

Investing in alcohol treatment

Part two: brief interventions

In issue 2 we revisited the classic studies indicating that short advice sessions really can make a worthwhile dent in alcohol problems. Now catch up with the latest findings in the second instalment of the comprehensive research review funded by Australia's health department.



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Brief interventions are short treatments offered to people identified by screening (▶ *part 1 of this review, issue 6*) as drinking at potentially hazardous or harmful levels. Typically they consist of a structured face-to-face intervention lasting five to 30 minutes

aimed at encouraging and equipping the recipient to stop or reduce drinking.¹ Approaches include health education, self-management training, group therapy, social skills training, simple advice (in person and/or through self-help manuals) and motivational interviewing.

Given the extent of heavy drinking, brief interventions are generally thought most appropriate for primary care settings because these provide regular medical access to a large proportion of the general population. Unlike more intensive treatments, brief alcohol interventions usually capitalise on contact made by the recipient for some other reason.

In 1995 an attempt to locate brief interventions within the overall context of alcohol treatments ranked them among the most effective and the cheapest, but cautioned that they had generally been restricted to less severely affected drinkers.² In contrast, a later analysis found that brief motivational counselling performed relatively poorly.³

The discrepancy arose largely because the first gave most weight to studies comparing an intervention to no treatment (an appropriate comparison for brief interventions), while the second gave most weight to comparisons with a strong alternative treatment (appropri-

ate for treatment-seeking populations).⁴ Confusion arises because such comparisons juxtapose interventions with different criteria for success, provided in very different situations to patients whose problems and motivations may be poles apart. It makes more sense to focus on brief interventions and ask if they work better than the most common alternative (doing nothing) for the populations they are most likely to be applied to (people *not* seeking help for alcohol problems).

Recent research overviews

Over the past decade studies of brief interventions have been collated in several large-scale reviews.^{5,6,7,8} Valuable as they were, their findings have been subsumed in a recent review and meta-analysis.⁹ Published in 1997, it found that brief interventions did reduce drinking, but that there was considerable variation in outcomes across different studies. To reach this conclusion, Professor Alev Wilk and colleagues examined 31 trials published between 1966 and 1995. Twelve met the following criteria:

- ▶ a focus on brief interventions for alcohol abuse in adults;
- ▶ interventions had a motivational, self-help orientation, typically including feedback on the individual's drinking, information on the risks, and advice to moderate to low-risk levels;
- ▶ they lasted 10–15 minutes to an hour followed by up to three booster sessions;
- ▶ subjects were randomly allocated to the intervention and to a control group which received no alcohol intervention;
- ▶ follow-up measures were taken;
- ▶ sample size was over 30.

The 12 studies embraced outpatient,

inpatient, primary care and general populations. Eight with results from nearly 2800 subjects provided sufficient data to calculate an 'odds ratio' estimating how likely (compared to the control group) heavy drinkers were to have moderated their drinking six or 12 months after the intervention.

An odds ratio of 1 (the break-even point) suggests that the intervention is no better and no worse than doing nothing, below 1 that it is worse, above 1 that it is better. Like any such statistic, it is not possible to say what the odds ratio *is*, only the probability (conventionally, a 95% probability) that it lies within a certain range. In three of the eight studies this range straddled the break-even point ▶ *figure opposite*. But when results from all eight were pooled, the ratio ranged from 1.66 to 2.30, with a best estimate of 1.95. In other words, intervention subjects were about twice as likely as their controls to have moderated their drinking.

To establish whether the better studies gave a different impression, each was scored for methodological quality.¹⁰ Two of the five which had found brief interventions better than doing nothing had relatively high scores which matched the best of the inconclusive studies, suggesting that the advantages of brief interventions could be demonstrated even in well controlled trials.

