and responsible for delivery. Even when emergency staff themselves take on screening and intervention, sustained implementation is likely to required sustained and significant outside specialist support. Particularly difficult to implement was the lifestyle counselling

intervention which required appointments to be made and kept, rather than the seamless delivery of

intervention which required appointments to be made and kept, rather than the seamless delivery of briefer interventions actually in the emergency department.

In terms of screening, the single question option trialled by the study proved both the quickest and the best at identifying risky drinkers.

When it came to how to respond to these risky drinkers, the more intensive interventions offered no significant clinical benefits, even for heavier drinkers. On average all were followed by reductions in the severity of drinking, results which may have been due to the interventions, but may instead have been due to natural changes in relatively extreme behaviour, or to the impact of being repeatedly assessed for drinking and recruited to a trial of drinking interventions.

Though only half the patients allocated to this received it, the most intensive of the interventions (brief lifestyle counselling) led per £ spent to greater gains in quality of life and greater reduction in societal costs, advantages which might be augmented by more complete implementation.

**FINDINGS COMMENTARY** See these Findings analyses for the sister trials conducted in GP surgeries and probation offices. The following commentary explores common themes across these settings and any differences, and supplements these with comments focused on the featured setting, emergency departments. The general picture was that implementation often required specialist support, and there were no great differences between how well the screening methods identified patients and no significant differences between how well the interventions helped them reduce the severity of their drinking. What was intended to be a 'control' condition against which scientifically developed and longer interventions could shine, turned out instead to be the better option, reaping what clinical benefits there were at the lowest direct cost in money and time.

### Implementation often needs specialist support; throughput low

Seeing the effectiveness of brief interventions as established in principle, the studies aimed to assess whether they would also work in normal practice. First issue was the feasibility of implementing such programmes with training, support and incentives of the kind that might routinely be available. In each setting, the intention was that usual staff would undertake screening and intervention, except for the longest intervention of the three, lifestyle counselling. In probation and emergency departments, this was delegated to a specialist alcohol worker provided by the SIPS project, an extra resource which mirrors how such programmes would probably be (and in emergency departments, commonly have been) implemented in routine practice. The project also undertook training, though for the briefer interventions this was minimal. For these interventions too, no structured ongoing support and supervision is mentioned, except for the primary care study, though researchers and alcohol health workers may have been available to offer ad hoc support.

One possibly important way the studies departed from normal practice was that usual staff also undertook the research tasks involved in recruiting patients to the trial and collecting baseline information. Compared to brief screening and intervention, this must have been a relatively substantial extra burden, one which may have suppressed the numbers screened and offered intervention.

Broadly, each study found that while implementing the tested programmes was possible, at many sites researchers and specialist alcohol workers who had trained the staff had to help with screening and intervention. Workload pressures, lack of knowledge, and feeling there were insufficient back-up alcohol services, were common themes. In emergency departments and in probation, inability to implement was the norm. Incentivized with per patient payments, most primary care practices managed to implement fully, but still 4 in 10 were unable to do so. While the denominators in terms of overall patient and offender throughput are unknown, the numbers screened seem to have been small, equivalent to about 12 per emergency department per week, less than two per GP practice per week, and one or two a fortnight in each probation office – and this despite the intention that half or more of the sites would screen nearly all the adults they saw who were capable of participating in the trials.

These findings have two possible implications. The first is to cast doubt over the potential for screening and intervention in these settings – as implemented and resourced in the trials – to make a significant contribution not just to the welfare of the individuals actually screened, but to the nation's health; numbers reached may simply be too small. Reinforcing this doubt was the uncertainty over the resultant impacts on those who were screened and advised (of which more below). Second is the possibility that those recruited to the trials and screened were not representative of all who might have been, and therefore too the possibility that how they reacted would not be duplicated in a national programme with the leverage to ensure widespread implementation.

In Scotland an evaluation of its national brief intervention programme has confirmed the SIPS finding that implementation faced greater barriers than in primary care. Based on the three health board areas where these figures were known, brief alcohol interventions were delivered to just over 6% of the estimated 100,000 alcohol-related attendances per year to Scottish emergency departments. Interviews with emergency department staff revealed that resistance to the programme (feeling that this was not their business and detracted from core activities and objectives) and time pressures sometimes led (contrary to the preferred option) to intervention being by appointment some time after screening rather than immediate, and this in turn reduced attendance rates.

