DRUG & ALCOHOL FINDINGS *Research analysis*

This entry is our analysis of a study considered particularly relevant to improving outcomes from drug or alcohol interventions in the UK. The original study was not published by Findings; click Title to order a copy. Links to other documents. Hover over for notes. Click to highlight passage referred to. Unfold extra text
The Summary conveys the findings and views expressed in the study. Below is a commentary from Drug and Alcohol Findings.

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Evaluation of a controlled drinking minimal intervention for problem drinkers in general practice (the DRAMS scheme).

Heather N., Campion P.D., Neville R.G. et al.

Journal of the Royal College of General Practitioners: 1987, 37, p. 358–363.

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Uncovered in our search for seminal studies for the Alcohol Treatment Matrix, a piece of old gold … Hampered by problems with implementation, this evaluation of an early controlled drinking brief intervention showed no advantage for patients over basic advice (or no intervention at all), prefiguring later findings from larger trials.

SUMMARY The 'drinking reasonably and moderately with self-control' (DRAMS) scheme was developed for use by general practitioners (GPs) in Scotland, with heavy drinking or low-dependence problem drinkers. This scheme was based on the goal of controlled drinking, as opposed to total abstinence.

Key points
From summary and commentary

The 'drinking reasonably and moderately with self-control' (DRAMS) brief intervention was developed for use in Scottish general practice.

The results of this trial challenged the presumption that the DRAMS scheme would be superior to simple advice (or no intervention at all) in helping problem drinkers to reduce their consumption.

The absence of the expected result could be explained in part by extensive discussions (over and above the protocol) of drinking in the comparison groups and few patients in the DRAMS group following the full procedure.

The DRAMS kit consisted of:
• A four-page introductory leaflet for GPs.
• A medical record card to note patient details, results of blood tests, and weekly self-monitored alcohol consumption, and a medical questionnaire with a checklist of 10 medical complications, adverse social consequences and signs of physical dependence.
• A two-week self-monitoring drinking diary card.
• A pocket-sized self-help book produced by the Scottish Health Education Group.

Patients attending their GP surgery for an appointment between March and December 1985 were handed a health questionnaire by the receptionist and asked to fill it in before seeing the doctor. After dealing with the problem the patient came to discuss, the GP referred to the questionnaire and calculated the patient's weekly consumption of alcohol. If it was above 35 units (each about 8g alcohol) per week for men and 20 units for women the patient was considered eligible for the next stage of the trial, at which point they were asked 10 questions probing for problem drinking or its possible medical and social consequences. These questions were also asked if weekly consumption was below problematic levels, but nevertheless the patients' notes or the GP's clinical impression suggested an alcohol-related problem. Any answers indicative of problem drinking again meant the patient could be included in the trial. Eligible patients were asked if they wanted to participate in a research project to study "the way people's drinking changes over time". The doctor stressed that the project had nothing to do with alcoholism.

A total of 16 GPs volunteered to participate in the trial, along with 104 patients who were randomly allocated to one of three groups: a group participating in the DRAMS scheme (34), a group given simple advice only (32), and a non-intervention control group (38). The average age of (the 78 male and 26 female) patients was 36.4 years. Twenty-one patients admitted to a current problem with drinking, and one defined himself as an alcoholic. Three patients had come to see their doctor to talk about an alcohol problem.

Following allocation to a study group, a blood sample was taken and the patient was asked to see a research interviewer for an initial assessment. If this was not possible immediately after the consultation, it took place within one or two days. Patients who did not return or respond to attempts at contact were excluded from further study.

Six months after the initial consultation, patients were sent a letter asking them to choose a suitable time for a further interview. Most of the interviews took place at the practices but a few patients were seen at home. Subjects who refused or who could not be contacted were given or sent a short self-completion follow-up questionnaire and asked to return it by post. The full follow-up interview covered the same areas as the initial interview with the exception of drinking history, the Michigan alcoholism screening test and the physical dependence score. The interviewers were unaware of the type of intervention or non-intervention the patient was assigned to. During a separate debrief procedure, patients were asked how useful they had found the advice and materials they had received. Patients in the DRAMS group were asked whether or not they had complied with the various parts of the procedure. Finally, a further blood sample was requested.

