

# Attitudes to cardiovascular health promotion among GPs and practice nurses

Andrew Steptoe, Sheelagh Doherty, Tony Kendrick,<sup>a</sup>  
Elizabeth Rink<sup>a</sup> and Sean Hilton<sup>a</sup>

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**Background.** Cardiovascular health promotion is an important element of national health strategy, but doubts have been raised about current methods, and attitudes among general practice staff are ambivalent.

**Objectives.** We aimed to assess attitudes to cardiovascular health promotion, opinions about efficacy and perceptions of skills in lifestyle counselling in GPs and nurses from the same practices.

**Method.** A questionnaire survey of 107 GPs and 58 practice nurses from 19 group practices (100% response rate).

**Results.** Practice nurses were seen to have the main responsibility for cardiovascular health promotion. Although attitudes to health promotion were generally positive, lack of training in lifestyle counselling was perceived to be a problem. Few responders believed that they were very influential in helping people change their lifestyles. Beliefs about the effectiveness of lifestyle counselling were mixed, with cigarette smoking, physical inactivity and obesity being seen as difficult to change. Beliefs in the effectiveness of lifestyle counselling were associated with positive attitudes towards health promotion and greater confidence in training. No association between personal health behaviour and attitudes towards health promotion were observed.

**Conclusions.** It is recognized that health promotion involves more than the provision of simple information and advice, but GPs and practice nurses lack confidence in lifestyle counselling skills. The attitudes of health professionals are crucial to the implementation of prevention strategies and require regular review.

**Keywords.** Attitudes, cardiovascular disease, general practice, health promotion.

## Introduction

Cardiovascular disease prevention is a major element of the UK health strategy outlined in the *Health of the Nation*.<sup>1</sup> Cardiovascular health promotion activities in general practice were encouraged between 1993 and 1996 by payments through a three-band system. General practices in Band 3 were expected to collect information on smoking and body mass index, to monitor diet, alcohol and physical activity, and to offer lifestyle advice and other appropriate interventions.<sup>2</sup> Cardiovascular health promotion activities are continuing in a revised system that came into place in October 1996.<sup>3</sup> Surveys in

the United Kingdom and elsewhere have shown that GPs are positive about cardiovascular health promotion in principle, while having reservations about their personal involvement.<sup>4–6</sup> GPs and practice nurses appear to have limited confidence in their training and ability to stimulate changes in smoking behaviour, diet and physical activity.<sup>7–10</sup> The results of the OXCHECK<sup>11</sup> and the Family Heart<sup>12</sup> studies of cardiovascular screening and counselling programmes were generally perceived as disappointing, and have led to scepticism about the value of health promotion in primary care and doubts about cost-effectiveness.<sup>13–15</sup> Prevention has been portrayed in some quarters as a new morality being forcibly imposed on the medical profession and the unsuspecting public.<sup>16,17</sup>

This study was designed to assess attitudes towards cardiovascular health promotion in primary care in the light of contractual obligations for health promotion, and the controversy surrounding the preventive approach.

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Department of Psychology and <sup>a</sup>Department of General Practice and Primary Care, St George's Hospital Medical School, London SW17 0RE, UK.

TABLE 1 Responsibilities for health promotion: percentages and 95% confidence intervals for GPs and practice nurses (PNs)

	Group	Agree	Neutral	Disagree	Difference between groups
Practice nurses are the most appropriate to carry out health promotion	GP	59.0 (49.6, 68.5)	40.0 (30.6, 49.4)	1.0 (0.01, 5.2)	n.s.
	PN	64.3 (50.4, 76.6)	33.9 (21.8, 47.8)	1.8 (0.04, 9.6)	
My job is not only to treat disease, but act as health educator	GP	70.2 (61.4, 79.0)	25.0 (16.7, 33.3)	4.8 (1.6, 10.9)	$P < 0.025$
	PN	87.5 (78.8, 96.2)	10.7 (2.6, 18.8)	1.8 (0.04, 9.6)	
My job is to treat disease and leave health promotion to others	GP	11.4 (5.3, 17.5)	29.5 (20.8, 38.2)	59.0 (49.6, 68.5)	$P < 0.0001$
	PN	0	10.7 (4.0, 21.9)	89.3 (78.1, 96.0)	
I have no time to spend on preventive medicine	GP	12.5 (6.1, 18.7)	57.7 (47.7, 66.6)	29.8 (20.8, 38.2)	$P < 0.0001$
	PN	1.8 (0.04, 9.6)	35.7 (23.7, 48.3)	62.5 (49.8, 75.2)	