But there were some reasons to be cautious, particularly in applying brief interventions to dependent drinkers. Professor Wilk and colleagues pointed out their results derived from heavy drinkers with little or no alcohol dependence. Even if future studies *did* show that brief interventions persuade alcoholics to stop or cut down, those drinkers would then risk untreated withdrawal symptoms. And while

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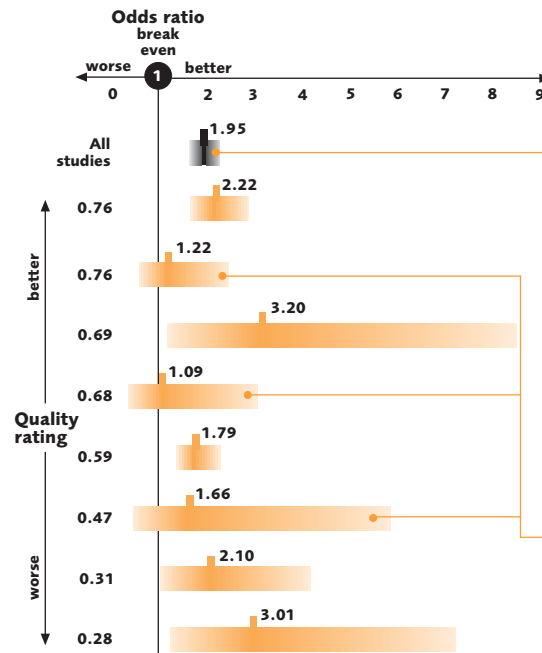
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drinking was reduced in the short-term, it remained unclear whether this would last and whether it would translate into good outcomes on dimensions such as cost effectiveness, death, ill-health, and demand on health care resources.

Degree of brevity may be important

In 1999 another meta-analysis argued that earlier analyses had not distinguished between *very* brief (up to 20 minutes) and *extended* (several visits) brief interventions, and had conflated primary care with hospital settings.¹¹ Dr Kari Poikolainen focused on primary care and identified seven randomised follow-up studies. Instead of how many clients moderated their drinking, the key outcome was the average change in alcohol consumption across all clients.

Among neither men nor women did very brief interventions reduce consumption. When genders were combined, the reduction *was* significant, but differences in outcomes between studies were too great for the pooled estimate to be meaningful. Extended brief interventions reduced drinking by about six UK units a week in both men and women, but for men and for the genders combined, extreme variation in outcomes made it unsafe to combine the studies. The conclusion was that extended brief interventions were effective among female primary care patients; with respect to men and to very brief interventions, all that could be said was that they worked sometimes but not always. Among the factors which might have affected



When results from eight studies were combined, the odds of a better outcome after a brief intervention (ticks on bars) compared to doing nothing were comfortably above break even. But in three studies the range of possible odds (bars) dipped below 1. There was no clear cut tendency for these studies to be more or less rigorous (quality rating) than the remainder.

outcomes are the enthusiasm and expertise of the doctors involved.

Unlike the Wilk study, this meta-analysis did not restrict interventions to motivational approaches. Though interventions which had worked often seemed no different to those which had not, it remains possible that the wide variation in outcomes which contributed to the negative results could itself reflect differences between the contents and approaches of the interventions.

Later research

Randomised controlled evaluations completed after the deadline for Wilk's meta-analysis are summarised below. They confirm the variability of outcomes found by Wilk and illustrate one of the possible reasons for negative findings – that brief interventions are overshadowed by extensive research assessments and follow-ups. These may have such an impact that extra gains from the intervention have no room to emerge. The studies also confirm how hard it is to show that reductions in drinking lead to health care savings or fewer drink-related problems. There is also a hint that people with a low level of concern over their drinking do not react well to longer interventions, even when these deploy techniques to enhance motivation (though they may react even less well to interventions which dive straight into teaching skills to cut down on drinking). Finally, the very low yields – a few hundred patients undergoing intervention from many thousands screened – argue on cost grounds for alcohol screening to involve minimal staff time and probably for it to be incorporated in routine health screens rather than conducted as a special exercise.

