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. Free reprints may be available from the authors – click prepared e-mail. 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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▶ Effectiveness of nurse-led brief alcohol intervention: A cluster randomized controlled trial.

Lock C.A., Kaner E., Heather N. et al.

Journal of Advanced Nursing: 2006, 54(4), p. 426–439.

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Interventions delivered by nurses did lead to a reduction in excessive drinking in their patients, but there seemed to be no advantage of a structured brief intervention over standard advice.

SUMMARY Research in primary health care has tended to focus on general practitioner-led brief interventions for tackling drinking; but with nurses taking an increasing lead in health promotion work in primary care, the effectiveness of nurse-led interventions warrants investigation.

The subject of this paper is the effectiveness and cost-effectiveness of nurse-led screening and brief interventions (compared with standard advice) for reducing excessive drinking among patients attending primary care practices in north-east England between August 2000 and June 2003.

Clusters [local groupings of general practitioners (GPs) and practices] of 369 practices from five health authority areas were randomly allocated to conduct a brief intervention (183) or provide standard advice (186).

Between August 2000 and January 2002 research staff phoned nurses at the practices to ask them to join the study. In the end just 49 practices started the study after 180 refused (72 citing time pressures) and 44 withdrew. Another nine did not recruit any patients to the trial so were excluded from the outcome analyses.

Key points
From summary and commentary

The effectiveness and cost-effectiveness of nurse-led screening and brief alcohol interventions were investigated in this UK-based study.

While reductions in excessive drinking were observed across all patients, there was no advantage of a structured brief intervention over standard advice.

The lack of a no-intervention control group to compare the brief intervention to limited the ability of the researchers to draw strong conclusions about its effectiveness or non-effectiveness.

A practice-based training session (30–60 minutes) was arranged for all nurses who agreed to participate to familiarise them with the study protocol and procedures. All nurses were told that they were involved in a study evaluating the impact of alcohol advice. Nurses in the intervention group were given a brief intervention protocol to follow. All nurses received regular telephone support from research associates to help maintain involvement in the trial.

Nurses screened patients when they had the opportunity, inviting them to participate in the study if their scores on the Alcohol Use Disorders Identification Test (AUDIT) indicated excessive drinking (scores above eight for men, and seven for women), and provided they were over the age of 16 years. Patients who scored as possibly dependent were excluded from the study. Patients who agreed were assessed by the nurse who then delivered a 5–10-minute brief intervention or standard advice. The brief intervention involved structured advice about drinking including units of alcohol, low-risk drinking levels, benefits of cutting down, how to cut down, and how to set goals, take action and review progress, as well as a self-help booklet and diary for patients to take away. At standard-advice practices patients were advised to cut down on their drinking and given an alcohol advice leaflet. Patients were followed-up at six and 12 months after the intervention.

The key outcomes measured at the initial assessment and follow-up were:
• AUDIT scores (based on questions about quantity, frequency and intensity of drinking, alcohol dependence symptoms, and alcohol-related problems)
• Average number of drinks over the past week
• Drinking Problems Index scores
• Health-related quality of life scores (for mental health and physical health)
• Health economic evaluation (NHS resource costs and individuals' personal costs incurred)

Main findings

Most participating practices were group practices (80%) in urban settings (55%) with an average of three GPs.

Nurses from 49 practices approached 515 patients about being screened – 498 patients (one to 42 per practice) agreed. Nine practices found no patients drinking excessively, while the remaining 40 found 127 patients (67 in intervention group, and 60 in comparison group). About six in ten of the 127 excessive drinkers who joined the study completed the 12-month follow-up.

Most patients reduced their alcohol consumption between their initial assessment and 12-month follow-up (55% brief intervention, 59% standard advice), and there was a statistically significant reduction in AUDIT scores for the whole sample across this period. However, on no outcome measure had patients at brief intervention practices improved significantly more than at practices which offered only standard advice. Nevertheless, there were some non-significant (and therefore possibly chance) differences favouring intervention patients, among whom AUDIT scores, average drinks per week, and Drinking Problems Index scores all fell between initial interview and follow-up, whereas only drinks per week fell among patients offered standard advice.

The cost of delivering the intervention was £28.57 per patient, based on cost of programme materials (which would last an estimated 10 years before they required revision) and nurse time for the intervention. There was no statistically significant difference in costs between the intervention and standard advice groups, and the brief intervention led to no statistically significant changes in subsequent health service resource use relative to standard advice.

The authors' conclusions

The study found reductions in excessive drinking across both sets of patients, but no statistically significant advantage for patients receiving the structured brief intervention over standard advice. However, this should not necessarily be interpreted as evidence that the brief intervention had *no effect*. Similar trials have failed to find an effect of brief interventions on alcohol consumption (1 2 3), or have reported smaller effects than typically found in trials where research staff (instead of/as well as practitioners) have been involved in recruiting patients and delivering the brief intervention. It could be that in this real-world trial where screening and intervention were conducted by usual primary care staff, effects were muted.

