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 randomized 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 to 65 years of age (62% men) and drank > 14 alcoholic drinks/wk (> 168 g alcohol/wk) (> 11 drinks/wk for women [> 132 g alcohol/wk]). Exclusion criteria were pregnancy, attendance at an alcohol treatment program or symptoms of alcohol withdrawal in the previous year, physician advice to change alcohol use in the previous 3 months, consumption of > 50 drinks/wk (> 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 behaviors 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 health care 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 health care use, legal events, and motor vehicle accidents.

MAIN RESULTS

Patients who received the brief physician intervention had greater reductions in alcohol use than did patients in the control group. Intervention-group patients reported fewer days of hospitalization than did 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 U.S. $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 health care system. The net benefit per patient was U.S. $947.

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COMMENTARY

The study by Fleming and colleagues gives further evidence that early intervention with nondependent heavy drinkers is effective in changing drinking behavior. 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 health care purchasers or such providers as Primary Care Trusts. The benefits are not restricted to the health care 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 health care 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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