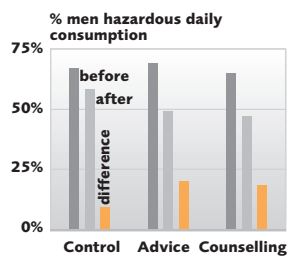
① A randomised clinical trial organised by the World Health Organisation in Australia, Kenya, Mexico, Norway, UK, Russia, USA and Zimbabwe compared a no-treatment control condition with five minutes of advice or 20 minutes of counselling.¹² The initial sample comprised 1260 men and 399 women identified as at risk of alcohol-related problems but with no history of alcohol dependence. Nine months later 75% were re-interviewed.¹³ Among men, both interventions improved on the control condition to roughly the same degree, leading to a 17%

Golden Bullets

Key practice points from this article

- ▶ Brief interventions in primary care and other general medical settings have reduced alcohol consumption in patients with mild to moderate alcohol problems and can be expected to create health gains, though the evidence for this is weak.
- ▶ Outcomes vary greatly across studies. It is by no means certain that providing a brief intervention will (or at least, can be shown to) reduce drinking more than occurs after simply screening the patient.
- ▶ The causes of this variation remain unclear. Very brief interventions may be less effective overall. The match between the length and type of intervention and the recipient's motivation level may also be a factor.
- ▶ To achieve widespread implementation, GPs and other primary care staff need to be convinced of the efficacy of brief interventions, skilled in applying them, and proactive in identifying suitable patients.
- ▶ This degree of commitment and confidence requires training and support. Doing without this and instead just providing intervention guidelines and materials is less cost-effective because of poor uptake.
- ▶ Medical staff and patients are more willing to accept interventions when alcohol is clearly risking the health or well-being of the patient. For this reason emergency departments are a promising setting.
- ▶ More intensive and costly approaches are needed to safeguard the welfare of severely dependent drinkers and may also be needed for those otherwise unable or unwilling to abandon harmful drinking patterns.

reduction in average daily consumption and a 10% reduction in the amount drunk on a typical drinking day. Defined as drinking an average five units of alcohol a day, hazardous consumption was reduced by 9% in control group men but by twice as much after the interventions. The findings were not due to a few men achieving abstinence but to widespread reductions seen consistently across the eight countries. Among women the trends were similar, but with fewer in the



In the important WHO study, twice as many men moved below hazardous consumption levels after receiving a brief intervention

sample, the only significant finding was that after the interventions a higher proportion of women (roughly 40–50% versus 30%) drank less on a typical drinking day.

The conclusions were that a large proportion of heavy drinkers can moderate their drinking, and that brief interventions help

promote these changes across health care settings and cultures.

In some respects, the results were less than convincing. Compared to screening, the interventions reduced male drinking by one UK unit a day, not enough in this study to show up in significantly curtailed alcohol-related problems.¹⁴ But any health gains will be apparent in only a proportion of people and will emerge most strongly only after many years of reduced drinking, making them hard to pick up without very large samples tracked over decades. For the authors and for experts who have commented on their work, this study reinforced the case for routine screening and brief interventions in primary care as a first low cost step to reducing the negative impacts of excessive alcohol use.

② At a Texas hospital 326 Mexican-American patients screened as heavy drinkers and were randomised into four groups.¹⁵ In the first, the doctor conducted a 10–15 minute confrontation and discussion. The second was a psycho-educational intervention over six 90-minute sessions which covered alcohol-related problems and possible solutions, followed by a group discussion. The third group received both interventions, the fourth none. Family members were encouraged to become involved in the interventions which stressed abstinence and AA involvement. Just over half the subjects completed baseline and follow-up interviews at 12 and 18 months.

All four groups improved in drinking and psychosocial problems, with no significant differences between them. The authors attributed the negative findings to statistical limitations and to the possibility that

LINKS Investing in alcohol treatment. Part one: screening and assessment, issue 6 • How brief can you get? issue 2 • Nuggets 6.9 6.1 5.11 3.10 2.7 2.8

extended assessments and the transparency of the study's purpose boosted outcomes, even when there was no intervention. Other possible explanations are that Mexican-Americans and people of European descent respond differently, that abstinence may have been an unsuitable objective, and that the interventions were simply ineffective. Despite their popularity in the USA, overall confrontational interventions have not been found to be effective.¹⁶

③ In Wisconsin researchers screened nearly 18,000 patients at 17 primary care clinics.¹⁷ Each screen lasted about 30 minutes. 2925 patients screened positive, 1705 completed an interview to assess suitability for the study, and 852 met the criteria. Of these, 774 were randomly assigned to intervention and control groups of whom 723 were followed up at 12 months.¹⁸ The intervention group was given a workbook with information about the extent and risks of problem drinking and about the cues which can prompt drinking. There were also diary cards on which to record alcohol intake and an agreement to moderate drinking in the form of a prescription. The intervention was initiated by the doctor in a 15-minute session followed a month later by a 15-minute booster. Further reinforcement came in the form of phone calls from the practice nurse two weeks after each session. The control group was given a general health booklet.

