IMPLEMENTATION AND DISSEMINATION OF METHODS FOR PREVENTION OF ALCOHOL PROBLEMS IN PRIMARY HEALTH CARE: A FEASIBILITY STUDY

SVEN ANDRÉASSON*, KERSTIN HJALMARSSON and CHARLOTTA REHNMAN

Karolinska Institutet, Department of Public Health Sciences, Stockholm North Center for Addiction, The STAD project, Hantverkargatan 8, 112 21 Stockholm, Sweden

(Received 17 March 1999; accepted in revised form 18 May 2000)

Abstract — Secondary prevention of alcohol problems in health care has been proved efficacious in many studies, yet its implementation remains scarce, and its effectiveness in regular health care remains unknown. This article reports results from a feasibility study of dissemination of alcohol prevention methods in primary health care in Stockholm. Initial interviews with general practitioners (GPs) and district health nurses indicated that few raised the issue of alcohol with patients, made notes about alcohol in patient charts or found working with alcohol issues rewarding. The impact of a training session, where a project nurse visited all willing GPs and nurses, was limited. Although the uptake of the prevention package was high, follow-up at 3 months indicated that little use was made of the materials. Specifically, screening rates were low. In the future, secondary prevention of alcohol problems will require better adaptation to the realities of primary care.

INTRODUCTION

There is considerable scientific support for secondary prevention of alcohol problems in health care. Secondary prevention means intervening at a stage where hazardous drinking has not yet led to problems. A large body of research indicates that, if a physician raises the subject of alcohol and spends 5–10 min advising high consumers to cut down, these drinkers will, on average, reduce their consumption by 20–30% (reviewed by advising high consumers to cut down, these drinkers will, on average, reduce their consumption by 20–30% (reviewed by Bien et al., 1993; Freemantle et al., 1993; Babor et al., 1994; Kahan et al., 1995; Wilk et al., 1997). Kristenson furthermore has demonstrated that secondary prevention also will result in a significant reduction in morbidity, health care utilization and mortality (Kristenson et al., 1983); results largely replicated by Israel (1996).

Secondary prevention of alcohol problems thus has been proved efficacious. Given the impressive research evidence that has accumulated, it is striking how rarely it occurs in regular health care. To our knowledge, it has not become regular practice anywhere in Sweden, although many doctors and nurses actually do much alcohol-related work. This is, however, usually directed towards more seriously afflicted problem drinkers.

In a report from an implementation trial in Northwest Stockholm, Arborelius et al. (1997) found that few doctors and nurses used the prevention methods taught at a 1-day course. At a 6-month follow-up, 45 patients had been identified as problem drinkers by 22 doctors and 13 nurses. Most of these patients were serious abusers, not high consumers which was the intended target group for the course. Suggested reasons for this outcome were the difficulties of identifying high consumers and the reluctance on the part of doctors and nurses to broach the subject of alcohol. Reports from Britain indicate a similar state of affairs. A recent national survey of GPs in the UK found that GPs ‘… were not sure whether they should respond to excessive drinkers, did not know how to respond, and felt unsupported when they did attempt to respond.’ (Heather, 1996). In a review article, Deehan et al. (1998a) summarize a substantial literature that points to the reluctance of GPs to work with alcohol problems. A study from Canada found that general practitioners were reticent to ask sensitive alcohol-related questions, because they were concerned about offending their patients (Rush et al., 1995).

A number of population surveys (Sobell et al., 1996; Grant, 1997) of alcohol drinking and problems have indicated that a majority of problem drinkers (i.e. fulfilling criteria for alcohol dependence or abuse) have not sought treatment. To what extent non-dependent high consumers discuss their drinking with health care practitioners has not been similarly investigated in population surveys. This would be a measure of the impact of secondary prevention on the societal level. The potential of secondary prevention in this regard was demonstrated in a study from Ontario, where Israel et al. (1996) succeeded in screening 89% of all primary care patients in the age group 30–60 years. In this project, 62–85% of the estimated number of high consumers in the population were identified. A large proportion of those identified accepted referral to a nurse for brief counselling, resulting in a substantial reduction in alcohol consumption, as well as health care utilization, as indicated by a 34% reduction in physician visits.

