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# ▶ A meta-analysis of the efficacy of nonphysician brief interventions for unhealthy alcohol use: implications for the patient-centered medical home.

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Sullivan L.E., Tetrault J.M., Braithwaite R.S. et al. American Journal on Addictions: 2011, 20, p. 343-356.

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It works when the doctor does it, but what if the nurse or other primary care staff counsel risky drinking patients? It still works – maybe not as well, but perhaps more patients can be reached more cheaply.

**Summary** Recent reviews have concluded that brief interventions conducted by doctors result in significant declines in drinking compared to not offering such advice. This evidence supports clinicians spending time delivering brief alcohol interventions and they are encouraged and reimbursed to do so by national authorities. Yet doctors provide these interventions infrequently and time constraints limit attention to this important health issue. One way forward would be for health care staff other than doctors (such as a nurses, doctors' assistants, health educators, or psychologists) to deliver these interventions, raising the issue of whether they would be equally effective.

To address this issue, the featured review identified studies published in English up to 2008 of brief, structured alcohol counselling by non-physician medical staff (with or without additional input from doctors) in primary care clinics, which reported on drinking outcomes compared to not offering such counselling. The analysis allowed for the possibility that impacts might vary in the different circumstances investigated by the trials.

A search uncovered 13 relevant studies, all but two of which included interventions delivered solely by non-physician staff. The comparator was 'usual care' – generally very brief advice either from a physician or a non-physician clinician. Patients offered these interventions had generally been identified as harmful or hazardous drinkers.

#### Main findings

Seven studies with 2210 patients provided sufficient information for their findings to be pooled statistically by meta-analysis. Across these studies, compared to usual care, a structured brief intervention by non-physician staff on average further reduced drinking 24g (3 UK units) per week. The extra reduction was not significantly different depending on how severe the average patient's drinking was in the different studies.

One study was (according to criteria set when the review was planned) an 'outlier' which, due to an unusually strong intervention impact, disproportionately contributed to the variation in impact across the seven studies. Excluding this study slightly reduced the average intervention impact to 20g alcohol or about two and a half UK units a week.

Three of the 13 studies included a comparison between the effectiveness of interventions delivered by non-physician medical staff versus doctors and found no statistically significant differences in the degree to which patients cut down their drinking – direct evidence that non-physician clinicians can be as effective as doctors. In one of the two studies to examine this scenario, adding non-physician inputs to those of doctors created lasting and statistically significant extra reductions in drinking.

## The authors' conclusions

This systematic review and meta-analysis offers preliminary support for the benefit of brief interventions for unhealthy alcohol use conducted by non-physician staff in primary care settings, either alone or in combination with physicians. When directly compared, non-physician-based interventions were no less effective than physician-based interventions, and can effectively supplement the latter. The pooled impact of the interventions was lower (24g v. 38g less alcohol drunk per week) than found for interventions conducted by clinicians, but the difference was not statistically significant.

However, making practice recommendations based on these studies is complicated by the fact that the interventions varied from a single five-minute session to six 90-minute sessions, beyond the limit normally considered 'brief'. At best the studies were of fair quality, raising concerns about the overall quality of the results and the legitimacy of translating these findings into a real-world model. Also the variations in their methodologies raise concerns over whether it was meaningful to pool their results.

The featured review is consistent from evidence in respect of other behavioural and mental health problems managed in primary care such as depression and smoking, when non-physician staff have been shown to be effective.