Both groups reduced their drinking, but both men and women made significant extra improvements as a result of the intervention, evident in average consumption and in the frequency of 'binge' or excessive drinking. Although encouraging, within the study period these changes did not significantly reduce demand on hospital services.

④ Rather than relying on staff, researchers in Oregon themselves screened for hazardous drinkers among patients at a busy primary care practice.¹⁹ The control group received the practice's usual care. For the intervention, the doctor's role was limited to a 30-second warning about their drinking to patients who had screened positive. Trained counsellors then conducted a 15-minute session covering the patient's drinking in relation to national norms, damage from alcohol abuse, 'safe' drinking limits, the fact that zero alcohol means zero risk, tactics for reducing drinking, and measures to build the patient's confidence in their ability to do so.

From 10,911 patients, 620 hazardous drinkers were identified; 516 agreed to enter the study of whom about 80% at each time

point supplied six- and 12-month follow-up data. At both points the intervention group recorded significantly fewer drinking days and at six months also significantly lower alcohol consumption. However, no adjustment was made for the possibility that some of the many comparisons between the groups might have been significant just by chance. Had this been done, the differences would no longer have been significant. Though at baseline treatment and control groups were similar, significantly more of the intervention group refused to be followed up and refusers tended to be the less well educated subjects, potential sources of bias.

For the authors, the impact of this short, one-off intervention was sufficiently encouraging to recommend widespread adoption. However, modest effects despite specialist counsellors provide little support for this position. Perhaps the intervention was *too* confrontational, especially since it was applied without regard to whether patients were ready to hear such messages. An Australian study set in a hospital ward found that patients not yet ready to change their drinking (the majority) did better after brief motivational than skills-based counselling – a clue that a non-confrontational style is best suited to this situation.²⁰

⑤ A US study set out to test whether motivation to change affected outcomes from brief interventions.²¹ Over 13,000 patients at primary care clinics in Pennsylvania completed a self-administered screening survey. 1388 scored as hazardous drinkers but just 301 provided the contact details needed for the study, of whom 232 also provided baseline and follow-up data over the next 12 months. At baseline they were asked about their drinking and its consequences and their readiness to cut back, underwent breath, blood and blood pressure tests, and named two contacts to report on their progress. They were then randomly assigned to one of three conditions.

In all three, doctors were informed about screening and assessment results indicative of excessive drinking and left to react as they wished. For 'standard care' patients, this was the only action taken. The other two groups were scheduled to return for sessions with specially trained staff. For one these consisted of 10 to 15 minutes of feedback on the assessment and advice on drinking goals; over 90% of patients attended. Sessions for the other group covered similar ground but lasted 30 to 45 minutes and deployed motivational interviewing techniques to enhance the patient's desire to drink less, and two 'booster' sessions were scheduled over the next six weeks. About 70% of patients attended all three sessions.

The expectation was that unmotivated patients would react poorly to the 'no frills' advice session. The opposite was the case.

After other variables had been taken into account, six and 12 months later advice patients assessed as *not* ready to change had reduced the amount they drank, and had done so to a greater extent than patients assessed as ready to change. The authors speculated that because it was shorter and less intensive, the advice session was more acceptable to patients with low levels of concern over their drinking. There was also more evidence that the advice session had reduced drinking than there was for the

► ► ► *Even if the science looks good, there remains the issue of real-world practicality*

motivational intervention, but neither convincingly outshone standard care, in which patients also substantially cut back.

On the measures taken (including AUDIT scores) patients prepared to enter the study did not differ from the majority, but the degree of non-participation raises serious doubts about whether the results can be generalised to primary care patients as a whole, and over the procedure used to engage patients in the interventions.

