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▶ Alcohol screening, brief intervention, and referral to treatment conducted by emergency nurses: an impact evaluation.



Désy P.M., Kunz Howard P., Perhats C. et al. Request reprint Journal of Emergency Nursing: 2010, 36(6), p. 538-545.

At over 50%, this US study's main achievement may have been to show that emergency department nurses can screen a high proportion of patients for risky drinking. After that point it suffered from a low intervention implementation rate, and no statistically significant benefits were found.

**Summary** A Kentucky hospital emergency department tested an implementation of an intervention being promoted nationwide by the US government to identify hazardous substance use in primary care and non-specialist community settings and offer brief advice or referral to treatment. The elements of the intervention – Screening, Brief Intervention, and (if appropriate) referral for Treatment – compose the intervention's acronym, 'SBIRT'. In the featured study conducted by the US Emergency Nurses Association, the focus was on alcohol and the aim was to test the feasibility and impact of interventions delivered by emergency department nurses.

Among 30,703 visits to the department during the study period, 15,891 patients whose injuries were not life-threatening were screened by nursing staff for alcohol use. Of the 926 adults whose bedside responses to the seven-question screening survey indicated they were drinking above US low-risk guidelines, and who met the study's other criteria (principally that they were aware enough and could communicate adequately), 824 were asked to join the study and 94 agreed to do so. Following screening, these patients were randomly allocated to a control group simply given a list of local referral options, or to the SBIRT intervention. SBIRT patients were given an immediate brief intervention by trained staff nurses, a highly scripted session lasting five to ten minutes during which the interventionist told patients their screening test results, expressed concern at their risky drinking, then sought to enhance motivation to cut back using motivational techniques such as exploring the pros and cons of drinking as the patient sees them, and reframing

and reflecting back to the patient some of their own responses. Sessions were planned to end with a signed agreement committing the patient to the drinking goals decided during the preceding discussion, and referral to primary care or alcohol services depending on the severity of their drinking.

## Main findings

Of the 94 patients (three withdrew and 49 were allocated to SBIRT, 42 to the control group) who joined the study, 46 could be reassessed by staff nurses over the phone three or more months later to check for any impact on their drinking. There were no statistically significant differences between SBIRT and control patients. Both ended up drinking at about the same levels, in both cases less than when first assessed. However, because on average they drank far more at the start of the study, the drop (70% v. 20%) in weekly average consumption was much greater among SBIRT patients. Across all the patients, including those who could not be recontacted, fewer SBIRT patients (20% v. 31%) returned to the emergency department during the following three months, and just one compared to four did so because of an injury. Over the same period there were no recorded traffic violations among the control group and one among SBIRT patients.

### The authors' conclusions

Staff resistance, pressure of work and lack of privacy in the department limited the number of patients screened and together with patient reluctance also limited the number who joined the study. The low follow-up rate was partly due to the transient nature of US heavy drinking emergency patients. Nevertheless the study showed that it is feasible for emergency department nurses to intervene with heavy drinking patients and to follow them up. Reductions in the control group as well as the SBIRT group suggest that screening itself might curb drinking, and the greater reductions in the SBIRT group are consistent with evidence that brief interventions can have a significant impact on drinking, at least in the short term.

FINDINGS At over 50% this study's main achievement may be considered to have been to demonstrate that emergency department nurses can screen a high proportion of their patients. After that point, as other studies have done, it suffered from a low intervention implementation rate. In routine practice without patients having to agree to join a study and with a seamless transition from screening to intervention, many more patients might have received the intended counselling. Over 4 in 10 of the screened patients were too unwell, too young or could not be communicated with adequately. Among the rest, staff reluctance and the over-pressured emergency department environment played their parts in whittling down the numbers counselled, but it was the study consent procedure which scared most patients off. Whatever the reason, of the possibly 1750 patients who might have been drinking heavily, just 5% joined the study and fewer than 3% were followed up. Despite random allocation, on average patients allocated to SBIRT were drinking well over twice as heavily at the start of the study, a statistically significant difference. This different starting point complicates the interpretation of the main positive finding – the greater subsequent drop in consumption. Even if the steeper drop had been statistically significant, there would have been doubt over whether it was due to the intervention.

On the other hand, as the authors point out, had the samples been larger the steeper drop in drinking in the SBIRT group might have been statistically significant, screening alone might have contributed to reductions in the control group, and the longer time spent with patients in the intervention group might have encouraged them to be more frank about drinking. It was also the case that on one or both measures, drinking declined significantly among both sets of patients, suggesting that what the nurses did had some impact. However, reversion to more normal drinking after whatever led to the hospital visit cannot be ruled out, and nor can an attempt to present oneself well at follow-up; patients who expressed guilt about their drinking were most likely to be followed up.

A much larger but otherwise similar US study also suffered implementation and follow-up problems. In this multi-site national study, researchers did the screening and not just nurses but other emergency department staff delivered the interventions. Still, on average each interventionist counselled just one patient every 19 days, a figure which might have risen to one every 10–11 days without the burden of research procedures. Extrapolating from the 62% of patients who could be followed up three months later, this study did find extra drinking reductions which meant that 26% of SBIRT patients no longer exceeded US low-risk alcohol consumption thresholds but just 17% of controls. By six months and again at 12 months, these promising effects had nearly or entirely dissipated and there were no statistically significant differences in alcohol consumption between intervention and control groups.

