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Bulletin 7 August 2008

Universal screening for alcohol problems in primary care fails in Denmark and no longer on UK policy agenda

No reductions in drinking were found by a Danish attempt¹ to implement in ‘real-world’ practice the primary care screening and brief advice protocol for heavy drinkers which emerged from World Health Organisation (WHO) trials,² also the origin of a model officially recommended for England.³ In line with recommendations at the time, the Danish trial aimed to screen every adult patient. Its failure lends weight to current UK policy which advocates selective screening. Whether this will prove effective remains unclear.

Findings

Of the 426 GPs invited to join the study 39 did so. They were required to have practice staff who would recruit patients eligible for the study and give them a screening questionnaire to be completed in private while waiting to see the doctor. The questionnaire consisted of the 10-item AUDIT screening test developed for WHO⁴ plus questions about how much the patient usually drank. Patients were also given another survey to be completed at home and mailed back to the researchers which assessed how much they had drunk in the past week.

Of the nearly 7000 patients who agreed to join the study, a randomly selected half (the control group) simply dropped their sealed screening questionnaire in a ballot-style box and saw the doctor in the normal way, who was unaware of their scores. The other half handed their questionnaires to the doctor who scored the AUDIT tests. About 1 in 6 of these patients scored above the score considered indicative of hazardous or harmful alcohol use. Of these, about 13% were eliminated from the study because they might be dependent drinkers. Either they scored high enough for the doctor to administer a second screen which indicated they might be dependent and required referral to specialist treatment, or were drinking/scored so heavily that dependence was suspected.

The remaining risky but presumed non-dependent drinkers – about 1 in 8 of all the screened patients – were to be given the 10 minute intervention consisting of feedback on

their scores, advice on cutting back, a self-help booklet, and a suggested further consultation (which over 80% did not return for). Follow-up data from these 442 patients were compared that from their 464 counterparts in the control group to assess whether the doctor's advice had curbed their drinking. This data was collected by means of a further AUDIT test and alcohol consumption survey mailed to the patients a year later to be completed at home and sent back to the researchers. About 60% of the patients returned this survey.

On none of the measures of changes in alcohol consumption or problems (usual amount, amount in previous week, reduction below excess drinking levels, ceased binge drinking, reversion to below AUDIT risky drinking score, or at least one of the last three without deterioration on the other two) had intervention patients improved to a statistically significant degree relative to the control patients. The only statistically significant result was that fewer women stopped binge drinking after the intervention. The pattern of the results makes it unlikely that findings from a larger sample would have been more decisive.

In Context

About the study

Unlike the WHO effectiveness study, the featured study combined AUDIT-based screening with brief intervention, was exclusively conducted in GP practices rather than also in hospitals and clinics, and conducted the intervention on the same visit as screening.

All the doctors had been trained in the intervention and provided a manual, raising the possibility that elements of the intervention 'spilled over' to the control group. However, the lack of reductions in drinking in both groups suggests even if this had happened, what 'spilled over' was an ineffective intervention.

At several points heavier drinkers were suspected or known to have been lost to the study (considered ineligible due to inebriation or current alcohol treatment, refusal to participate, screened out, or failure to return follow-up survey). Possibly both to the doctors and to the patients they might have seemed a more legitimate target for intervention and have responded better. One recent meta-analysis found that heavier drinkers did respond better to such interventions.⁵ In the event only about a fifth (usual amount, screening test) or a just over a third (past week, returned surveys) of the patients admitted to drinking more than Danish recommended weekly limits. Despite their elevated AUDIT scores, an intervention which involved comparison against these guidelines might have seemed to legitimate their drinking. On the other hand, those who sent back their baseline surveys were on average drinking about 26 UK units a week, over the recommended 21 unit limit for men in the UK, and patients with higher AUDIT scores did not react better to the intervention.

The fact that there was extra opportunity to screen out dependent drinkers among the intervention patients (through the double screening procedure) seems unlikely to have affected the results since the same proportion of patients (13%) were screened out in both groups. For the same reason the unrecorded benefits (if there were any) of referring dependent drinkers to treatment also seem unlikely to have made much difference.

Among the outcome indicators were reversions to below the harmful and hazardous drinking score in the AUDIT screen which incorporates some questions indicative of

adverse consequences from drinking. However there was no direct attempt to measure such consequences.

While the doctors' contributions were limited to conducting the intervention, the receptionists who screened patients also had to conduct research-related procedures which would not have been required in normal practice. However, this does not seem to unduly affected the number of patients they screened.

The large loss to follow up especially among intervention patients (barely more than half of whom returned their surveys) is a significant weakness in the study. However, intervention patients unwilling to admit they had failed to follow the doctor's advice seem likely to have been over-represented among the non-returners. If they were, this would have tipped the balance in favour of the intervention. Analyses which assumed that patients lost to follow-up had continued drinking at the same level or which simply excluded these patients, came up with similar results.

The intervention patients were also much less likely (49% v 77%) to send back their home-completed baseline surveys. It seems that after being exposed to an alcohol-focused brief intervention, these patients were both then and a year later less willing to report back on their drinking than patients whose consultations had presumably not focused on alcohol. This seems consistent with findings from a preceding pilot study in which some patients were noted to have reacted defensively against the intervention.