Since responsibility for prevention has been devolved to practice nurses in many primary care settings, we thought it important to compare the views of GPs and nurses using the same measures. Responsibility for health promotion, perception of skills in lifestyle counselling for behaviour change and opinion about the efficacy of lifestyle change for reducing cardiovascular disease risk were investigated as being attitudes central to the implementation of preventive practice.<sup>18</sup> We predicted that practice nurses would display more favourable attitudes to cardiovascular prevention than would GPs. Another factor that has been shown in previous work to affect attitudes to prevention is the health professional's own lifestyle.<sup>19–22</sup> We therefore tested the hypothesis that attitudes would be affected by the diets, smoking and exercise habits of doctors and nurses themselves.

## Method

### Sample

The study questionnaire was sent to 107 GPs and 58 practice nurses from 19 group practices in December 1994, and the response rate was 100%. The practices had agreed to recruit patients into a randomized controlled trial of behavioural counselling for cardiovascular disease prevention, but the survey was completed prior to randomization. All practices were engaged in Band 3 health promotion activities. List sizes varied from 5500 to 20 000, and the mean Jarman Index was  $5.2 \pm 10.5$ , with a range from  $-14.6$  to  $+21.3$ .

### Questionnaire

The questionnaire consisted of a series of attitudinal statements, each of which was rated on a 7-point scale from 'strongly agree' to 'strongly disagree'. For convenience in presenting the results, responses were collapsed into three categories: 'agree' (ratings of 1 or 2), 'neutral' (3–5) and 'disagree' (6 and 7). The items were based on a measure used in surveys of GPs in Australia,<sup>22</sup> and addressed four issues: who had primary responsibility

for health promotion, how confident doctors and nurses were in their own lifestyle counselling skills, the perceived efficacy of counselling for cardiovascular risk modification and the importance of cardiovascular risk factor modification. Details of the individual questions are given in Tables 1–4. In addition to attitude ratings, participants' own smoking habits, leisure-time physical activity over the past 2 weeks, height and body weight, and diet and cholesterol were assessed.

Data were analysed using the chi-square test and unpaired *t*-tests. Results are presented as percentages because missing data mean that the denominator for individual items varied.

## Results

In total, 56.4% of GPs worked in fundholding practices, as did 69.0% of the nurses. The average age of GPs was 37.6 (SD 7.4) years, significantly lower than that of practice nurses (42.3, SD 9.9,  $P < 0.001$ ). All the nurses in the study and 54.3% of the GPs were women. The majority of doctors (78.3%) were principals, with others being general practice registrars and clinical assistants. The doctors worked an average of 7.97 (SD 2.03) sessions per week, while the practice nurses worked for 27.0 (SD 8.1) hours per week.

### Responsibility for health promotion

The majority of GPs and practice nurses endorsed the statement that practice nurses are the most appropriate people to carry out health promotion (see Table 1). Indeed, only one doctor and one nurse disagreed. In line with this view, significantly more practice nurses than doctors agreed that their job was to act as a health educator as well as to treat disease, while fewer nurses endorsed the view that their job was to treat disease and to leave health promotion to others. A majority of practice nurses disagreed with the statement that they had no time to spend on preventive medicine, in contrast with only 29.8% of GPs.