### FAST screening edges it

In relation to screening, results from the trials have been amalgamated in a conference presentation. Of the three methods tested, the FAST Alcohol Screening Test had the broadest applicability, in all three settings virtually equalling or bettering the alternatives in terms of its ability to identify risky drinkers. Generally only the first (about frequency of excessive drinking) of the four questions had to be asked, and the test picked up 8 in 10 of the risky drinkers who would have been picked up by the longer AUDIT questionnaire.

Whether screening is best implemented universally or targeted at certain patients or appointments was answered in favour of universal screening, if the yardstick was identifying the greatest number of risky drinkers and not missing out people (around 4 in 10 were missed) who would have screened positive. The most stringent test took place in the GP practices, where the same methods were used for universal and targeted screening. There the targeted method started with fewer eligible patients (1274 v. 1717) yet ended up netting more AUDIT-positive risky drinkers (461 v. 439), because (as intended)

it did reserve screening for patients who were more likely to be risky drinkers. However, over a quarter

it did reserve screening for patients who were more likely to be risky drinkers. However, over a quarter who would not have been targeted turned out to score as risky drinkers. In a targeted strategy, their drinking risks being ignored. On the assumption that a universal strategy truly would be universally implemented, this may be the decisive consideration. But if targeting screening – favoured by primary care staff – encourages more complete implementation, the balance could shift in its favour.

### Minimal or extended advice – it doesn't matter because each is equally (in?)effective

The final link examined by the studies was how best to advise risky drinkers identified through screening. Once patients and offenders had been sorted in to risky drinkers who had agreed to join the intervention study, there was a remarkable uniformity in trends in their drinking. Six months later the proportions scoring as risky drinkers had fallen by 11%, 12 months later, by 16–17%. With one exception, on this, the primary yardstick used by the studies, an alcohol advice booklet plus a sentence or two of feedback alerting someone to their risky drinking was not improved on by adding more extended and individualised interventions. The exception was a fleeting extra reduction at six months among particularly heavy drinking offenders offered counselling. Given the many tests of significance made in the studies, this single finding may have breached the threshold of statistical significance purely by chance, but the concordance with reconviction data suggests a real effect. Even if this was the case among offenders, findings among the patients gave no grounds for triaging heavier drinkers in emergency or primary care settings to more extended but still brief advice.

As the researchers acknowledged, this does not mean the interventions were equally effective; they may have been equally *in*effective. Without a no-intervention comparator, there is no way of knowing whether the interventions played any hand in the outcomes. Even before the interventions, 15–20% of emergency patients and nearly a third in primary care said they were trying to reduce their drinking. Apart from the possible reasons for the drinking reductions mentioned by the researchers, this in itself could account for the findings.

It cannot even be said that screening plus a sentence of feedback is all it takes to get whatever benefits are available. These came after patients and offenders were quizzed about their drinking and related problems and their readiness to do something about these, possibly thought-provoking interventions in themselves. And, as the researchers acknowledged, while what was intended in the interventions is clear, what was actually done is not. In particular, it seems reasonable to question whether brief feedback interactions really ended abruptly after a doctor, nurse or probation officer, had warned the person for whom they had welfare responsibilities that their drinking risked harm – that the recipients of this news did not respond and staff in turn respond back, in what could have become an interchange rivalling in length and perhaps exceeding in individualisation the brief advice option.

Reinforcing doubts over the impact of the interventions is the general finding that control groups in alcohol brief intervention studies who received no or minimal intervention on average reduced their drinking by amounts comparable to those seen in the SIPs trials. Though the review which collated these findings did not single these out, the studies which offered only usual care to control patients often also registered such reductions.

Regarding emergency department in particular, the findings seem at odds with those from the best researched British programme at St. Mary's hospital in London, which screens suspected heavy drinkers or patients with complaints linked to heavy drinking. In the relevant study, doctors explained to all positive screen patients that drinking is damaging their health, then patients were randomly allocated to be given only an alcohol advice booklet, or offered an appointment with an on-site health worker for counselling – similar to the SIPS trial's comparison between brief feedback and lifestyle counselling. But the findings were not similar; offering counselling was found to further significantly reduce return visits to the department and later drinking, the latter more cost-effectively than brief feedback.