Findings The modest average reduction in drinking and the cautions expressed by the analysts mean concerns over whether clinically significant reductions would be replicated in usual practice must be taken seriously. Evidence from the featured review and other work shows that primary care medical staff can deliver brief counselling which reduces drinking among risky drinking patients. A remaining major challenge is how to consistently realise that potential – how to turn 'can' into 'do'. There remains considerable doubt over whether the average drinking reduction seen in trials will be replicated if intervention is 'scaled up' to practices in general, and applied by the general run of primary care staff to the general run of patients. This is partly a doubt over the consistency of the effectiveness of systematic screening and structured intervention compared to usual practice, partly over whether studies have been sufficiently representative of normal practice, and partly over whether this degree of systematisation will be widely implemented. Where the climate is supportive, organisational and personal incentives are strong, and performance against targets matters and is monitored, implementation rates can be high; in other circumstances, they can be near zero. The few British studies of non-doctor primary care alcohol interventions give some – but far from convincing – evidence that these reduce drinking, and found that in practice few patients were screened and advised. Details below.

One finding in the review could be misunderstood to imply that supplementing the doctor's counselling with that from non-physician staff had been found in one study to significantly improve drinking outcomes. In fact that study (1 2 3) tested a single intervention variously delivered by nurses and doctors who were aided by administrative support from research assistants. The assistants attached to the patient's notes information from research assessments of their drinking, the intervention guide, and patient education materials, prompting primary care staff to intervene as intended with the patient. This package was compared against usual care which rarely involved any alcohol counselling at all, and again was variously delivered by nurses and doctors. Apart from the outlier study, this was the single most convincing demonstration of the impact of 'non-doctor' intervention, being considered at least of fair quality and registering the largest effect. However, 22 of the 27 interventionists were doctors and the study was conducted at just four primary care clinics managed by a single US health provider of which two were adjacent so were considered a single unit.

### **UK** studies

The government-funded SIPS national trial of brief alcohol interventions in England included a primary care arm which involved practice



nurses as well as GPs in screening and counselling. The largest such trial to date, it found that given financial incentives, training and specialist support, most primary health care practices could implement screening and intervention, but in the circumstances at least of a research trial, they screened and advised few of their patients; on average, less than two per GP practice per week. Least well implemented was the longest of the three interventions tested, which required appointments to be made and kept, rather than seamless delivery of briefer interventions during the patient's initial attendance. But implementation problems did not seem to account for why the anticipated extra benefits of the longer and more sophisticated, theory-based interventions did not materialise, even for heavier drinkers, leaving the shortest and simplest intervention looking the most cost-effective – an alcohol advice booklet plus a few sentences of feedback alerting someone to their risky drinking. These findings cast doubt over the potential for primary care screening and brief intervention to make a significant contribution to public health; numbers reached may simply be too low.

Before SIPS the main studies of non-physician alcohol interventions in British primary care surgeries derived from the early 2000s in the north east of England. Like SIPS, they gave some – but far from convincing – evidence that these interventions reduce drinking among risky drinkers, and suggested that under the conditions at the time, few patients are screened and advised. Details below.

One study conducted in the early 2000s in England's north east region tested whether an intervention delivered by nurses in 49 practices (of 273 invited to join the study) reduced drinking. The nurses were asked to opportunistically (ie, at their discretion as the opportunity presented itself) screen patients for risky drinking using the few questions in the AUDIT questionnaire. Practices were randomly allocated to counsel those who scored as risky drinkers using the brief intervention protocol being evaluated, or the nurse's usual response. During the study, nurses approached on average 10 patients each for screening, of whom about a quarter (127 patients) were AUDIT-positive and recruited to the study – a low recruitment rate which may have been partly but probably not mainly due to the requirements imposed by the research.

The brief intervention protocol was followed by reductions in all drink-related measures six and 12 months later (consumption, AUDIT score, drink-related problems), while among those given usual advice, only consumption at 12 months fell, and then less than in the protocol group. However, none of the outcome differences between the two types of intervention were statistically significant. Across both groups there was little change in consumption at 12 months (reduced by just two UK units a week from a baseline average of 25) or drink-related problems, but there was a significant reduction in the average AUDIT score from about 11 to about 10. In the 12 months following the interventions, health care costs and these plus the intervention costs were on average over £100 lower for the protocol group (about a quarter less than for the usual advice group), but again, these differences were not statistically significant. The authors concluded that the trial provided "no evidence that nurse screening and brief intervention should be routinely provided", but also that it did not rule this out given the non-significant advantages of the brief intervention protocol.