Prior to the commencement of the present study, an anonymous questionnaire survey, with a response rate of 80%, was conducted among all 150 general practitioners in the western and central health care regions of Stockholm county council (Andréasson et al., 1994). Questions were asked about the frequency and extent of advice concerning alcohol and other life style issues, utilization of validated screening instruments and reasons which might prevent GPs from involving themselves in alcohol prevention. The GPs in general reported high frequencies of lifestyle discussions. Few acknowledged barriers to alcohol prevention, such as time constraints (10.5% of GPs indicated this to be a barrier); uncertainty about how to detect high alcohol consumption (12.3%); uncertainty about how to discuss alcohol habits (15.8%); concerns about damaging doctor–patient rapport (3.5%); lack of supervision for more complicated cases (16.7%). However, 49.1% chose...
the alternative ‘No, I see no barriers’, though few indicated that they employed screening for alcohol problems through questionnaires or laboratory tests, hence the rationale for this dissemination trial, where a strong emphasis was placed on encouraging the use of a validated screening questionnaire. The trial is a replication of an Australian trial (Saunders, 1995), where the intervention was focused on the use of the AUDIT questionnaire (Saunders et al., 1993), with very brief advice provided by the GP when appropriate. This trial resulted in a 30% reduction in hazardous drinking.

As yet, there have been few reports from trials where attempts have been made to integrate secondary prevention in regular practice among unselected groups of practitioners, e.g. in a whole health care region. Generally, such attempts have not been successful (Clement, 1986; Valente et al., 1986; Holmila, 1997). This could be due to several factors, such as lack of interest in prevention among practitioners, deficiencies in the prevention methods themselves or ineffective marketing strategies.

This underlines the need for more dissemination research in the field of alcohol prevention. Dissemination research is neglected and underfunded in many countries. In the USA, prevention research received only 0.32% of the health care budget and dissemination research received <10% of the prevention research budget (Farquhar, 1996). This could be due to several factors, such as lack of interest in prevention among practitioners, deficiencies in the prevention methods themselves or ineffective marketing strategies.

In order to engage general practitioners and district health nurses in prevention work, telemarketing was used, as this was believed to be the most cost-effective approach (Gomel et al., 1998). A research assistant telephoned all GPs and nurses in the central Stockholm health care region (53 GPs and 55 district health nurses), enquired about their interest in participating in an alcohol prevention trial and whether she could book an appointment for the project nurse to visit them. This telephone contact was also used to gather baseline data on current prevention practices.

**Phase 2: training**

The project nurse, a nurse specially trained for this trial, visited doctors and nurses in their practices. The visits, which on average took 30 min for the doctors and 45 min for the nurses, included a brief outline of methods for secondary prevention and a demonstration of materials useful for this purpose. During these sessions perceived barriers to implementation of alcohol prevention were addressed, such as beliefs of practitioners, attitudes and lack of time. The materials included the AUDIT questionnaire (Saunders et al., 1993), a manual for practitioners (developed in collaboration with GPs in the area) and a patient booklet on drinking guidelines. The 30-page manual provided guidelines for discussing high alcohol consumption, how to raise the subject, brief negotiating skills to facilitate behaviour change and also management of patients with alcohol dependence. This approach was chosen following consultations with primary care representatives on the steering committee for the STAD project. The alternative, inviting doctors and nurses to seminars or workshops, had been attempted previously, resulting in low rates of attendance (<25% of GPs and nurses attended at least one of three half-day seminars).

**Data collection**

Several doctors and nurses in the area expressed frustration with high work loads and inability to participate in a large number of proposed projects. This made it necessary to design a very simple procedure for evaluation. Questionnaires generally were considered too time-consuming. Instead, baseline data were collected by the research assistant while making the appointment for the nurse’s visit. During the telephone contact, a brief interview was conducted, which included questions on attitudes to and current practices regarding alcohol prevention. The purpose here was to study the extent to which alcohol and other lifestyle questions and counselling were incorporated into normal everyday routines. Doctors and nurses therefore were asked to assess what proportion of patients they...
discussed alcohol and other lifestyle issues with, and how often they made notes of this in their charts. For follow-up, a short questionnaire (five items) was considered acceptable to the practitioners. This was mailed out 3 months after the visit by the project nurse. Two main questions were addressed: perceived usefulness of the materials and level of use.