Patients seen for the follow-up interview were also asked to name a person who knew them well, who could give an opinion on how they were progressing. They were either seen in person or interviewed by telephone and asked about their knowledge of the patient and his or her drinking, whether the patient had ever had any problems with drinking, and whether drinking, drinking problems or their relationship with the patient had changed over the last six months.

When the patient's follow-up interview had been completed, the GP was sent a form requesting information on whether the procedure had been successfully followed, including information on consultation patterns and attendance.

The interventions

DRAMS group

DRAMS group

The GP went through a medical questionnaire with the patient, and entered the results onto a medical record card. If this indicated that the patient had a drinking problem, the doctor was directed to consider raising this with the patient. If the patient agreed, a blood sample was taken, and they were asked to fill in a drinking diary "as honestly as possible". A follow-up consultation was arranged for two weeks later.

At the follow-up consultation, the results of blood tests and the drinking diary card were reviewed with the patient. If the existence of a drinking problem was confirmed, the doctor advised him or her to try to control the amount consumed. The patient was then introduced to the self-help book and encouraged to decide on a realistic plan of action based on the measures suggested in the book. Additional appointments were made at which the patient's medical condition and progress at cutting down were reviewed using the results of further blood tests.

Advice-only group

Patients were informed that their drinking could be harmful and were given strong advice to 'cut down', but no precise quantities of consumption were recommended and no follow-up consultations were arranged to discuss their drinking.

Non-intervention group

The doctor explained to patients in this group that the research study would involve a blood test and an assessment interview, but made no specific reference to treatment or drinking, and arranged no follow-up consultations about their drinking.

Main findings

All three sets of patients generally reduced their drinking and improved in other ways, but the sole statistically significant difference between them was that a blood test indicated greater remission in heavy drinking among the DRAMS patients compared to those offered only brief advice.

Across all groups, there was a significant reduction in alcohol consumption, and a significant improvement on a measure of physical health and well-being.

The blood samples were analysed for levels of 'gamma-glutamyl transpeptidase' and 'mean corpuscular volume', which both increase when the patient drinks large quantities of alcohol. There were significant reductions across all groups in both measures. The only finding suggesting any superiority for the DRAMS scheme was a significantly greater reduction in the measure of gamma-glutamyl transpeptidase compared with patients in the advice-only group. However, this significant difference was not observed between the DRAMS group and the non-intervention control group.

There was generally good agreement between patients' own reports of their drinking and the person known to them who commented on their drinking (based on 46 patients).

The authors' conclusions

The results of this study provide little support for the hypothesis that the DRAMS scheme is more effective than simple advice (or no intervention at all) in helping problem drinkers seen in general practice to reduce alcohol consumption.

There were several reasons why this trial may have failed to demonstrate effectiveness of the DRAMS scheme:
• Only 14 patients in the DRAMS group completed the full procedure and the remainder were given an incorrect procedure or did not comply. Among those patients who did complete the full DRAMS procedure, little use was made of feedback on gamma-glutamyl transpeptidase levels by the doctors. [Elevated levels of gamma-glutamyl transpeptidase can indicate heavy drinking and injury to the liver].
• Although patients in the DRAMS group experienced twice as many consultations where drinking was discussed, patients in the advice and non-intervention control groups did receive some discussion of their drinking during the follow-up period (which was not in the design of the study). The drinking levels and problems of the subjects in all three groups received some attention. Even in the control group, the issue of drinking was raised by the doctor, and this was followed by an extensive research interview dealing mostly with drinking behaviour and a specially arranged blood test. Therefore, all subjects received some form of minimal intervention directed towards their drinking, making the difference between the DRAMS scheme and the two comparison groups small.
• Although there was evidence of alcohol-related impairment in the sample under study, most patients had not attended their general practitioner to complain about an alcohol problem and, when asked, only a minority considered that their drinking was causing problems. "In this context, it may be unrealistic to expect large and consistent changes in drinking behaviour, especially in view of the large differences between individuals in drinking levels and changes in consumption over time."