Putting it into practice

One obstacle to realising the potential of brief interventions has been the low level of take-up in primary care. Overcoming this has been the subject of several recent studies. Their message seems to be that simply mailing GPs has little impact;^{22,23} some personal contact is needed, even if only over the phone. For those who express an interest, training and follow up support improve implementation rates and cost-effectiveness. The same seems true of practice nurses. Screening and intervention is best implemented in a way which involves and legitimises the involvement of the entire practice team and gives them training and support.

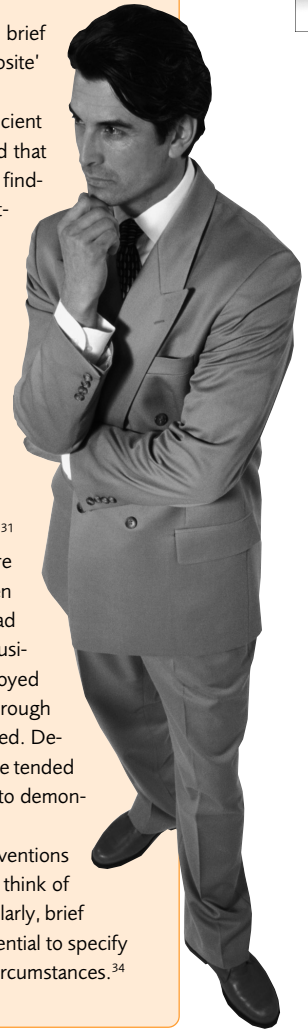
These conclusions are primarily based on studies in Australia²⁴ and Britain²⁵ as the third phase of the eight-nation WHO project cited above. In both nations, doctors were randomly assigned to one of three strategies designed to promote the uptake of a brief alcohol intervention package. Of the three, telemarketing was the most cost-effective way to recruit GPs, outperforming personal visits and direct mail. In the British study, visits and telemarketing both encouraged about 30% of GPs to agree to use the package but for each acceptance visits cost over six times as much. Direct mail was cheap, but so few doctors responded that per 'hit' it cost more than telemarketing (£15.42 v. £13.41).

In both nations researchers went on to test training and support strategies for the doctors who did agree to implement the

The experts' verdict

If we were to synthesise the views of experts who have debated brief interventions for heavy or hazardous drinkers, the resulting 'composite' expert would make the following points.

- Such interventions are on balance worth pursuing: there is sufficient evidence that they can be more effective than not intervening and that the benefits can justify the relatively low cost. Despite inconsistent findings, policymakers should not dismiss their potential to create cost-effective health gains. On the other hand, the research does not allow us to conclude that brief interventions are as good as and can replace more intensive interventions for dependent drinkers.
- More research is needed which takes account of the limitations of research to date. This has tended to embrace only patients with relatively good prognoses: older, more moderate drinkers without other serious drug, psychiatric or physical disorders. Often, too, findings of effectiveness in men have not extended to women. On this basis it is not possible to conclude that brief interventions are suitable for all drinkers, in particular, that they are suitable for the more dependent drinkers found at alcohol treatment centres.^{30,31}
- There is also a question mark over whether the interventions are effective *enough*. In research settings interventions have usually been conducted by keen practitioners ("motivated converts"); widespread implementation would have to embrace those whose lesser enthusiasm may be reflected in poorer outcomes.³² Studies have also employed liberal criteria for assessing change, and subjects who have been through an intervention may exaggerate the degree to which they responded. Despite these potential boosts to outcomes, reductions in drinking have tended to be modest and sometimes non-existent,³³ and it has been hard to demonstrate that these have translated into improvements in health.
- Variability in outcomes may be related to the fact that brief interventions themselves vary greatly in length and content. Few people would think of accepting or rejecting extended alcohol treatments as a whole. Similarly, brief interventions cannot be accepted or dismissed as a whole: it is essential to specify what type of intervention for which type of patients and in which circumstances.³⁴



package. In Australia 161 out of 628 doctors agreed to participate in the this phase of the study. A randomly selected 34 simply had the package delivered to the surgery. The remaining 127 were matched into one of three levels of support/training: training but no support; training with minimal support; training with maximal support. Cost and effectiveness (ie, how often GPs conducted alcohol screening and intervention) generally increased with increased support. The exception was that training plus minimal support was actually less effective than training with no support at all.