RESULTS

Current prevention practices

Baseline interviews. Thirty-seven out of 53 GPs (response rate 70%) and 45 out of 55 district health nurses (82%) agreed to participate in a brief telephone interview. However, 34 GPs (92%), and only 19 nurses (42%), felt they were able to give advice about alcohol and its effects, which is a measure of perceived role adequacy. As for role legitimacy, 34 GPs (92%) and 30 nurses (67%), felt that their patients thought that they had the right to ask questions about alcohol.

More doctors than nurses raised the issue of alcohol with patients, made notes about alcohol in patients’ charts and found working with alcohol issues rewarding (Table 1). More nurses than doctors discussed general lifestyle issues. The numbers were generally low, however. Questions about alcohol were particularly infrequent, only six of 37 GPs discussed alcohol habits with >50% of their patients, whereas none of the nurses did so.

Dissemination study

Physicians. Out of 53 GPs, 39 (73%) accepted a visit from the project nurse and received the prevention material. The follow-up questionnaire 3 months later was returned by 29 of these (74%). Most doctors indicated little or no value of the manual, patient booklet and AUDIT questionnaire (Table 2). They were somewhat more positive to the visit by the project nurse (Table 2). The material was not utilized frequently. Among the 29 respondents, a total of 33 AUDIT questionnaires had been administered, and a total of 57 patient booklets had been distributed. At the follow-up, all physicians felt they were able to advise patients about alcohol and the effects of alcohol.

District health nurses. Out of 55 nurses, 45 (82%) accepted a visit from the project nurse. The follow-up questionnaire three months later was returned by 28 of these (62%). Several items were left unanswered, the non-response rate to different

<table>
<thead>
<tr>
<th>Parameter</th>
<th>GPs (n = 37)</th>
<th>District health nurses (n = 44)</th>
</tr>
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<tbody>
<tr>
<td>Discussed general lifestyle issues with &gt;50% of patients</td>
<td>13 (35)</td>
<td>23 (51)</td>
</tr>
<tr>
<td>Discussed alcohol habits with &gt;50% of patients</td>
<td>6 (16)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Made notes concerning alcohol in patient charts of &gt;50% of patients</td>
<td>14 (38)</td>
<td>5 (11)</td>
</tr>
<tr>
<td>Found work with alcohol issues rewarding</td>
<td>15 (41)</td>
<td>15 (33)</td>
</tr>
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Table 1. Lifestyle and alcohol counselling by general practitioners (GPs) and district health nurses. Responses to interview questions

items varied between 21% and 50%. Overall, nurses were in agreement with doctors in assigning little value to the material, but found the visit by the project nurse somewhat more valuable (Table 3). Nurses used the material even more infrequently than the doctors. Among the 28 respondents, a total of eight AUDIT questionnaires had been administered, and a total of 18 patient booklets had been distributed. The proportion of nurses who felt they could advise patients about alcohol remained low. Among the 18 nurses who responded to this question, 10 (56%) indicated that they felt able to advise patients, compared with 19 out of 45 at the baseline interview (42%).

Table 2. Assessments of value of training package by general practitioners. Results from follow-up at 3 months

<table>
<thead>
<tr>
<th>Parameter</th>
<th>No. (%) responding from a total of 29</th>
</tr>
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<tbody>
<tr>
<td>Value of manual</td>
<td>16 (55) 11 (38) 1 (3) 1 (3)</td>
</tr>
<tr>
<td>Value of patient booklet</td>
<td>17 (59) 6 (21) 3 (10) 3 (10)</td>
</tr>
<tr>
<td>Value of AUDIT questionnaire</td>
<td>16 (55) 7 (24) 0 (0) 6 (21)</td>
</tr>
<tr>
<td>Value of visit from nurse</td>
<td>14 (48) 13 (45) 1 (3) 1 (3)</td>
</tr>
</tbody>
</table>