Such reactions were also commented on during focus group and individual 'debriefing' sessions involving 24 of the 39 doctors in the study.⁶ But these patients were the in the minority and most seemed to have appreciated the doctor's concern. However, the doctors themselves seemed deeply uncomfortable with the intervention. Though accepting that counselling on alcohol was part of their role, they felt that introducing it in this 'artificial' manner when the patient was attending for some other reason, and without a naturally emerging clinical prompt for diverting the conversation to the patient's drinking, damaged doctor-patient rapport. Patients rarely, they felt, reacted in ways which suggested they would take the advice to heart. Almost universally the doctors said they would not continue to screen patients for risky drinking.

With on balance no financial incentives and the burden of the intervention and the research to look forward to, the researchers reasoned that the 39 GPs who volunteered were "highly motivated" and therefore fertile ground for trialing the intervention. That they nevertheless found such difficulties is, it is implied, all the more telling.

UK effectiveness studies

WHO effectiveness trial UK arm

The WHO study⁷ from which the intervention tested in the featured study was derived has been described as "perhaps the most powerful evidence yet"⁸ for brief interventions in primary care. However, the benefits it found were limited. There were none among female drinkers and (compared to screening only), brief primary care advice led just 1 in 10 men to cut their alcohol consumption. For the men this amounted to on average about one UK unit a day, not enough in this study to significantly curtail alcohol-related problems. However, this study did not use AUDIT for screening and the interventions differed from those recommended by WHO on the basis of this and other studies.

The British arm of this multinational study foundered on the reluctance of GPs and patients to get involved.⁹ Perhaps because of the research requirements, only three health centres participated, forcing the study to seek further subjects on general hospital wards where implementation was easier. Health centre patients were screened by means of a mailed questionnaire but 30–40% did not return it and of the excessive drinkers it revealed, just half attended the centre for interview and (if assigned to these groups) intervention. Attrition at various points of the study meant that follow-up data was available from just 34 of the 3467 primary care patients who had been screened. Over two-thirds of the entirely male follow-up sample were recruited in the hospitals, so the sole statistically significant finding (a greater reduction in average alcohol intake in the advice groups relative to the controls) cannot be assumed to be applicable to the primary care setting or to women. Judging by the differences in average amounts drunk, this greater reduction in drinking was most apparent in the group given the shorter of the two interventions, five minutes of advice that their drinking might place them at risk and encouragement to cut down or abstain. Supplementing this with 15 minutes of counselling did not improve outcomes. On their neither of the components of amount drunk (amount drunk on a drinking day and the number of these days) fell significantly more after advice, nor did related problems or level of dependence. In both settings some patients did not see their drinking as excessive and nurses sometimes felt “despondent”, “undermined” and demoralised. In practice they had to negotiate the intervention with the patient rather than simply delivering it.

The postal screening procedure and the time spent assessing patients for research purposes mean these results cannot be considered much of a reflection of how in-surgery screening and immediate intervention would work in practice.

Lock 2006

Conducted in the same region by the same research team as the corresponding implementation studies (see *Lock and Kaner 2006 and 2003*), in 2000 to 2003 a further study investigated whether nurse intervention was effective.¹⁰ 273 practices were asked to participate. 49 did so, though nine did not recruit any AUDIT-positive patients to the study. This practice recruitment rate is not a reflection (see above) of the rate to be expected when nurses are not also required to undertake research activities. All the nurses were asked to screen opportunistically using AUDIT and to advise AUDIT positive patients either (by random allocation of practices) using the brief intervention protocol tested in the marketing and training studies or their usual advice on cutting down drinking.

Nurses in 49 practices approached on average 10 patients each for screening during the study and of these about a quarter (127 patients) were AUDIT-positive and were recruited to the study. Low recruitment may be related to lack of enthusiasm for the trial but also to low screening rates seen even without the research burden of the trial (see above). 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 standard advice only consumption at 12 months fell and then less than in the protocol group. However, none of the 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 2 units a week from a baseline average of 25) or on 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 in the protocol

group (about a quarter less than in the standard advice group) but 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 out this possibility given the non-significant advantages of the brief intervention protocol.

Wallace 1988

For the UK Paul Wallace’s study published in 1988 remains the most convincing demonstration of the potential role of GPs.¹¹ Effectively it tested whether GP interventions *could* work given relatively ideal conditions with pre-selected patients.¹² A clear ‘Yes’ was delivered to this question, but there remained the issue of whether the benefits would survive more routine implementation. Conducted in 47 group practices across Britain, its results could not be attributed to a few skilled or enthusiastic doctors or (except for under-representation of urban practices) an atypical local population. However, all the practices had agreed to participate in a broader research network, raising a query over how representative they were.