FINDINGS **COMMENTARY** This pioneering study was the first trial of brief interventions in a primary care setting, and has been cited in the Effectiveness Bank Alcohol Treatment Matrix and added to the Effectiveness Bank Old Gold collection in recognition of its contribution to the field. Hampered by problems with implementation, the study found no advantage of the brief intervention over basic advice (or no intervention at all) – results reminiscent of the SIPS study (click to read). The sole significant difference was observed between the brief controlled drinking intervention and advice group. This emerged from a 'one-tailed' statistical test, which effectively assumes that a negative finding (in this case, that the interventions made things worse relative to the control or comparison groups) must be a meaningless fluke. This kind of test roughly doubles the chance of finding a significant positive effect. Had the alternative 'two-tailed' test been used, the result may not have been statistically significant. Similarly, the significance test might have failed if the criterion for statistical significance had been adjusted to account for the multiple outcomes tested in the study. Put together, it seems unlikely that there was even one significant difference. One possible explanation for the lack of difference between groups is that *all* patients were exposed to a minimal intervention via blood tests and interviews (including self-administered questionnaire and screening test), and some patients from each group experienced discussions of their drinking (over and above, or contrary to, the protocol) in follow-up consultations. Another explanation is that the small sample size in the study (especially when divided into three groups) limited its power to detect an effect. Further information from the author revealed that the main reason for the small sample was the slow rate of recruitment to the study by participating GPs. The researchers did not have direct influence over recruitment, the responsibility for this lay with the Department of General Practice at the University of Dundee, and a request for further funding to enable them to increase the sample size was declined.

The authors themselves referred to the DRAMS scheme as a "minimal" intervention, but the method reported in this paper suggests it was anything but. Patients exposed to the entire DRAMS scheme experienced a health questionnaire, a medical questionnaire, further questions from the Brief Edinburgh Alcohol Dependence Schedule (to determine late dependence), blood tests, a drinking diary, self-help book, and follow-up consultations to discuss progress. This

dependence), blood tests, a drinking diary, self-help book, and follow-up consultations to discuss progress. This (arguably protracted and complex procedure) could help to account for the small number of patients who participated in every stage, why the protocol in some cases wasn't implemented properly by the GPs, and why many of the patients in the DRAMS condition did not comply with the doctor's recommendations. The authors instead partly attributed the issues with implementation to "the difficulties encountered in conducting research in service general practice where patient care takes top priority". The DRAMS scheme was an early example of a real-world trial, giving insight into the challenges of implementing screening and brief interventions into routine clinical practice where staff may or may not see their 'real' business as talking to their patients about drinking – patients who may be (and often are) there for another reason. A Scottish evaluation found that "healthcare staff see the delivery of [alcohol brief interventions] as a worthwhile activity for NHS staff", and of three priority settings (primary care, emergency departments, and antenatal care) only primary care practices really accepted the challenge. However, even in GPs' practices most risky drinkers were not screened and the quality of the work was unclear. The barriers identified in an international review remained evident: competing priorities, not enough time, concerns over relationships with patients, feelings that this was not what you should be doing, all hindered implementation.

In a recent publication, the present study's lead author argued that the benefit of brief interventions should be demonstrated under ideal and controlled circumstances (in what are known as 'efficacy studies'), *before* being tested in real-world conditions (as in 'effectiveness studies'). The DRAMS scheme (three decades earlier) was applied straight to real-world general practice, making it difficult to interpret what the lack of a significant finding meant – could it indicate, for example, a lack of benefit from the intervention itself, or were the benefits not seen because of challenges with implementation?

On the back of this evaluation and another pilot study, the Scottish Health Education Group intended to develop a revised DRAMS scheme which would be "more responsive to the stage reached by the patient in the process of change". Described in this Effectiveness Bank review, the 'stage of change' model offers practitioners a guide for how to work with patients, avoiding wasteful change attempts with those not yet ready to change, a rationale for instead nudging them to the next more receptive stage, and a way to recognise when someone is ready to commit to and make the changes needed to overcome their substance use problems. The authors suggested above that as most patients had not visited their GP to address a drinking problem, it may be unrealistic to expect significant and long-standing changes as a result of the intervention. However, this was in the very early days of the development of brief interventions, and what we can say now is that brief interventions are precisely intended for patients who "had not attended their general practitioner to complain about an alcohol problem", as challenging a context as this can be.

Thanks for their comments on this entry in draft to research author Professor Nick Heather of Northumbria University. Commentators bear no responsibility for the text including the interpretations and any remaining errors.

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