One possibly critical difference is that at St. Mary's the patients were typically very heavy drinkers and clearly dependent, averaging AUDIT scores three times those in SIPS. This too was the case in another UK study which found that an option similar to the SIPS counselling intervention led to much greater remission in dependence and drinking than assessment only.

Though the featured study found no extra benefit from counselling even in heavier drinkers, these studies suggest this may materialise further up the severity scale among drinkers dependent enough to warrant treatment, but who are not actually looking for that kind of help.

### Cost may be decisive

The clearest difference between the interventions was in cost, likely to be persuasive given equivocal or no evidence that spending more gained more. Not only did this directly cost least, but on the health service's primary yardstick – quality adjusted life years – in both probation and primary care, the briefest intervention gained most years for each £ of social costs incurred by the drinkers.

Only in emergency departments did the longest intervention have the edge, but at normal valuations of a life year, this was minimal. It resulted partly from an extra increase in quality of life that itself failed to reach statistical significance, and may have been partly due to these patients starting the study with the lowest quality of the three intervention groups. Rather than ending the study with on average a better quality of life than the other patients, they caught up somewhat in what may have been a natural levelling up unrelated to the interventions. Even in the emergency setting, this finding offers no convincing basis for extending intervention beyond the simple warning and written advice of the brief feedback option.

All quality of life calculations are partly dependent on how quality is measured. SIPS used a health-related measure, ill equipped to capture losses or gains in the quality of social and leisure life, major domains within which drinking plays a role and is seen by consumers to have value (for which they are prepared to pay), just as excessive drinking can cause damage. Discounting such possible benefits of substance use as judged by consumers also makes a substantial difference to cost-benefit calculations.

### Policy implications

The UK alcohol strategy published in 2012 said government was awaiting the results of the SIPS project before deciding whether to incorporate alcohol screening and brief intervention in to the national quality framework for primary care, a major national driver of primary care practice. Already, however, brief alcohol interventions are among the practices commissioners can incentivize through cash rewards, and from April 2013 this work will be incorporated in the NHS Health Check for older adults. The strategy also encouraged accident and emergency departments and hospitals in general to check for and offer brief advice about hazardous drinking, in the case of hospitals by employing alcohol liaison nurses

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In general, all areas covered by the strategy are expected to implement guidance from the National Institute for Health and Clinical Excellence on prevention and treatment of drinking problems and associated quality standards and guidance for commissioners. These documents' insistence that commissioners and managers of NHS-commissioned services "must" ensure staff have enough time and resources to carry out screening and brief intervention work effectively seems a tall order given the consistent appeal in the SIPS studies to workload pressures as a reason for incomplete implementation and the need for specialist support – and this in services which had volunteered to participate in the studies.

The guidelines' preferences for targeted screening may also need to be re-evaluated, though SIPS' findings on this issue are probably not definitive enough to override the greater feasibility of targeting due both to workload pressures and staff preferences. It seems questionable too whether the precision of the 10-item AUDIT screening questionnaire is sufficient to warrant the guidelines' preference for this as a first-line option, or as a triaging tool if a briefer screen is positive. The FAST method picked up 8 in 10 of the risky drinkers who would have been picked up by the AUDIT, and there was few signs of extra benefits from triaging higher risk patients to extended counselling.

Where guidance is clearly at odds with the findings is in its backing for the equivalent of the mid-level intervention, brief advice, and, subject to local conditions, the most extended option – motivationally based counselling – for heavier but still probably non-dependent drinkers. As highlighted by the Department of Health's Director of Health and Wellbeing, the appealing message from the studies is that "Less is more". On the face of it, the findings go even further than her presentation suggests, offering most consistent backing for merely informing patients of screening results. For reasons outlined above, this message may be misleading because much more was and may have been done. But with no convincing reason to spend more money and time, it is easy to imagine that hard-pressed staff and austerity-hit commissioners will do the least seemingly justified by studies on which the government itself said it would rely for its policy decisions.

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