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► [Randomized controlled trial of mailed personalized feedback for problem drinkers in the emergency department: the short-term impact.](#)



Havard A., Shakeshaft A.P., Conigrave K.M. et al.

**Alcoholism: Clinical and Experimental Research: 2012, 36(3), p. 523–531.**

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*At Australian emergency departments, screening followed by written personalised feedback mailed to risky drinkers led to at least a short-term cutback in their drinking, but only when they saw or had cause to see drink as contributing to their medical misfortune. This low cost written option demanding little of staff may make intervention more feasible.*

**Summary** Despite their potential to reduce drink-related harm, attempts to incorporate brief alcohol interventions into emergency department routines have been hampered by substantial financial and time constraints and staff resistance to providing face-to-face feedback and counselling or advice about drinking. Employing an alcohol health worker is likewise beyond typical financial resources. Written advice reduces these demands on staff and on staff time. Studies ([1](#) [2](#)) suggest that personalising written advice is critical to effectiveness, consistent with the enhanced impact of tailoring in changing health behaviours generally.

Although promising, the cost of achieving personalisation through computerised screening and feedback and the logistics (for example, of ensuring privacy) are still likely to be prohibitive in most departments. A low-cost alternative is to mail written personalised feedback after brief screening. Such feedback has been associated with reduced alcohol consumption in problem drinking college students, employees, and the general population, but has not been evaluated in emergency department patients. The featured study addresses this gap by measuring the short-term efficacy and cost-efficacy of mailed personalised feedback to problem drinking emergency department patients.

Participants were recruited from departments in five rural communities in New South

Wales in Australia already involved in a community-wide approach to reducing alcohol-related harm. The five were asked because they had electronic medical records. Screening interviews were conducted with patients aged at least 14 years. They were told it was a phone survey of drinking conducted by researchers independent of the hospital. Patients identified as risky drinkers through screening were invited to participate in follow-up surveys. Those who agreed were randomly assigned to be sent mailed feedback on average a week later or to a **control** group who received no further contact until both groups were phoned six weeks later for the follow-up interview.

The feedback intervention took the form of a letter from the research project presenting sex-specific charts contrasting the patient's scores with the averages in the five communities in respect of drinking quantity and frequency, frequency of heavy drinking, experience of alcohol dependence symptoms, and experience of negative consequences. Then the recipients were told that changing drinking was possible, citing relevant evidence. The letter concluded with a summary of the Australian drinking guidelines, strategies for reducing consumption, and sources of advice.

During the recruitment period 2610 patients aged 14 years or more attended the department but 1008 were there too little time or too ill or distressed to be approached. Of the rest, 1415 completed screening using the **AUDIT questionnaire** and 455 were identified as **risky** drinkers. The 304 who consented to follow-up interviews were randomly allocated, 150 to feedback and 154 to the control group. Typically they were nearly 30 years of age and drank 160g (20 UK units) a week, and three quarters were men. About a quarter (the 'alcohol-involved' presentations) said they had drunk in the six hours before becoming unwell or thought alcohol had contributed to their condition. Follow-up interviews were completed with 80% of participants, 124 feedback patients and 120 from the control group. Rather than the usual 12 months, they were asked about the past six weeks, the time since their attendance at the emergency department.

## Main findings

Based on the responses of the 244 people who could be followed up, those given mailed feedback had at follow-up significantly reduced the amount they drank relative to control group patients. They were also less likely to be drinking above Australian guidelines, but this difference was not statistically significant.

The significant difference in alcohol intake was due to impacts among the minority of patients with alcohol-involved emergency attendances. Among these patients, at follow-up those sent feedback drank less than half the number of drinks per week than control group patients (11.9 v. 24.1), a medium **effect size** of 0.59. Among these patients, providing feedback cost 0.48 Australian dollars for every 10g alcohol less they drank at follow-up than control group patients. Impacts of the intervention were not significantly altered by the patient's sex, education level, how much they typically drank before the study, or their pre-study symptoms of alcohol dependence.

Another analysis was confined to the 71% sent feedback and the 89% in the control group who correctly recalled whether or not they had received mailed feedback. Results were similar in respect of reduced drinking amount, but among women, feedback participants also drank heavily significantly less often than those not sent feedback. Of the feedback participants who recalled receiving the letter, 87% read at least some of it

and, of those, 76% found it somewhat or very useful, and 77% thought the hospital should provide this information.

### The authors' conclusions

This study tested an inexpensive brief intervention method which made minimal demands on emergency staff by using mailed feedback. It reduced drinking among risky drinking patients whose attendance was related to drinking, and cost less (and less to achieve a given reduction) than brief face-to-face counselling.

One question is why the significant impacts were confined to patients had drunk in the six hours before becoming unwell or thought drinking was a contributing factor. From previous research (1 2), it seems that the patients' attribution of their condition to alcohol may be the decisive factor.

The cost analysis suggests mailed feedback represents a good investment relative to face-to-face interventions. The direct cost was 5.83 Australian dollars per patient compared to 135 US dollars for a face-to-face option. Similarly, among the group for whom it worked (patients with an alcohol-involved attendance), cost per unit less it led patients to drink must have been far lower.

In contrast to findings on drinking amount, findings on the frequency of heavy drinking were less conclusive, significant effects being limited to women who were correctly aware of having received or not the feedback. The possibility that these patients somehow differed from the remainder in ways which biased this result cannot be dismissed. It is also conceivable that seeing their drinking compared to the average led feedback patients to later under-report how much they drank. Many patients were too ill or distressed to be asked or refused to join the study, and some could not be followed up, especially younger patients who had experienced negative consequences from their drinking. These exclusions mean the results may not be applicable to emergency patients across the board. A planned six-month follow-up should help establish whether the short-term effects reported in the featured study persist. On the other hand, control group patients underwent an assessment of their drinking so the results reflect the added value of providing feedback, not the full benefit of screening, assessment and feedback. Similarly the cost estimates represent the added costs of feedback, not the full costs, though these would still be lower than a screening-assessment-intervention package which featured face-to-face intervention.