Departures from normal practice were most evident in pre-intervention recruitment and screening. This was done by the research team and was a two-stage process. First the practice themselves distributed questionnaires to patients of which 62,153 were returned from an unknown number handed or mailed out (assuming a 75% return rate, the number would have been about 83,000).¹³ These were sifted by the research team which invited 4203 available patients to an research interview out of the 4454 respondents whose responses indicated their drinking had been excessive or had caused them concern. 2571 patients attended the interview and 909 joined the study after it was established that they met the study’s criteria for excessive drinking – in the past week, at least 35 units a week for men and 21 for women. On average the men admitted drinking about 63 UK units in the past week and the women 36. Despite questionnaire evidence of risky drinking, the remaining 3294 patients potentially available for interview did not participate. Of the 909 who started the study two died. Of the remaining 907, 748 supplied data for the 12-month follow-up. Disproportionately lost during this funnelling were heavier and younger drinkers and men, leaving, it’s been suggested, a set of subjects who might have been particularly susceptible to intervention.¹⁴ One of the practices dropped out during the study.

The GPs had been video-trained in an alcohol intervention which consisted of a re-assessment of the patient’s alcohol use and problems, comparison with drinking norms, information about the potential harmful effects of alcohol, and advice to restrain drinking to safe levels or (if dependent) to abstain. Then patients were asked to monitor their intake via a drink diary and to attend for at least one further consultation a month hence to discuss the diary and the results of blood tests.

Half the sample were asked in for this session (which 386 patients attended, 86% of the 450 patients invited); the other half (the controls) received advice only if they asked for it or if blood tests indicated liver damage. Well over half the intervention group attended for a follow-up consultation. Over 80% of both groups were re-assessed by research staff six months and a year later. Whether the measure was past-week consumption or the proportion drinking excessively, and in both men and women, the doctor’s advice had led to less drinking. The impact was relatively modest – 10 UK units a week less than the

controls for men and half this for women – but it was enough to create a worthwhile shift towards safer drinking. By definition all the patients had been drinking excessively at intake; a year later, 45% of the advice group were no longer doing so compared to 27% of controls. In the men, a blood test indicative of excessive drinking recorded a modest but statistically significant drop in the advice group.

Unlike some others, in this study patients were not excluded if they drank very excessively or appeared dependent. Instead the tested protocol called for abstinence to be advised. In the intervention group outcomes did not differ between patients assessed at baseline as dependent and those not. At the one-year follow-up the assessing nurses knew that 87 of the 363 intervention group patients they interviewed had been in this group. In regard of the men, this may have affected their assessments of the answers the men gave. 35% of these male patients were assessed as still drinking excessively compared to 52% of the male intervention group patients whose allocation remained 'blinded'. Even the lower of these two figures would still have been 10% higher than found among men in the control group and this potential source of bias affected just 54 of the 257 men. However, such a large and statistically significant difference calls in to question the validity of the assessments made by the nurses. Blood test evidence of greater drinking reductions among the men which was statistically significant helps allay this concern.

Heather 1987¹⁵

In 1985 a study conducted in Scotland evaluated a demonstration programme designed to involve primary care physicians in the identification and management of problem drinkers.¹⁶ Known as the DRAMS Project (Drinking Responsibly and Moderately with Self-Control), the programme aimed at reducing the patient's alcohol intake by means of education materials. The DRAMS programme was subjected to a controlled trial using 16 GPs who screened patients using a short health questionnaire. Males drinking above 20 standard drinks per week and females drinking more than 11 drinks per week were randomly assigned to three groups: one receiving the DRAMS materials, a second receiving only advice to limit their drinking, and a control group that was asked to return in several months for a follow-up blood test. At the six-month follow-up evaluation there was a significant reduction in the previous month's alcohol consumption for the combined sample, but there were no differences between groups. In their interpretation of these results, the authors note that some of the GPs did not implement the study protocol properly. Many of the patients in the DRAMS condition did not comply with the doctor's recommendations, and the control group received some discussion about their drinking. This, combined with the small sample size, may have accounted for the lack of significant differences among groups.

In this study the sole significant finding related to a biological marker of heavy drinking. This was in favour of the DRAMS group relative to the brief advice group. The brief advice group evidenced no benefits relative to the control group. Only a fifth of the patients screened as heavy drinkers saw themselves as having a drink problem. Over five to nine months the 16 urban practices identified 104 patients for intervention who joined the study, about one a month for each practice. Given the broad screening remit it seems likely that many heavy drinking patients were missed.

Anderson 1992

The objective of the study published in 1992 was to determine the effectiveness of advice from general practitioners to heavy drinking men (consuming 350–1050g of alcohol per week) to reduce their alcohol consumption.¹⁷ 154 men recruited from eight general practices were allocated randomly to treatment and control groups. Men in the treatment group received advice from their own general practitioner. At one year follow-up, when analysed according to intention to treat, the treatment group had reduced their consumption by an excess of 65 grammes of alcohol per week when compared with the control group, a significant difference.

