

# A randomized trial of three marketing strategies to disseminate a screening and brief alcohol intervention programme to general practitioners

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## SUMMARY

**Background.** Research findings are of little benefit to patients or society if they do not reach the audience they are intended to influence. A dissemination strategy is needed to target new findings at its user group and encourage a process of consideration and adoption or rejection.

**Aim.** To evaluate the effectiveness and cost-effectiveness of different marketing strategies for the dissemination of a screening and brief alcohol intervention (SBI) programme to general practitioners (GPs).

**Method.** Seven hundred and twenty-nine GPs, one per practice, from the former Northern and Yorkshire Regional Health Authority were randomly assigned to one of three marketing strategies: postal marketing (mailing a promotional brochure to GPs), telemarketing (following a script to market the programme over the telephone), and personal marketing (following the same script during face-to-face marketing at GPs' practices). GPs who took up the programme were asked if they would agree to use it. Outcome measures included the proportions of GPs who took up the programme and agreement to use it.

**Results.** Of the 614 GPs eligible for the study, 321 (52%) took the programme. There was a significant difference in the proportions of GPs from the three marketing strategies who took the programme (82% telemarketing, 68% personal marketing, and 22% postal marketing). Of the 315 GPs who took the programme and were eligible to use it, 128 (41%) agreed to use the programme for three months. GPs in the postal marketing group were more likely to agree to use the programme (55% postal marketing, 44% personal marketing, and 34% telemarketing). Personal marketing was the most effective overall dissemination strategy; however, economic analysis revealed that telemarketing was the most cost-effective strategy. Costs for dissemination per GP were: £13 telemarketing, £15 postal marketing, and £88 personal marketing.

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**Conclusion.** Telemarketing appeared to be the most cost-effective strategy for dissemination of SBI to GPs.

**Keywords:** dissemination; marketing; brief alcohol intervention; economic evaluation.

## Introduction

Health research findings are of little benefit to patients, or to society, if they do not reach the audience they are intended to influence – usually practitioners. Dissemination is the process of sending out information or making it widely available to others in the scientific and/or larger community. Dissemination is a complex and dynamic process whereby individuals become aware of new information, have the opportunity to assess its value, and then decide to either accept or reject it.<sup>1</sup> If adoption is chosen, then the process of implementation can begin in which new information is incorporated into practice either via individual or organizational behaviour change.

Screening and brief alcohol intervention (SBI) involves routine screening of the general practice population to identify 'at risk' drinkers and the subsequent delivery of brief structured advice on reducing excessive consumption. There is a strong evidence base for SBI by GPs; randomized controlled trials over 10 years have demonstrated that excessive drinkers receiving SBI reduce their consumption by approximately 25% compared with controls receiving assessment only.<sup>2-5</sup> However, uptake of SBI by GPs has been negligible.<sup>6</sup> Consequently, there is a need to investigate effective and cost-effective methods of conveying research findings to those who can act on them.

In a market economy, where supply continues to exceed demand, commerce and industry have been quick to adopt the concept of marketing to ensure their goods are sold. Despite extensive use in the commercial world, most health professionals have been slow to use marketing techniques to promote health products. Of the few published marketing studies available, postal marketing of health intervention programmes appears to be relatively ineffective.<sup>7,8</sup> However, while personal marketing appears to be more effective,<sup>9,10</sup> it may not be a cost-effective method.<sup>11</sup>

The aim of this randomized trial was to investigate the most effective and cost-effective of three marketing strategies to encourage uptake and consideration of an SBI programme by GPs in the UK. This study was the first part of the UK arm of Phase III (Strand 3) of the World Health Organization (WHO) Collaborative Study on Disseminating and Implementing Brief Alcohol Intervention in Primary Health Care. The WHO study is the first trial in health research to evaluate the use of telemarketing to disseminate research findings.<sup>12</sup> An economic evaluation was carried out from the perspective of health authorities that may wish to disseminate SBI in general practice in the future. A companion paper investigates the process of encouraging implementation of SBI by GPs who have made the decision to adopt this approach<sup>13</sup>.

## Method

### Sample

The sampling frame consisted of 1236 general practices comprising 3816 GPs in the former Northern and Yorkshire Regional Health Authority. Seven hundred and twenty-nine general practices were randomly sampled using a computer programme, and one GP from each practice was selected using a random number table. GPs were randomly allocated to one of three marketing strategies in a ratio of approximately 2:1:1 (320 postal marketing, 213 telemarketing, and 196 personal marketing). Sample sizes and allocation ratios were based on the results of an earlier Australian arm of the study and checked in a pilot study. The marketing was carried out in three waves by two trained research associates with social sciences backgrounds between February and December 1996. Only those GPs who were randomly sampled into the study were eligible for participation. Thus, if another GP from the practice requested the programme, they were sent specimen materials but were not included in the study because they may have been disproportionately motivated towards health promotion or alcohol intervention work.