## Other emergency department studies

The featured study adds to the negative side of what has been a patchy record of statistically significant success for emergency department brief alcohol interventions. Previous studies have shown that just a few minutes counselling at-risk drinkers among emergency patients can reduce consumption and alcohol-related injuries, improve welfare, promote treatment uptake, and cut the future workload of emergency services. But there have also been negative findings, and the research record is fairly evenly balanced between these and more positive findings. A recent synthesis of research on interventions conducted actually in the emergency department rather than after admission found that overall such interventions have not been shown to significantly reduce alcohol consumption, while impacts on drink-related problems have been variable. More positively, three studies did together indicate that six to 12 months after the interventions patients were half as likely as comparison patients to have suffered an alcohol-related injury, but all three were from the USA, and two involved only teenage patients whose drinking would have been illegal in that country. In all three the patients were known to have recently been drinking or had a history of drink problems rather than merely having tested as exceeding national drinking guidelines, underscoring the possibility that heavy drinkers are most affected by such interventions.

Patchy findings have prompted attempts to identify why some interventions have worked in some situations but others have failed, but the evidence is insufficient to answer this question. In particular, it remains unclear whether a relatively elaborate, theory-based approach really is needed. One well designed US study, which managed to follow-up nearly all the patients it recruited, found that an intervention very similar to that in the featured study was no more effective than one minute of straightforward advice at

discharge that (among other things) the patient cut their drinking. As in the featured study, both interventions were conducted by emergency department staff.

It seems likely that (as in a US study) when emergency department alcohol interventions do curb drinking, impacts are concentrated among relatively heavy and/or dependent drinkers rather than those who only modestly exceed low-risk drinking limits.

#### British studies

In 2008 an audit of alcohol health service provision in England found that advice-giving at accident and emergency departments was rare. Commissioners have reportedly found it hard to persuade staff to undertake this work.

The best researched example is the programme at St. Mary's hospital in London, which uses trained and motivated (performance feedback is important) emergency unit staff to screen suspected heavy drinkers or patients with complaints linked to heavy drinking. Doctors explain to positive screen patients that drinking is damaging their health and offer an appointment with an on-site health worker, typically the same or the next working day. In these circumstances, two-thirds of patients attend for advice. Offering this service was found to reduce later drinking and return visits to the department. This last finding may be attractive to commissioners seeking to meet national targets to reduce alcohol-related hospital admissions. Further analysis based on the same study found that total public service costs and productivity losses over the following 12 months were roughly equivalent whether or not the intervention was offered, but that offering it was the most cost-effective option for reducing drinking. Another study at the unit demonstrated the (at least temporary) feasibility of tasking reception staff to hand out screening questionnaires to all adult ambulant patients, and the willingness of over half the patients to fill in and return the forms.

## The UK policy climate

In England directors of public health are expected to include alcohol brief interventions among attempts to address the population-wide determinants of ill health. This policy is in line with recommendations from Britain's National Institute for Health and Clinical Excellence (NICE), which in 2010 saw screening and brief interventions targeted at risky drinkers as an effective way to prevent drinking problems, though one less important at a population level than policy changes affecting the price and availability of alcohol. Among the sites NICE envisaged for this work were emergency departments, and the recommended approach was the FRAMES model. However, the guidance acknowledged that (in contrast to primary care) research on emergency department interventions was scarce and the barriers to implementation were considerable.

In Scotland national policy prioritises screening and brief intervention in primary care, antenatal care, and accident and emergency departments, backed by a health service target for 2008/09–2010/11 to deliver 149,449 brief interventions across the three years supported by dedicated funding. The target was exceeded by nearly 25,000. However, this tally of about 58,000 brief interventions a year should be set in the context of what was in any event 111,200 primary care consultations for alcohol misuse in a single year in 2006/07.

The Welsh substance misuse strategy recognises the potential value of brief alcohol interventions in accident and emergency departments, but its action plan made no commitment to their expansion; neither did the strategy for Northern Ireland.

## Practice implications

Given findings to date and the policy context in most of the UK, commissioners and emergency department managements may not feel alcohol screening and intervention initiatives are mandated either on the evidence or by policy levers. However, neither should they ignore the possibility that patients' health can be improved, and department workloads relieved, by brief advice to risky drinkers identified through a rapid screening procedure and/or through indications that the attendance was alcohol-related. If procedures permit, screening questions should be built in to routine assessment/triage procedures. Unless actively and continuously monitored and encouraged, screening may be applied haphazardly and to only a small proportion of the patients who could benefit. If possible the intervention should be conducted while the patient is waiting in the department or on the ward if admitted as an inpatient. If a follow-up reminder and progress check (in person or by telephone or letter) can be factored in, outcomes can be monitored and are likely also to be improved. More severely dependent patients require referral to treatment, preferably actively pursued then and there by hospital staff. A letter to the GPs of positive-screen patients would alert them to the need to pay attention to the patient's drinking, and offer a second chance of intervention if counselling in the hospital proved impractical or was refused.

In the UK advice on brief interventions is available from the Alcohol Learning Centre. US guidance is available on the specific intervention used in the featured study and on emergency department alcohol screening and intervention in general.

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