The British study adopted a similar methodology except that only one level of training plus support (in the form of a fortnightly phone call) was tested.²⁶ Out of 128 GPs who had agreed to use the package, 73 actually implemented it. Over the next three months they screened 11,007 patients. Trained *and* supported GPs were significantly more likely to implement the programme (71%) than those only trained (56%) or not trained at all (44%); they also screened and intervened with significantly more

patients. Per patient screened, the two training interventions each cost just over a £1 and were more cost-effective than delivery only. Per patient the doctor went on to intervene with, at £5.43 the most expensive option, training plus support, was the most cost-effective; the least expensive option, simply delivering the package, was the least cost-effective.

In the British study, 4 out of 10 doctors used practice nurses to help with screening and intervention. A later study (yet to be published in a peer-reviewed journal) tested training and support options for these staff similar to those tested on GPs.²⁷ Out of 270 approached, 212 agreed to use the programme for three months and 128 implemented it, screening 5541 patients and intervening with 1333. Training or training plus support encouraged far more nurses (over 70%) to use the package than just delivering it to them (39%); the upshot was that for each 'active' nurse, the training options cost less – about £120 compared to £155. Trained nurses also screened and intervened with many more patients; per

OFFCUTS

AERC funding has enabled England to participate in a multi-national WHO project ([study 1](#), p. 21) aiming to achieve widespread **implementation of screening and brief interventions for alcohol problems** in primary care. The English arm is led by the Centre for Alcohol and Drug Studies at the University of Northumbria and the Department of Primary Health Care at the University of Newcastle upon Tyne. Available at their [web site \(www.alcohol-phaseivproject.co.uk\)](http://www.alcohol-phaseivproject.co.uk) are research updates and a discussion forum. Visitors can also sign up to the project's "strategic alliance" which lobbies for brief interventions to be accepted as essential to public health. Alcohol Concern has set up a Primary Care Information Service which provides [newsletter](#) and factsheets and support for practitioners – press the Primary Care button at www.alcoholconcern.org.uk.

patient who received a brief intervention the most extensive training and support option was the most cost-effective.

In this study, nurses who felt able to enlist receptionists to give out screening questionnaires also implemented the programme more extensively. Another study tested training and support options for receptionists.²⁸ During the three months when their practices were involved in screening and brief intervention, without support receptionists' attitudes became very negative, a deterioration prevented by training and support. A similar study in the UK also found that receptionists became more negative as a brief interventions trial progressed, but this time training and support did not help.²⁹

But will it float?

Though caveats abound, on balance experts who have evaluated the research literature on brief interventions agree that the evidence supports their effectiveness [The experts' verdict](#), p.23.

Even if the science looks good, there remains the issue of real-world practicality. GPs do not lightly change their consulting behaviour; evidence of health gain from brief interventions may not be strong enough to overcome inertia or to persuade health funders to offer sufficient incentive. To maximise public health benefits, brief interventions should be applied to any patient who screens positive. Doctors trained to treat patients as individuals may feel constrained to go much further in assessing whether this particular patient is really at risk and requires intervention, or will outgrow their excessive drinking with no (apparent) ill-effects. There is also the concern that unasked for drinking advice to patients who have come with another pressing concern could damage relationships.³⁵

Studies already cited (and others^{36,37}) are beginning to find ways round these blockages. Suggestions include screening for alcohol not in isolation but within a general health screen, a procedure which patients and staff may find more acceptable and practical. It might also help if the didactic

style of some approaches ('You are drinking more than the norm and should cut down') gives way to one in which the patient is a partner in the process – given information that they want and the leeway to decide whether this motivates them to change. Such approaches are more in tune with modern thinking and evidence from other medical sectors.³⁸

How patients might react is less of an issue in settings such as emergency (and some other) hospital wards where many have recently been sharply reminded of the risks of drinking. Here several studies have reported positive results³⁹⁻⁴⁰⁻⁴¹ including reductions in alcohol-related problems.⁴²⁻⁴³ As with GPs, implementation difficulties are a serious obstacle but, here too, ways have been found to weave alcohol screening and intervention into routine work.⁴⁴⁻⁴⁵

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