The men in this study were drinking at least 44 units a week, a higher criterion than in most other such studies. The practices (all in the Oxfordshire region) in the study had been selected because they had previously expressed an interest in being involved in alcohol research. After pre-selection using the results of surveys mailed to 8483 patients or filled in at the surgery, final screening and assessment was conducted by a researcher in a face to face interview at the surgery. 524 patients, 6%, were over the study's drinking limit. 419 were invited to join the brief intervention study of whom about half attended for final screening and 154 had drunk an amount within the study's limits in the past week. These patients were randomly allocated to the control group (no advice) or to the intervention group who were asked to make an appointment with their GP at which the GP would deliver 10 minutes of structured advice based on feedback from the screening interview including blood tests. Among other things the patient's consumption was related to population norms. GPs had been trained in this protocol but only for half an hour in total. A year later 100 patients returned for re-assessment. On average at recruitment they had been drinking 66 units of alcohol a week, relatively heavy drinking for such a study. Two measures of consumption were available to the study: past week drinking as assessed by interview and a repeat of the screening survey. There were some reductions in both groups but these were more consistent and greater in the intervention group which had cut back by a further 8 units a week on average. At follow-up 18% of the intervention group were now drinking at relatively safe levels (at or below about 28 units a week) compared to 5% of the control group. Changes in the control group were similar to those seen in another sample of heavy drinkers identified by the initial survey but not subject to the assessment interview, suggesting that interview on its own had little impact. Despite the greater drinking reductions in the intervention groups there had been no greater reductions in alcohol dependence scores or in alcohol-related problems. In another report on women recruited to the study the intervention had no greater impact than assessment alone.

At one year changes in consumption as measured by the (it was thought) more accurate method of an interview using a past-week drinking diary narrowly missed the conventional level of statistical significance when no changes were assumed among patients lost to follow-up. The measures taken using the health survey were statistically significant.

Summary of UK effectiveness trials

In both the Anderson study and in the Wallace study (the two most convincing British studies) the GP practices were involved or interested in research and were known or can be presumed to have been interested in alcohol research in particular. Researchers conducted the screening process, a very small proportion of screened patients entered the study, and of those initially identified as risky drinkers, around a fifth ended up supplying follow-up data. Perhaps importantly, patients were selected in to the studies not just (or at all) on the basis of their responses to standard screening tests, but explicitly on the basis of excessive

consumption. Either none or a very high ceiling was set on their consumption before they were excluded. The result was a sample of on average clearly excessive drinkers (the men averaged over 60 UK units or 480g of alcohol a week). Most would have been towards the far end of the national distribution against which (among other things) their drinking was compared during the intervention.

Other British effectiveness studies were either not reflective of primary care or inconclusive about the benefits of intervention. The British arm of the WHO study from which the featured study was derived consisted mainly of hospital patients because GP practices were reluctant to participate.¹⁸ An earlier trial in Scotland recorded no benefits from brief advice or for an intervention based on repeated blood tests.¹⁹ The 16 urban practices recruited on average just one patient a month for the study, indicative of a very low screening and/or identification rate. A study in which primary care practice nurses conducted both screening and intervention tended to find greater reductions up to a year later in drinking and drink-related problems and health care costs when nurses had followed a brief intervention protocol than when they had given their usual advice.²⁰ However, none of these differences was statistically significant, and across both groups there were only modest and sometimes statistically insignificant improvements. Instead of universal screening, in this study nurses were asked to screen patients when the opportunity presented itself. Despite this and the fact that their practices had volunteered for the study, they lacked enthusiasm for the trial, approaching on average just 10 patients each.

UK implementation studies

WHO implementation study UK arm

Following the effectiveness trial (above) the World Health Organization mounted a trial to investigate ways to encourage and support GPs to implement screening and brief intervention.²¹ The conclusion was that personal contact and ongoing support are needed to encourage even modest levels of implementation.

The study used the AUDIT test for screening and the five-minute *Drink-less* protocol to guide the doctor's (or nurse's) advice to AUDIT-positive patients. With adaptations to local circumstances, it was replicated in Australia, Flanders, Denmark, New Zealand, Spain and northern England. Generally it involved receptionists asking all non-repeat adult patients to complete the written screening test and take it in with them to the doctor for scoring. Those scoring at least as hazardous drinkers were to be given the *Drink-less* advice.

In the first phase of the study three 'sales' strategies were tried on 3436 randomly selected GPs to persuade them to order the free programme. The first was simply a mailed promotional leaflet, the second a 'telemarketing' phone call following a set script, and the third a similar script delivered face-to-face. For the last two, staff were trained to anticipate and respond to potential objections. Both roughly doubled uptake compared to the leaflet, from 32% to 65% and 67% respectively.

GPs who had ordered the package (which included guidance on how to implement it), and who had agreed to enter their next phase of the study, were then randomly allocated to no further action or to one of two strategies to encourage them to make use of it over the following 12 weeks. The first was a one-off, face-to-face training session for both the GP

and their practice receptionist; the second, this plus regular phone calls and/or visits to offer ongoing support.

Across five countries (Denmark had dropped out) these strategies led about 70% of practices to implement screening compared to 58% without them. However, most did so patchily. The intention was to screen virtually all adult patients but trained and supported practices typically screened just 9%, those trained but not supported 6%, and those just given the package, 1%. Once patients had been screened, around half those identified as hazardous drinkers were given advice, more if their drinking was more severe. But the low screening rate meant that, even with training and support, typically just 3% of all the patients estimated to be in need of advice received it. Practices which had received the package without training intervened with virtually no patients. Some of the best results came from Australia and New Zealand. There the best quarter of trained practices screened roughly at least half their patients and intervened with at least a third of those thought to be at risk.