DISCUSSION

Generalizability

There are widespread hopes and expectations that primary care could play a key role in alcohol prevention. This is based on results from a large number of research trials. In reality, primary care in Stockholm, as indeed in many parts of Sweden, has great difficulties in living up to these expectations. In part this might be explained by organizational changes; primary care in Sweden has been reorganized repeatedly during the 1990s. At the same time, large cost reductions have been made in the health system, leading to considerably larger work loads in primary care. Extrapolating from research trials, which are often characterized by high internal validity, in the real world of everyday clinical practice therefore illustrates the problem of external validity or generalizability. Furthermore, doctors and nurses in this study expressed frustration with frequent demands from administrators, politicians and hospital specialists that they should participate in various projects. These considerations led to several limitations for this project, in terms of both intervention and evaluation. Thus, there was little time to attend courses, but a 30–45 min visit from the
project nurse was acceptable. Evaluation had to be limited to very brief instruments. Even so, non-response was a problem: 74% of GPs and only 62% of the nurses taking part in the intervention returned the 5-item follow-up questionnaire.

Current work with alcohol in primary care

The picture that emerges in this study through questionnaires and interviews is that alcohol prevention is not given high priority among doctors and nurses in primary care. Very few employed systematic screening procedures for alcohol problems. In most cases, notes about alcohol habits were not made in patient charts.

In the baseline interview almost all the doctors, but less than half of the nurses, felt that they were able to give advice about alcohol. It is important, however, that the high level of perceived competence among GPs is not correlated to a high frequency of raising the issue of alcohol with patients. Attitudes to work with alcohol were more negative among nurses than among doctors, even though a majority in both groups felt that their patients did not object to their asking questions about alcohol. Nurses, while reporting a higher frequency of general lifestyle discussions, rarely made notes about alcohol habits in patient charts.

The training programme

The form for dissemination of prevention methods chosen in this trial, telemarketing, proved to be effective in so far that a relatively high proportion of doctors and nurses could be reached, 74% of the GPs and 90% of the nurses. This is considerably more than the attendance at courses arranged previously. The delivery cost for telemarketing and subsequent training by the project nurse was calculated to be considerably lower than for arranging central courses, taking time cost of attendance and travel into account. These results are in agreement with the findings of an Australian study on different marketing strategies for brief intervention techniques (Gomel et al., 1998). Tele-marketing was found to be the most cost-effective approach to achieve a high uptake of materials.

The effects of this training programme in terms of implementation of prevention methods appear, however, limited. Doctors and nurses attached little value to the material distributed. This was also demonstrated by the low level of utilization of both patient booklet and AUDIT questionnaire. Specifically, the idea of screening was not supported. Doctors and nurses seem to accept working with alcoholic patients as their responsibility, but are not prepared to raise the issue of alcohol in the absence of clinical signs of alcoholism. Yet all successful research trials have used screening in some form, whether this be questionnaires, laboratory tests or systematic interviews. These results are also in agreement with the study of Gomel et al. (1998) where the level of implementation (screening rates) varied with the level of support from the project workers. In our trial, doctors and nurses received no additional support following the initial visit by the project nurse.

Results from this study do not support the view that nurses by and large are more supportive of prevention work than doctors. The results also suggest that nurses need more training and motivational efforts than doctors. A survey of practice nurses in England and Wales in 1995 found that nurses identified few patients with alcohol problems. Although very little intervention work was undertaken with those identified, the authors emphasized the important potential of practice nurses for alcohol prevention (Deehan et al., 1998b).

The lack of clear effects in this trial should be viewed against a number of limitations in its planning and execution. Thus, the project was not well anchored among participating doctors and nurses. Although it was planned together with leading representatives of the primary care organization, many practitioners viewed the project as initiated and run by external specialists and not really addressing their own concerns.

There were also a number of practical limitations. Most GP practices in this area did not have receptionists who could assist with distributing and collecting screening materials. Using waiting room time for questionnaires was not considered feasible, as most patients were not prepared to spend time in waiting rooms. Furthermore, in this study, GPs felt that they were already proficient in alcohol counselling. More important perhaps was a lack of expressed expectations and support from the management level in this trial.