TABLE 2 Perceptions of skills at lifestyle counselling: percentages and 95% confidence intervals for GPs and practice nurses (PN)

	Group	Agree	Neutral	Disagree	Difference between groups
I feel properly trained to give lifestyle counselling advice	GP	48.6 (39.0, 58.1)	41.0 (31.5, 50.4)	10.5 (4.6, 16.3)	n.s.
	PN	48.2 (35.1, 61.3)	42.9 (29.9, 55.8)	8.9 (3.0, 19.6)	
It is not very difficult to counsel patients about an alternative lifestyle	GP	21.9 (14.0, 29.8)	53.5 (43.8, 62.9)	24.8 (16.5, 33.0)	n.s.
	PN	14.5 (5.2, 23.9)	60.0 (47.1, 72.9)	25.5 (13.9, 37.0)	
Health professionals are very influential in persuading patients to change their lifestyles	GP	24.0 (15.8, 32.3)	62.5 (53.2, 71.8)	13.5 (6.9, 20.0)	n.s.
	PN	33.9 (21.5, 46.3)	62.5 (49.8, 75.2)	3.6 (0.04, 12.3)	
I can offer my patients a great deal in the way of lifestyle counselling	GP	17.3 (10.0, 24.6)	75.0 (66.7, 83.3)	7.7 (2.6, 12.8)	$P < 0.0001$
	PN	50.0 (36.9, 63.1)	50.0 (36.9, 63.1)		

TABLE 3 Efficacy of lifestyle counselling: percentages and 95% confidence intervals for GPs and practice nurses (PN)

	Group	Agree	Neutral	Disagree	Difference between groups
Lifestyle counselling is very effective	GP	20.0 (12.3, 27.7)	70.5 (61.8, 79.2)	9.5 (3.9, 15.1)	$P < 0.0001$
	PN	53.6 (40.5, 66.6)	42.9 (29.9, 55.8)	3.6 (0.04, 12.3)	
It is possible to persuade patients to modify their lifestyles to reduce:					
Hypertension	GP	50.0 (40.4, 59.6)	47.1 (37.5, 56.7)	2.9 (0.06, 8.2)	n.s.
	PN	62.5 (49.8, 75.2)	35.7 (23.2, 48.3)	1.8 (0.04, 9.6)	
High cholesterol	GP	44.2 (34.7, 53.8)	52.9 (43.4, 62.5)	2.9 (0.06, 8.2)	n.s.
	PN	58.9 (46.0, 71.8)	41.1 (28.2, 54.0)		
Cigarette smoking	GP	34.6 (25.5, 43.8)	56.7 (47.2, 66.3)	8.7 (3.3, 14.1)	n.s.
	PN	23.2 (12.2, 34.3)	67.9 (55.6, 80.1)	8.9 (3.0, 19.6)	
Obesity	GP	25.0 (16.7, 33.3)	62.5 (53.2, 71.8)	12.5 (6.1, 18.9)	n.s.
	PN	32.1 (19.9, 44.4)	64.3 (51.7, 76.8)	3.6 (0.04, 12.3)	
Physical inactivity	GP	24.0 (15.8, 32.3)	64.4 (55.2, 73.6)	11.5 (5.4, 17.7)	n.s.
	PN	34.5 (22.0, 47.1)	61.8 (49.0, 74.7)	3.6 (0.04, 12.5)	

### Perception of lifestyle counselling skills

Just under half of doctors and nurses felt that they were properly trained in lifestyle counselling (see Table 2). However, a minority felt that they were very influential in persuading patients to change or that counselling patients about changes in lifestyle was easy. Significantly fewer GPs than practice nurses perceived themselves as being able to offer patients a good deal in terms of lifestyle counselling.

### Efficacy of lifestyle counselling

Practice nurses were more likely than GPs to consider that lifestyle counselling was efficacious, with the majority of nurses agreeing that it was very effective for reducing cardiovascular risk factors (see Table 3). Nevertheless, when responders were asked about the specific goals of counselling for cardiovascular disease, there were no differences between the two groups. Both GPs and practice nurses were most likely to believe that lifestyle counselling was effective for the management of hypertension and high cholesterol. Significantly

fewer endorsed the efficacy of counselling for obesity, physical activity and (for nurses) cigarette smoking.