### SBI programme

The SBI programme used in this study was called 'Drink-Less', and was developed by and tested with GPs in Australia.<sup>14</sup>

### Marketing strategies

Each marketing strategy provided standardized information including endorsements, incentives, benefits of the programme, and possible barriers. Both research associates were fully conversant with the scripts but were also trained to anticipate and address any problems, barriers, or reservations expressed by the GP.

**Postal marketing.** GPs were mailed a promotional brochure (with reply slip) that described the programme in written and pictorial form and offered GPs free materials. GPs agreed to take the programme either by returning the reply slip or by telephoning the study centre.

**Telemarketing.** GPs were telephoned at their practice and the marketing script was used to promote the programme. Up to 10 attempts were made to speak to the GP. GPs agreed to take the programme verbally during the telephone conversation.

**Personal marketing.** GPs were telephoned to make an appointment but the specific reason for the visit was not explained. Researchers used the rehearsed marketing script to promote the programme and sample materials were shown. Up to 10 attempts were made to arrange an appointment. GPs agreed to take the programme verbally during the visit.

Once GPs had agreed to take the programme they were asked if they would try to run it in their practice for a three-month period. This allowed us to establish which GPs had considered the programme with a view to usage rather than agreeing to take it merely as a way of ending the marketing process.

### Outcome measures

**Uptake rate.** The number of contactable GPs who took the programme was expressed as a percentage of those GPs from the original random sample who were offered the programme. Uncontactable GPs were sampled practitioners who had died, moved practice, or retired.

**Consideration rate.** The number of GPs who agreed to use the programme was expressed as a percentage of those GPs who

were eligible to use the programme. Ineligible GPs were those who worked less than two sessions per week, were retiring, going on maternity leave, or about to take a prolonged break from general practice.

**Overall dissemination rate.** The number of GPs who considered and agreed to use the programme were expressed as a percentage of those GPs from the original random sample who were offered the programme.

### Economic evaluation

Costs associated with programme development, production, and marketing were recorded at all stages of the study to permit economic evaluation of the three strategies. Cost-effectiveness analysis was carried out using overall dissemination rate as the common outcome measure of effectiveness.

### Ethical approval

The project received ethics committee approval from the lead ethics committee for the Northern part of the region and the 10 ethics committees covering the seven health districts in the Yorkshire part of the region. GPs in the study were not consulted prior to random allocation into marketing conditions.

### Statistical analysis

Data were entered onto SPSS for Windows,<sup>15</sup> and differences in proportions among treatment groups for programme uptake, consideration, and overall dissemination rates were assessed using chi-squared tests ( $df = 2$ ).

## Results

Of the 729 GPs randomly sampled into the study, 59 practitioners in the telemarketing and personal marketing groups were uncontactable because they had died, moved practice, or retired. It was not possible to obtain directly the equivalent figure for postal marketing. However, an average proportion of uncontactable GPs (15%) was calculated from the other two marketing groups and applied to the postal marketing group. This proportion of uncontactable GPs represented the inaccuracy inherent in the sampling frame (district health authority records) and is similar to other reports.<sup>15</sup> It was not possible to establish how many GPs actually received the promotional brochure through the mail, but we assumed that all GPs working in practice who were posted the brochure received it. A further eight practices from the postal marketing group had to be excluded from the study because partners of the sampled practitioners responded instead of the practitioners themselves (presumably because of a personal interest in health promotion or alcohol-related issues).

Of 614 GPs who were eligible for marketing, 321 (52%) took the programme. Table 1 shows the uptake, consideration, and overall dissemination rates in the three marketing groups. There was a significant difference between the proportions of GPs from the three marketing groups who took the brief intervention programme ( $\chi^2 = 181.4$ ;  $df = 2$ ;  $P < 0.0001$ ). A lower proportion of GPs in the postal marketing group (22%;  $n = 57$ ) took the programme than GPs in the telemarketing (82%;  $n = 153$ ) or personal marketing groups (68%;  $n = 111$ ).

Of the 315 GPs eligible to use the programme in their practice, 128 (41%) agreed to use the programme for a three-month period. There was a significant difference between proportions of GPs from the three marketing groups who agreed to use the programme ( $\chi^2 = 7.9$ ;  $df = 2$ ;  $P < 0.01$ ). GPs in the postal marketing group were most likely to agree to use the programme (55%;  $n = 29$ ) followed by GPs in the personal marketing condition (44%;  $n$

= 48), and GPs in the telemarketing condition (34%;  $n = 51$ ).

There was also a significant difference between proportions of GPs from the three marketing groups in overall dissemination rate ( $\chi^2 = 27.5$ ;  $df = 2$ ;  $P < 0.0001$ ). Overall dissemination was less effective in the postal marketing group (11%;  $n = 29$ ) compared with the telemarketing group (27%;  $n = 51$ ) and the personal marketing group (29%;  $n = 48$ ).