In England the most effective marketing strategy (telemarketing) led 72% of GPs to order the programme. Once GPs had ordered it and agreed in principle to use it, the most effective implementation strategy (training plus ongoing support through fortnightly phone calls) led 71% to use it to screen at least one patient. Offered training plus ongoing support, across all the practices which ordered the programme and agreed in principle to use it, typically 11% of patients were screened and 4% of all patients thought to be at risk were given the recommended advice. However, the best quarter of English practices screened at least a quarter of patients and advised roughly at least a fifth of all patients at risk. Without ongoing support and even if training had been offered, typically 0% of at-risk patients were screened.

Intervention rates may be underestimates because they were based on the proportion of screened patients who were at-risk drinkers, grossed up across all the adult patients seen during the study.²² If receptionists or other staff were selecting likely heavy drinkers for screening, this calculation would overestimate the number of risky drinkers among the patients. However, in England this is unlikely to have made much of a difference. The proportion of screened patients who were at-risk drinkers was 32%, not much above the 26% national estimate of at-risk drinkers in the general population.²³

If in England over a year a different set of patients attended each three months then at the end of that year just 4% of at-risk patients would have been screened, but in fact the average patient visits their GP four times a year.²⁴ Stickers on notes identified which patients had already been screened so over a year screenings might cumulate to a maximum of 17%²⁵ and in the best quarter of practices to a maximum of at least 78%.²⁶ These will be over-estimates because some patients do not attend regularly or frequently but on the other hand, heavy drinkers are among the most frequent attenders²⁷ and therefore most likely to eventually be captured by screening. This means that even a low capture rate over a 12-week period might over a sufficiently long period cumulate to a substantial proportion of patients being screened.

Reports devoted to the English arm of the study give a more detailed picture. These showed that 'telemarketing' and face-to-face marketing, roughly equivalent strategies, led 28% of GPs to agree to try the package for three months, over twice as many as were enticed by the mailed leaflet.^{28 29} Telemarketing persuaded the most GPs to order the

programme (82% of all those contacted and available to do so) and was also the cheapest strategy per acceptance.

Among GPs who agreed to try the package, per patient screened, the two training interventions each cost just over a £1 and were more cost-effective than just delivering the package.³⁰ 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. GPs who enlisted the assistance of a practice nurse (as well as receptionists) were more likely to implement the programme. The paper notes that over both phases of the study in England just 10% of the 729 doctors offered the programme went on to implement it and most stopped using it once the three months of the study were over. However, some of the 729 doctors were uncontactable or not available to use package leaving 614 who might have ordered it. Of these 321 did so, 128 agreed in principle to use it for three months and entered the second phase of the trial, and 73 actually did use it with at least one patient, about 1 in 8 of the approachable doctors. These figures refer to the total sample. If it had been implemented across the sample the most effective marketing strategy (personal contact) might have led 181³¹ doctors to agree to try the package and the most effective training strategy might have led 71%³² of these to implement it amounting to 127 GPs, about a fifth of all of the approachable doctors.

In the WHO study as a whole, the weak link resulting further down the line in low intervention rates was the failure to screen, principally the responsibility of receptionists. An offshoot of the English arm of the study focused on the receptionists in practices which had agreed to implement the package and used it at least once.³³ Only just over half completed before and after feedback surveys. They can be expected to have been the ones most enthusiastic about the project, yet by the end over half felt the programme was demanding and that they should be paid extra for this kind of work, a degree of resistance not seen among the GPs. More disappointing still was a tendency for the receptionists to become *less* positive about doing this kind of work over the course of the trial, a deterioration unrelated to whether they had been trained and/or received ongoing support.

In four of the countries involved in the featured study (England, Australia, Belgium and Spain) a similar deterioration was seen amongst GPs who had ordered and agreed to use the programme.³⁴ Across the four countries most GPs felt it was legitimate for them to address drinking with their patients and were confident in their ability to do so (role security), but just 1 in 6 felt committed to this aspect of their work. Only those already relatively committed to alcohol interventions and who felt secure in this role responded to training and support by increasing their screening and brief intervention rates. Training and support had no effect on less committed/secure GPs except to further diminish their commitment and security from before the trial started to six months later, even though it was GPs who did most to implement the programme tended to be the ones who contributed to the follow-up survey. GPs with relatively high screening and intervention rates did not as a result become more secure about and committed to this kind of work, in fact, for confidence, the reverse was the case for those who started the study feeling relatively insecure.

24 practice nurses from English practices in the study were also interviewed.³⁵ They felt intervening in respect of drinking was a legitimate part of their role and often raised the issue during general health checks, with new patients, and when monitoring patients with certain chronic conditions which might be related to or aggravated by drinking such as

hypertension, diabetes and heart problems, ie, in situations where it was not a case of singling out an individual. This may have been because such situations help defuse the potentially negative and resistant responses among patients which the nurses described to the researchers, which in turn made the nurses feel awkward, apprehensive and reluctant to raise or pursue the issue.

As part of the WHO study but not in the context of its brief intervention trials, GPs in nine developed countries were randomly sampled and asked about the same attitudes and beliefs and how many drinkers they treated.³⁶ England was bottom of the ranking in therapeutic commitment (19% in top half of score) and in the proportion who had managed at least seven patients in respect of their drinking in the past year (about a third). The number treated by each GP (across and within countries) was related to both role security and therapeutic commitment.