As both groups experienced reductions in drinking, the screening itself, or screening plus advice of some kind from the nurse, could have had an impact. Alternatively, the small sample size may have limited the power of the study to detect any additional benefits of the brief intervention. Although 93 practices were initially recruited to the trial, 53 withdrew without recruiting any patients so just 40 practices completed the study, recruiting 127 patients into the trial. The poor recruitment and retention of nurses in this trial could have been explained by factors which were unmeasured, such as the reorganisation of primary care during the time period, as well as factors cited by nurses and practices, the number one reason being lack of time. A similar study, set in an accident and emergency department, was abandoned due to poor patient recruitment which nurses attributed to a lack of consultation about their consent to be involved in the trial, inappropriateness of the setting for brief alcohol interventions, and lack of time. In the featured study, "every attempt was made to keep nurses' work in the trial to a minimum. Nevertheless, enthusiasm for the trial remained low."

Ultimately the lack of a no-intervention control group limited the ability of the researchers to draw strong conclusions about the effectiveness of the brief intervention.

FINDINGS COMMENTARY This UK-based study of nurse-led alcohol interventions, which has not yet been superseded, confirms that, unaided and non-incentivised, primary care staff generally under-implement screening and brief interventions, and when they do implement, the impact tends to be modest or non-significant.

The findings *appeared* to support the delivery of screening and advice by nurses in primary care, but not the added-value of screening and structured brief interventions. However, whilst the

observed reductions in both groups could be down to the screening itself producing an effect, the lack of a no-intervention control group also makes it possible that the reductions were a case of heavier drinking normalising over time (even without any intervention) – a phenomenon known as 'regression to the mean' (1 2).

The featured study excluded potentially dependent drinkers. Although it is generally assumed that brief interventions should be reserved for non-dependent drinkers, this Effectiveness Bank matrix bite finds a lack of evidence that brief interventions work among more moderate drinkers but fail further up the severity scale. The low cut-off here may have resulted in the intervention's overall impact being limited. Also, as patients were "opportunistically screened", nurses could have screened patients who were more *receptive* to a conversation about drinking (eg, those perceived to be more open and willing to receive advice, who came in with less serious or time-consuming problems leaving time for screening, or whose problems were related to their drinking) – thereby further limiting the reach of the intervention.

Here also, only a quarter of the practices approached agreed to participate (many said they had no time) and just over 1 in 10 contributed data to the analysis. The results cannot therefore be assumed to represent what would happen in a normal GP practice less motivated or well placed to join and complete a brief intervention trial. In general, the degree to which screening and brief intervention are systematically implemented depends on the requirements and incentives applied to primary care practices. Where these are strong, research shows that screening *can be* very widely implemented. But as feared by England's national alcohol charity, in 2008 an audit of health service provision found that systematic screening by GPs was the exception and few patients were screened or offered brief advice, undermining the hoped-for public health benefits of a mass programme. The same year the system was reinforced by a new requirement for health commissioners to organise for GPs in their areas to screen adult patients newly registering with the practice, incentivised by a payment for each screening. These initiatives follow the commitment to selective screening and brief intervention in the 2004 English national alcohol strategy and resultant practice guidelines.

Nurses interact with (and have the potential to intervene with) patients along the drinking spectrum, from hazardous, to harmful, to dependent. Policy and practice guidelines have been published to guide this work (1 2 3 4). Recurring themes from these guidelines are described in a publication outlining "in more concrete terms, how nurses in all settings can effectively intervene with patients". It says that: all hazardous and harmful drinkers warrant an opportunistic brief intervention with follow-up enquiry as to progress; some harmful drinkers would benefit from structured brief treatments such as motivational enhancement therapy; and some harmful and dependent drinkers, particularly those with coexisting or overlapping health conditions or social problems, may require specialist referral and treatment.

There is substantially more evidence about the effectiveness of brief interventions delivered by doctors in primary care, than by other professionals. However, the findings of a review featured in the Effectiveness Bank suggests that non-physician-based interventions (eg, delivered by nurses, doctors' assistants, health educators, or psychologists) are no less effective than physician-based interventions. From 13 studies of brief (but structured) alcohol counselling versus 'usual care' (brief advice) in primary care clinics, the pooled impact of the interventions was lower (24g versus 38g less alcohol drunk per week) than found for interventions conducted by doctors, but the difference was not statistically significant.

This study was an 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 (the key factor cited by nurses here), concerns over relationships with patients, feelings that this was not what you should be doing, all hindered implementation. In light of this, it is recommended 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'). Without this, it is difficult to interpret what the lack of a significant finding means – could it indicate, for example, a lack of benefit from the intervention itself, or were the benefits not seen because of the challenges with implementation described above?

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

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