An accompanying study (1 2) tested ways to support practices nurses in the implementation of a brief alcohol screening and intervention programme. Of 270 nurses 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 (54%) to use the package than just delivering it to them (30%); 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.

The most expensive option (training plus continued support) resulted in the most interventions and was also the least costly per patient who received a brief intervention. Nevertheless, nurses offered this support typically screened just four patients a month and intervened with one every two months. The biggest shortfall was in the screening rate; just 2% of patients seen by the nurses were screened. Of the 28% found to be at risk, an intervention was delivered to 64%. With training but without support the corresponding figures were 1%, 24%, and 60%. The screening shortfall was partly because universal screening was not attempted. Instead most of the nurses who implemented the programme did so when they had time not just for screening but for any ensuing intervention, and in specific contexts such as new patient registrations, well person checks, or chronic disease clinics, when screening was a natural part of broader health checks. Nurses who felt able to enlist receptionists to give out screening questionnaires also implemented the programme more extensively.

#### The UK policy context

In recent years Britain has made progress in extending alcohol screening and brief intervention to more primary care patients, but it is unclear whether this has been to the degree needed to make noticeable public health gains, and provision remains patchy. Details below.

In both England and Scotland, the prime objective for primary care is to screen new patients and/or those thought in advance to possibly be at risk from their drinking. Screening newly registered patients was the reimbursement indicator for the enhanced alcohol service. Initially for two years from 2008 but then extended to March 2013, this requires all primary care trusts in England to offer GP practices in their areas the chance to contract to provide alcohol screening and brief intervention to their new patients. If they wish, local commissioners can go further to contract for more extended services. Also in England, directors of public health are expected to include such activity among attempts to address the population-wide determinants of ill health.

In line with Scotland's own practice recommendations, national policy in Scotland prioritises screening and brief intervention, backed by a health service target for 2008/09–2010/11 to deliver 149,449 brief interventions supported by dedicated funding. The target was exceeded; over the three-year period 174,205 alcohol brief interventions were recorded across the three priority settings – primary care, accident and emergency departments, and antenatal services. In 2008, the Welsh Assembly Government announced its intention to instigate a programme to promote alcohol brief interventions in both primary and secondary health care settings.

These policy initiatives implement guidelines from Britain's National Institute for Health and Clinical Excellence (NICE), which encourage screening for new patients and in circumstances where both patient and doctor might feel it was 'natural' and justified to ask about a patient's drinking. Touching on a key barrier to widespread implementation beyond these circumstances, the guidelines cautioned that, "Clinical consultations for non-alcohol-related medical problems can be an inappropriate time to discuss alcohol use, given that users are focused on the condition for which they are seeking advice," and recognised the greater acceptability of discussing drinking "in a context that is related to the purpose of the visit (such as lifestyle assessment or chronic condition monitoring)".

It is unclear how far things have moved on since 2008 when a national audit found that systematic screening by GPs in England was the exception and few patients were screened or offered brief advice. The requirement to offer screening and intervention contracts to GPs has generated more activity, but far from consistently, and the quality and even the reality of the services supposed to have been provided has been questioned. In London in 2010 a survey of staff responsible for local alcohol policy indicated low levels of investment in developing the role of GPs in screening and treating alcohol use disorders. Nearly two thirds of areas had yet to invest in or develop screening systems beyond those nationally required. In one large London borough not known for the rarity of its drinking problems, over half the practices which had contracted to provide screening failed to identify any risky drinkers using the stipulated screening survey, and in a year screening resulted in just ten people being referred for treatment. Whilst reluctance to address drinking 'out of the blue' is understandable, there is even reluctance to raise the topic in general health and well-being assessments.

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