Experts in England favoured routine screening of patients attending clinics for complaints potentially linked to or aggravated by heavy drinking (eg, hypertension, diabetes) and during consultations of the kind where screening would be more natural and acceptable such as new patient registrations and general health checks.^{37 38 39} GPs who had participated in the WHO trial thought routine screening should be confined to general health and blood pressure checks but did agree that clinics for complaints potentially linked to or aggravated by heavy drinking were appropriate opportunities to ask about drinking. Patients also felt comfortable with this kind of approach which effectively raised the issue of drinking in circumstances where to both them and to the doctors it seemed natural to do so. There was it seems little support for the universal screening model tested in the WHO study. A similar model is advocated by Alcohol Concern, a national charity.⁴⁰

The discussions were held as part of an attempt to customise screening and brief intervention for the UK context and to raise the profile and increase acceptance of the approach.⁴¹ A demonstration project based on these discussions refined and tested such approaches in five practices in Tyne and Wear. The resultant model used AUDIT or briefer tests for screening new patients and those attending certain clinics and offered either brief advice to hazardous drinkers, longer counselling (up to 15 minutes) to harmful drinkers or those who did not respond to brief advice, and referral to specialist evaluation in cases of suspected dependence or when counselling has been ineffective. The same research network is conducting wider trials along similar lines arising from commitments made by the government in 2004 in its national strategy, the *Alcohol Harm Reduction Strategy for England*.⁴²

Lock and Kaner 2000 and 2003

Conclusions similar to those arrived at in the WHO implementation studies with GPs were reached by a British study which offered training and support options to practice nurses like those tested on the GPs (AUDIT screening and the *Drink-less* brief intervention protocol).^{43 44} Out 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.

As with the GPs, the most expensive option (training plus continued support) resulted in the greatest number of interventions and was also the least costly per patient who received a brief intervention. Nevertheless, nurses offered this support (including those who did and did not go on to use the programme) typically screened just 4 patients a month (12.5 median over 3 months) and intervened with one every two months (1.5 median over 3 months). The biggest shortfall was in the screening rate; just 2% of patients seen by the nurses were screened. Of those found to be at risk (28%) 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 opportunistically, that is when they had enough time to undertake the extra screening and intervention activity. Programme implementation also tended to occur in specific contexts such as new patient registrations, well person checks or in chronic disease monitoring clinics.” In other words screening occurred usually only when the nurses had the time not just for this but for any ensuing intervention (typically taking 5 minutes) or when such checks were a natural ingredient of broader health checks. Nurses who felt able to enlist receptionists to give out screening questionnaires also implemented the programme more extensively.

Taking into account a higher rate of apparently inappropriate interventions (AUDIT score not high enough) after training, the cost per appropriate intervention was the same regardless of the degree of training and support. After nurse training, 1 in 8 patients not at risk according to AUDIT were advised about their drinking. Whether these really were inappropriate interventions or the proper exercise of discretion given the extra information available to the nurses cannot be determined. Perhaps because universal screening was not attempted, nurses’ attitudes to alcohol interventions improved slightly from before to after the trial. However, just 46% said they would “probably” continue to use the programme.

Angove 2001

At seven practices in Cardiff in 1997/8 a “real-life” attempt was made to get receptionists to hand out the AUDIT screen to all waiting adult patients with a view to GPs referring AUDIT-positive (scoring over 8) patients to the research project’s nurse for a one hour motivational interview.⁴⁵ Pilot studies had revealed that 4 in 10 men and over 1 in 10 women attending the practices scored over this level. During the six months of the intervention project 738 patients completed AUDIT screens. Averaging 18 patients a month or four a week for each practice, this suggests that in practice screening was far from universal. 95 of the 738 scored positive and 83 were available for referral. GPs recorded what they did with 48 of these patients. 11 were referred for counselling and 2 attended. Another 11 patients whose drinking problem had become apparent outside the screening process were also counselled. Across these 13 reactions to the motivational interview were positive. Of the 10 (out of 24) GPs who commented few found the screening process useful in identifying patients for alcohol counselling. In this project screening and intervention rates were low perhaps partly because little time was available to prepare and motivate practice staff. On the other hand the load on practice staff was minimal. The suggestion is that universal screening was in practice not feasible or was resisted and that the offered intervention was above the threshold patients and doctors were prepared to countenance in all but a few cases.

North England GPs

In 2003/4 a varied sample of 29 GPs working in the north of England were interviewed about their alcohol-related attitudes and practice.^{46 47 48} The results were discussed by groups of (mainly) GPs and other professionals in the area. Much as many GPs anticipate would be the case in raising drinking with their patients, there was evidence of some sensitivity about their own drinking and also some that the need for intervention with patients was benchmarked against their own drinking habits.