### Economic evaluation

Costs for the development and production of the 'Drink-Less' programme for the UK study totalled £6743.78. This cost was common across all three marketing strategies and was therefore excluded from the economic analysis. The total cost for marketing the programme to GPs was £6328.14. The breakdown of the costs for the three marketing strategies is shown in Table 2. Overall, telemarketing appeared to be the most cost-effective dissemination strategy.

### Discussion

This study has shown that, although personal marketing was the most effective marketing strategy to persuade UK GPs to take up and consider using a brief alcohol intervention programme, the high travel and labour costs associated with this strategy resulted in telemarketing being a much more cost-effective option. Cost

per GP for dissemination of the programme was almost seven times cheaper in the telemarketing group compared with the personal marketing group.

This finding is consistent with previous studies showing that personal marketing is significantly more effective but more costly than postal marketing of health intervention programmes in primary health care.<sup>7-11</sup> We have also demonstrated that, in the UK, telemarketing is almost as effective as personal marketing but more cost-effective than either postal or personal marketing. However, while telemarketing was more cost-effective than the other strategies for overall programme dissemination, it was postal marketing that was the most successful method of persuading GPs to agree to use the programme, perhaps because those who responded by mail were more motivated to do so. The relative value placed on the most cost-effective strategy can therefore be debated depending on the importance the decision-maker attributes to variables such as budget constraints and perceived value of extra benefits.

Some caution is needed in generalizing the results of this study, particularly when a different intervention or subject matter is used, or when strategies are implemented in other countries. First, uptake and agreement to use an intervention will depend on the interest of the GP in the subject matter and the complexity of the intervention that is being disseminated. Secondly, the costs of

**Table 1.** Uptake, consideration, and dissemination rates in the three marketing strategies.

	Postal marketing	Telemarketing	Personal marketing	Total
Random sample	320	213	196	729
Uncontactable GPs	48 (15%) <sup>a</sup>	26 (12%)	33 (17%)	107 (15%)
Excluded GPs	8 (2%)	0 (0%)	0 (0%)	8 (1%)
Eligible uptake sample	264	187	163	614
Uptake rate	57 (22%)	153 (82%)	111 (68%)	321 (52%)
Ineligible to use GPs	4 (7%)	1 (1%)	1 (1%)	6 (2%)
Eligible to use sample	53	152	110	315
Consideration rate	29 (55%)	51 (34%)	48 (44%)	128 (41%)
Overall dissemination rate	29 (11%)	51 (27%)	48 (29%)	128 (21%)

<sup>a</sup>Estimated value.

**Table 2.** Total costs in the three marketing strategies.

Costed item	Postal marketing ( $n = 320$ )	Telemarketing ( $n = 213$ )	Personal marketing ( $n = 196$ )
Promotional brochures	£124.80	—	—
Staff time to organize mail shot @ £5.00 per hour	£75.00	—	—
Postage of promotional brochures	£61.80	—	—
Non-utilization programmes posted to GPs	£170.81	£448.58	£62.76
Non-utilization programmes handed to GPs @ £3.81	—	—	£233.02
Postage of non-utilization programmes	£39.25	£92.10	£12.00
Staff time to prepare mailing @ £5 per hour	£21.67	£53.75	£2.50
Phone calls @ £0.05 per minute	£18.55	£66.35	£52.30
Staff time calling @ £5.00 per hour	£30.91	£110.58	£87.17
Mileage (up to 80 miles) @ £0.36 per mile	—	—	£2344.32
Mileage (over 80 miles) @ £0.18 per mile	—	—	£792.00
Travel time by staff @ £5.00 per hour	—	—	£1086.75
Contact and waiting time by staff @ £5.00 per hour	—	—	£341.17
Total marketing cost	£542.79	£771.36	£5013.99
Cost of marketing per GP	£1.70	£3.62	£25.58
Overall dissemination rate (effectiveness)	11%	27%	29%
Cost-effectiveness of dissemination (per GP)	£15.42	£13.41	£88.21

Cost-effectiveness =  $\frac{\text{costs of marketing}}{\text{effectiveness of dissemination strategy}}$

strategies are likely to vary considerably depending on the country in which they are applied, owing to the different costs associated with labour, transport, postage, and material production.

Effective dissemination is an essential part of the process of getting research findings out into the community that can then benefit from them. Previous reliance on passive diffusion of information to keep health professionals' knowledge and skills up to date has failed,<sup>17</sup> and more active dissemination strategies need to be explored. It took over 20 years for screening for hypertension, cervical cancer, and breast malignancy to be translated into routine clinical practice.<sup>18</sup> Given the resource constraints that exist in the field of healthcare, consideration of the cost-effectiveness of dissemination strategies should also be a priority.

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