### FINDINGS

This study adds to other findings which show that screening for risky drinking and, if indicated, offering very brief advice reinforced by written material may be a worthwhile preventive intervention. Though not tested by the featured study, other studies provide no convincing case for more extended (if still brief) intervention, except perhaps for clearly dependent drinkers.

### More is usually not better

Patchy results in emergency departments have prompted attempts to identify why some brief interventions have worked but others have failed. As yet the evidence is insufficient to answer this question. In particular, it remains unclear whether a relatively elaborate, theory-based approach really is needed. One well designed US study, which managed to follow-up nearly all the patients it recruited, found that a sophisticated structured intervention was no more effective than one minute of straightforward advice at discharge that (among other things) the patient cut their drinking. Both interventions were conducted by emergency department staff.

Most recently and most convincingly for the UK, the non-superiority of longer interventions was the message of [preliminary](#) findings from the [emergency department arm](#) of the SIPS project, funded by the Department of Health in 2006 to evaluate different ways of identifying risky drinkers through routine screening, and different forms of brief advice to help them cut back. It compared more extended advice or counselling against [very brief face-to-face feedback](#) (indicating that the patient was drinking "above safe levels, which may be harmful to you") accompanied by an alcohol advice booklet. Six and 12 months later the proportions of patients scoring as at least hazardous drinkers on the AUDIT questionnaire 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 the longer and more sophisticated interventions significantly bettered the most basic.

The findings seem at odds with those from the best researched British emergency department 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 was 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.

Beyond the emergency department too, support is weak for extended intervention. Two UK studies of non-emergency hospital patients tested fully fledged brief interventions against a minimal intervention based on handing over an advice booklet [with](#) or [without](#) a warning about the patient's drinking. In the first, relative to assessment only, both interventions led patients to cut drinking by on average 2–3 UK units a day; nothing was gained from further counselling. In the second, neither intervention significantly improved on assessment only; all the groups reduced their drinking to roughly the same degree.

Internationally too, studies have usually found more extended brief interventions offer no advantage over briefer ones ([1](#) [2](#) [3](#)). A [review](#) of such interventions at GP practices found more extended interventions have led to only slight and statistically non-significant extra reductions in drinking.

### **Do any emergency department interventions work?**

Even if more is not always better, perhaps, as the featured study suggests, giving some advice rather than none is worthwhile. [Previous studies](#) have shown that just a few minutes counselling at-risk drinkers among emergency patients *can* reduce consumption

and alcohol-related injuries, improve welfare, promote treatment uptake, and cut the future workload of emergency services. But there have also been negative findings, and the research record is [fairly evenly balanced](#) between these and more positive findings.

Perhaps most disappointing was the large-scale and important US ED SBIRT study at 14 emergency departments. It faced implementation barriers in attempting to use routine emergency staff for the interventions, and promising outcomes three months later had by [six and twelve months](#) nearly or entirely dissipated, leaving no statistically significant differences in alcohol consumption between intervention and control groups.

A [recent synthesis](#) of research on interventions conducted actually in the emergency department rather than after admission found that overall such interventions have not been shown to significantly reduce alcohol consumption, while impacts on drink-related problems have been variable. More positively, three studies did together indicate that six to 12 months after the interventions patients were half as likely as comparison patients to have suffered an alcohol-related injury, but all three were from the USA, and two involved only teenage patients whose drinking would have been illegal in that country. In all three the patients were known to have recently been drinking or had a history of drink problems rather than merely having tested as exceeding national drinking guidelines, underscoring the possibility also emerging from the featured study that when patients understand or have to admit that their illness or injury may be alcohol-induced, advice to cut back has a greater impact.

## Policy implications

The [UK alcohol strategy](#) published in 2012 said government was awaiting the results of the SIPS project described [above](#) before deciding whether to incorporate alcohol screening and brief intervention in to the national quality framework for primary care. 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. 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. Implementation was most difficult in the [emergency department arm](#) of the study, in which only three of nine departments managed to implement the trial as intended. At the others, researchers helped out with the research-related tasks and the specialist alcohol worker had to help out with screening and interventions. Still the numbers screened seem to have been small, equivalent to about 12 per emergency department per week.

Where guidance seems at odds with SIPS and some other findings is in its backing for structured brief face-to-face advice covering the potential harm caused by the patient's drinking, reasons for changing including health and wellbeing benefits, barriers to

change, and practical strategies, culminating in a set of goals. Subject to local conditions, also recommended is a more extended option – motivationally based counselling – for heavier but still probably non-dependent drinkers. Research as whole and in Britain offers no persuasive evidence that these relatively sophisticated face-to-face encounters are more effective than much briefer (and perhaps computerised or written) feedback/warnings.

The intervention tested in the featured study could effectively shift the intervention burden from clinical to administrative staff and reduce costs overall. What would remain for clinical staff is screening and the recording of the results. With no 'consequence' in terms of having to counsel positive screen patients, it is possible that not just intervention but screening rates would improve. There is at the moment no convincing reason to believe that such a procedure would be any less effective than more (for clinical staff) onerous procedures or ones which require the hiring of specialist staff to relieve the burden on emergency staff.

Last revised 24 September 2012

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