Doctors in this study were often sceptical about the 'evidence-base' for screening and intervening with risky drinkers. Drink-related work was it was felt a legitimate and important part of their work but had to be fitted naturally in to consultations which may also have much other ground to cover, leaving in reality nowhere near the 10 minutes required. Most respondents were flexibly working around alcohol problems in a way that fitted with the spirit of brief interventions and maintained the doctor-patient relationship (in particular by not pre-empting the agenda) rather than mechanically implementing screening and intervention. The GPs felt that until patients were willing to accept that their alcohol consumption was problematic they could achieve very little. They tentatively introduced alcohol as a potential problem, re-introduced the topic periodically, and then waited until the patient decided to change their behaviour. They were aware that they could identify and manage more patients. A lack of time and having to work with the multiple problems that patients brought to consultations were the main factors that stopped GPs managing more risky drinkers.

Running through respondents' accounts was the sense that research was often disconnected from the realities of clinical practice, and that clinical practice itself was framed around a well established set of activities, deeply embedded in a stable clinical encounter. Thus the topic of alcohol was often raised within an 'auspicious environment', one where the immediate context made its discussion either medically less challenging or organisationally relevant. These auspicious environments emerged either via 'embedding' alcohol in a list of questions about other lifestyle behaviours or generalising it so that it was just one of a list of risk factors for a condition or even saying that this is something that 'I ask everyone'. Alternatively, GPs legitimised the need to discuss alcohol by referring to test results or casualty reports or the needs of the computer, for instance in prompts about updating notes.

In essence, the GPs stressed the importance of not asking the question 'out of the blue'. Regularly asking all patients about alcohol was not a systematic practice. None of those interviewed currently used any types of screening questionnaire beyond new patient registration forms and medical record updates. Three GPs had used screening tools in a previous implementation trial of brief alcohol intervention. They described how they had been surprised by the number of patients the screening tools had identified as drinking beyond recommended levels whom they would not normally have thought to ask. All the GPs in this sample were aware that they might be missing people who drank excessively, especially those who were risky or binge drinkers, but still did not feel that universal screening was viable.

Wilson 1992

16 GPs in Nottinghamshire seeing at least 8 patients an hour and who wanted to increase the time available to each patient tried implementing fortnightly sessions during which

patients were booked in every 10 minutes.⁴⁹ Medical notes from these sessions were compared with those from normal sessions at the same time and day either before the trial or on alternate weeks during the trial. Typically each trial consultation lasted a minute longer. Health promotion was addressed more often in the trial consultations. In particular, drinking was addressed in well over twice as many consultations (3.3% v. 0.9% and 1.4%). More patients too said drinking had been covered (7% v. 5% and 4.5%). There seems to have been no instruction to the GPs or expectations that these would be the uses made of the extra time. The authors speculated that the extra minute enabled GPs to address lifestyle issues related to the presenting complaint.

Recent reviews and meta analyses

Anderson 2004

Findings from the WHO implementation studies are in line with those of a meta-analysis pooling these results and those of other studies on engaging GPs in addressing heavy drinking.⁵⁰ Overall such attempts (including training, practice visits, and telephone support) raised screening rates by a further 8% and advice giving by 18%. Continued support additional to initial training most effectively increased general practitioners' screening and advice-giving rates for hazardous and harmful alcohol consumption.

Beich 2003

Screening adult primary care attenders for risky drinking is an ineffective use of health care resources was the hotly contested conclusion of study published in 2003 in the *British Medical Journal*.⁵¹ The conclusion was based on a meta-analytic compilation of studies of screening followed by brief intervention in general practice. From this emerged an estimate that on average 1000 patients have to be screened to gain 12 months later just two or three who have stopped drinking above levels which the source study defined as excessive. The main problem was not the efficacy of brief interventions, but the 'wastage' which occurred before patients got to this point. Across the studies, screening indicated that 90 out of 1000 patients might be drinking too much and 25 of these were assessed as suitable for and actually received brief feedback, information, and advice.

Critics argued that outside a research context more – perhaps virtually all – of those who screened positive would immediately be talked to about their drinking,^{52 53 54 55} that drinking reductions which don't cross the border between excessive and not excessive may still be valuable,⁵⁶ that screening for heavy drinking could be incorporated in broader health screening,⁵⁷ and that a choice does not have to be made between no screening and universal screening⁵⁸ – screening could be targeted at certain categories of patients likely to include higher than average numbers of heavy drinkers⁵⁹ or at specific types of consultation during which patients and doctors would expect such questions to be asked. Finally, it was argued that even accepting the meta-analysis's figures, screening for alcohol problems is no more hit and miss than screening for other medical conditions, yet screening for these is considered worthwhile.⁶⁰ The original authors have replied sticking by their conclusions.⁶¹ They argued that the proportion of positive screen patients who actually get through to receive a brief intervention is likely to be roughly the same in normal practice as in the research, that most of the studies they included in their analysis claimed that their results supported screening as well as brief intervention, that selective screening is untested in

general practice, and that what is needed is a study comparing screening-based approaches with normal patient-centred clinical procedures.

Bertholet 2005

A meta-analysis of brief alcohol intervention trials in primary care reported that 8 of 17 trials found a significant reduction in alcohol consumption.⁶² A synthesis of trials taking in to account subjects lost to follow-up estimated that overall an extra reduction in drinking of 38g or nearly 5 UK units a week resulted from intervention. Reductions were greater the higher the consumption of the patients when they entered the trial. Positive trials typically featured an intervention lasting 5–15 minutes giving feedback on assessment results, written take-home materials and the offer or arranging of a further appointment.