Components of effective prevention

This work represents an attempt to study the feasibility of one strategy for dissemination of alcohol prevention in primary health care. The study involved the dissemination of a package of prevention methods in an entire health care region, among unselected groups of doctors and nurses, without providing extra resources. Overall, the strategy chosen appears ineffective. This could either be due to ineffective marketing of the prevention package, or that practitioners found the contents of the package unattractive. Since the form of dissemination chosen resulted in a reasonably high uptake of materials, with 73% of physicians and 82% of district health nurses receiving the project nurse and accepting the materials, but in a low rate of screening, it seems reasonable to assume that the content of the prevention package was unattractive. The components of alcohol prevention, and the principles on which these rest, therefore need to be examined and alternatives discussed. We would like to offer the following themes for this discussion.

Screening. The concept of screening seemed to be one of the hardest to accept among practitioners in this trial. The same finding has been reported from several trials. A large study of alcohol screening practices in North Carolina found that a large majority of physicians preferred routine clinical methods over structured screening questionnaires, such as the CAGE questionnaire (Townes and Harkey, 1994). In view of these sceptical attitudes, different screening methods need to be evaluated. In the Ontario study cited earlier (Israel et al., 1996), four trauma questions were used in the first stage of screening for alcohol problems, which was found effective. Another possible approach is to use the computerized lifestyle assessment (CLA, developed by Skinner (1993). Here, patients are invited to examine their lifestyles and how this relates to health, with the aid of an interactive computer programme. Alcohol is one of several lifestyle areas. It seems necessary to develop screening methods that are both non-obtrusive and time-efficient.

Motivational interviewing. Practitioners often find the alcohol issue difficult, because many of their patients become defensive or resistant when questioned about alcohol. This
might, to some extent, depend on interviewing style. Motivational interviewing is a patient-centred method employing a set of sound counselling strategies, such as open questions and reflective listening and where the advice from the practitioner is matched to the readiness of change of the patient, thereby reducing resistance (Miller and Rollnick, 1991). The method is attractive to practitioners, because it is generalizable to a wide array of behavioural problems. In reality, the issue of screening and motivational interviewing are strongly interconnected. Reluctance to screen for alcohol problems is related to uncertainty about how to proceed when problems are detected.

*Treatment.* For some practitioners, lack of proficiency in the treatment of more severe alcohol problems is a reason for not engaging in prevention activities. While some patients with alcohol dependence require specialist services, the majority of problem drinkers have moderate levels of dependence, are socially and mentally stable and are well suited for primary care management. Furthermore, many primary care physicians prefer not to refer problem drinkers to specialized services (Rush et al., 1995). To facilitate this, brief, structured treatment protocols need to be developed for primary care. An example is Sobells’ *Guided Self Change* model (Sobell and Sobell, 1993), a protocol which has been translated into Swedish, but needs to be adapted for primary care purposes.

*Policy.* Effective prevention also needs to include a policy component. The issue of alcohol prevention should be raised both with health care providers and with the professional organizations involved. From the perspective of the health care provider, alcohol prevention is a medical procedure with considerable scientific support for efficacy and potential for reducing morbidity and health care costs. In a cost-effectiveness analysis, Lindholm (1998) concluded that the crucial point is the number of people who make durable changes in their drinking. If ~1% of patients who have received counselling make lasting changes, a brief intervention is relatively cost-effective (cost of 20,000 ECU per year of life saved) and, if ~10% change, resources will be saved in health care. Providers therefore should require alcohol prevention, and also support its implementation (Lindholm, 1998).

*Attitudes.* Perhaps the most important component in a more effective strategy for secondary prevention involves attitudes among practitioners. The reasons for the present lack of interest need to be further explored and if possible counteracted. Some of these reasons, we believe, are addressed by the points above. If non-obtrusive and time-efficient screening methods can be developed, counselling methods applied that reduce resistance from patients, brief treatment methods for dependent patients learned, and policy developed on the health care provider level that supports alcohol prevention, it seems reasonable that this would facilitate the adoption of secondary prevention among primary care practitioners.

**REFERENCES**


