Economics

Brief physician advice to problem drinkers reduced alcohol intake and societal costs

Fleming MF, Mundt MP, French MT, et al. *Benefit-cost analysis of brief physician advice with problem drinkers in primary care settings*. *Med Care* 2000 Jan;38:7-18.

QUESTION: In patients with drinking problems, is brief advice given by a physician cost effective?

Design

Cost benefit analysis of a randomised controlled trial with 12 months of follow up.

Setting

17 community clinics in Wisconsin, United States, comprising practices of 64 family physicians and general internists.

Patients

774 patients who were 18-65 years of age (62% men) and drank >14 alcoholic drinks/week (>168 g alcohol/wk) (>11 drinks/wk for women [>132 g alcohol/wk]). Exclusion criteria were pregnancy, attendance at an alcohol treatment programme or symptoms of alcohol withdrawal in the previous year, physician advice to change alcohol use in the previous 3 months, consumption of >50 drinks/week (>600 g alcohol/wk), or symptoms of suicide.

Intervention

Patients were allocated to a brief physician advice intervention (n=392) or a control group (n=382). The intervention consisted of printed feedback on health behaviours and previous problem drinking, adverse effects of alcohol, drinking cues, and diary cards. Intervention group patients had two 15 minute physician visits 1 month apart and follow up telephone calls. Control group patients received a general health booklet.

Main cost and outcome measures

Main clinical outcomes were healthcare use and change in alcohol use and alcohol related events. The costs were considered from the perspective of the clinic (equipment and personnel) and patient (lost wages and transportation). The economic benefits pertained to reductions in healthcare use, legal events, and motor vehicle accidents.

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Main results

Patients who received the brief physician intervention had greater reductions in alcohol use than patients in the control group. Intervention group patients reported fewer days of hospitalisation than control group patients (p=0.046) and were involved in fewer motor vehicle accidents and criminal events. However, the difference with control group patients was not statistically significant. The total clinic cost (initial screening, assessment, intervention sessions, staff training sessions, and follow up telephone calls) was US\$64 933 (\$165.65 per intervention patient). Patient resource costs (travel and lost work time) were \$15 277 (\$38.97 per patient). The total cost of the intervention was \$80 210 (\$205 per intervention patient). The saving in service use cost was \$195 448 (\$523 per patient). The saving in legal events and motor vehicle accidents was \$228 071 (\$629 per patient). The total benefit of the brief intervention was \$423 519 (\$1151 per patient) (p=0.009). The net benefit per patient was \$947. The benefit to cost ratio was \$56 263 for every \$10 000 invested.

Conclusions

In patients with drinking problems, brief advice given by a physician was cost effective for patients and for the healthcare system. The net benefit per patient was US\$947.

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Abstract and commentary also appear in
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COMMENTARY

The study by Fleming *et al* gives further evidence that early intervention with non-dependent heavy drinkers is effective in changing drinking behaviour. Patient selection by opportunistic screening and the simplicity of the intervention make this study particularly attractive for primary care. The mean level of consumption would hardly raise eyebrows in normal practice and might result in a brief mention of recommended limits, which is basically what the control group received. The study shows that a structured approach, focused on the individual patient and his or her drinking patterns, is much more effective.

The study presents a robust attempt at calculating a financial cost benefit analysis for the health intervention. The use of "opportunity cost" is germane to the real world of medicine, where questions revolve around the allocation of limited resources. The conclusion that resource allocation to primary prevention produces major overall resource savings, particularly in secondary care, will be of great relevance to total healthcare purchasers or such providers as primary care trusts. The benefits are not restricted to the healthcare system. Accidents, injuries, and crime all decreased after the intervention, although some of the variables failed to reach statistical significance when taken individually. This intervention does not just save hospitals money—it improves the patients' lives and makes society a safer place.

Some questions arise from a lack of detail. We do not know the take up rate of the intervention or the number of patients lost to follow up. Whether intervention group patients visited their primary care physicians less—an obvious benefit to those physicians delivering the intervention—is not indicated. Some breakdown of the benefits by level of consumption would be useful. Is there any benefit in targeting the group drinking just over "safe" limits? The healthcare use figures also suggest that the benefit may not be sustained at the 12 month follow up point. It would be interesting to know whether the effects of the intervention continue or whether further "top up" intervention is required.

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