Kaner 2007

A Cochrane review and meta-analysis extended its reach beyond Bertholet's primary care focus to also include emergency departments and other on-demand health services.⁶³ Of the 28 trials, 23 were in primary care settings. Overall the interventions led to an extra reduction of drinking amounting to 41g per week or about 5 UK units usually measured a year later. There was a non-significant tendency for trials which more closely approximated normal practice to lead to a lesser reduction. Longer interventions tended to lead to greater reductions but this was not a major influence.

Practice Implications

For the researchers, the featured study suggests that patients would respond better and GPs find the process more acceptable if alcohol screening and intervention were introduced 'naturally' as part of a patient-centred consultation.

As in the US medical service for former military personnel, when primary care practitioners are mandated to do alcohol screening and completion of screening is a recorded performance measure, then near 100% screening can be achieved, at least when screening is intended to pick up on actual problems as opposed to at-risk drinking and the population (in this case almost exclusively male veterans) is at high risk of such problems.⁶⁴ Even with these incentives, lack of time stood out as the most important barrier to implementation, cited as important by half the staff surveyed. Patient defensiveness was the next, cited as important by a fifth of respondents. Among patients with drinking problems, managers estimated 59% received brief interventions. The percentage of patients receiving brief interventions was negatively correlated with lack of specialist staff available to conduct brief alcohol interventions.

Under their contracts with the NHS, GPs in England are not required to do alcohol screening and intervention unless they have specially contracted with their local funders to provide this "enhanced service", and funders are not required to ensure the provision of this service in their areas.⁶⁵ England's national alcohol charity described this as a "limited aspiration" because it will only affect the practice of a small proportion of GPs.⁶⁶ However, a recent survey in England found that each month the average GP sees 22 patients whom they recognise as having a drink problem, far higher than in a survey published in 1998.⁶⁷ Moreover, a high proportion reported the use of systematic screening methods and the provision of a wide range of in-house interventions.⁶⁸

The English Department of Health is piloting ways to screen for and briefly respond to alcohol problems in primary care to support its programme of improvement for alcohol misuse interventions,⁶⁹ fulfilling a commitment given in 2004 in the national alcohol strategy.⁷⁰ That strategy favoured targeted screening of patients whose complaints suggest possible drinking problems rather than the universal screening model tested in the featured study. Among other sites, the studies are taking place in 24 GP practices.⁷¹ Among the researchers will be the Newcastle team which conducted the WHO trials in England.⁷² They have developed a brief intervention protocol called *How much is too much?*⁷³ based on the brief advice intervention tested in the WHO trials.⁷⁴ This advises screening adults using AUDIT or shorter screens such as FAST and suggests “You might consider targeting certain consultations, e.g. new patient registrations, well-person clinics or diabetes and hypertension clinics.”⁷⁵ Simple advice or extended brief interventions are advised for hazardous and harmful drinkers respectively. These consist of assessment feedback compared to national norms, advice on what to cut down to and how, and on the benefits of doing so,⁷⁶ plus in the extended version motivational style probing of the patient’s desire for and confidence in their ability to cut down, a decisional balance exercise and more detailed planning.⁷⁷

This protocol is recommended in English NHS guidelines for commissioning alcohol screening and brief intervention from GPs as an enhanced service.⁷⁸ Screening with very brief tests is recommended to be followed by the full AUDIT for patients who screen positive.

A discussion paper on a Scottish alcohol strategy released in 2008 proposes to “expand screening to enable early identification of people who are misusing alcohol but may be unaware they are doing so, and delivery of brief interventions to help prevent them from developing problems”.⁷⁹ As in England, universal screening is not recommended. Instead it suggests that health services “opportunistically screen people who may be at risk” according to the model recommended by a Scottish medical and research network.⁸⁰ This guideline recommends “judicious” use of screening tests on suspicion of drinking problems and routinely as part of the medical history documented for new patients. Any ensuing intervention should it suggests relate to the patient’s presenting problem wherever possible, reflecting concern not to pre-empt the agenda and to have screening and intervention arise naturally within a patient-centred consultation. Again as in England, the strategy discussion paper envisages alcohol screening and brief intervention as one of the enhanced services available to be commissioned from primary care in Scotland, underpinned by a “comprehensive national training programme”.

Whilst doctors and nurses generally see preventive health care as a legitimate role, administrative staff are less likely to do so, yet (if responsible for initiating the procedure through screening) they are the key link in the chain which could deliver public health benefits through alcohol screening and intervention. Receptionists also rarely receive feedback on the benefits of their efforts and are most likely instead to receive negative feedback from patients asked to fill in screening forms. Practices which involve receptionists as healthcare professionals in their own right and give them resources and recognition commensurate with this role are more likely to be able to absorb initiatives such as alcohol problem screening.

An alternative trialed in a series of pilot projects funded by Alcohol Concern involved the siting of an alcohol worker in primary care settings to counsel patients referred by practice

staff and sometimes also themselves to undertake screening.⁸¹ Several used standard screening instruments in one case handed out to all patients in the waiting room. Given adequate training and the involvement and engagement of the primary care team, this proved a feasible model.

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