An index of attitudes towards the effectiveness of lifestyle modification was computed by summarizing scores across the five risk factors listed in Table 3, with disagreement = 0, neutral = 1 and agree = 2. This resulted in an index with a maximum of 10 (agreement that all five risks can be reduced through lifestyle modification) and a minimum of 0 (belief that none can be reduced through lifestyle modification), and good internal consistency (Cronbach = 0.83). The overall average was 6.57 (SD 2.2), and did not vary significantly by professional group. Scores were higher among those who concurred with the statement that health professionals are influential in persuading people to change lifestyles ( $P < 0.002$ ), and were lower among responders who stated that they had no time to spend on preventive medicine (mean 4.43, SD 1.5) compared with those who were neutral or disagreed with this statement (means 6.51, SD 2.3, and 7.09, SD 2.0 respectively,  $P < 0.001$ ). Health professionals who felt that they were properly

TABLE 4 Identification of cardiovascular risk factors: percentages and 95% confidence intervals for GPs and practice nurses (PN)

	Group	Agree	Neutral	Disagree	Difference between groups
Identification of the following risk factors is a very important part of my day-to-day work:					
Hypertension	GP	81.0 (73.4, 88.5)	18.1 (10.7, 25.5)	1.0 (0.01, 5.2)	n.s.
	PN	82.1 (72.1, 92.2)	17.9 (7.8, 27.9)		
High cholesterol	GP	29.5 (20.8, 38.2)	63.8 (54.6, 73.0)	6.7 (1.9, 11.4)	$P < 0.001$
	PN	56.4 (43.2, 68.4)	43.6 (29.9, 55.8)		
Cigarette smoking	GP	89.5 (83.7, 95.4)	9.5 (3.9, 15.1)	1.0 (0.01, 5.2)	n.s.
	PN	80.4 (70.0, 90.8)	19.6 (9.2, 30.0)		
Obesity	GP	42.9 (33.4, 52.3)	54.3 (44.8, 63.8)	2.9 (0.6, 8.1)	$P < 0.001$
	PN	74.5 (61.6, 84.8)	25.5 (13.7, 26.3)		
Physical inactivity	GP	29.8 (20.8, 38.2)	66.3 (57.3, 75.4)	3.8 (1.0, 9.5)	$P < 0.001$
	PN	66.1 (53.7, 78.5)	33.9 (21.5, 46.3)		

trained in lifestyle counselling had significantly higher ratings on the index of attitudes towards effectiveness than did others (means 6.96, SD 2.1, 6.26, SD 2.2, and 5.94, SD 2.4, respectively,  $P < 0.05$ ). Thus belief in the effectiveness of lifestyle counselling for cardiovascular risk factors was associated with more general positive attitudes towards health promotion and greater confidence in counselling skills.

#### Cardiovascular risk factor identification

Results concerning the involvement of GPs and practice nurses in the identification of cardiovascular risk factors are summarized in Table 4. A substantial majority of both groups considered that the identification of hypertension and smoking were important elements of their work. Fewer than half of GPs regarded the detection of high cholesterol, obesity or physical activity to be part of their day-to-day work. In all three cases, significantly more nurses than doctors considered that their work included detection of these risk factors.

GPs who felt that identification of hypertension and high cholesterol were important parts of their work were also more likely than others to consider lifestyle modification as effective for these conditions ( $P < 0.01$ ). Similarly, practice nurses who included the detection of obesity, high cholesterol and physical inactivity in their daily work also had more favourable attitudes to the effects of lifestyle counselling for these problems ( $P < 0.05$ ). There was no significant association in either professional group between the identification of smoking and confidence that smoking could be modified.

#### Associations with personal health behaviour

The number of current smokers among GPs (5.7%) and practice nurses (7.0%) was low, although significantly more nurses than doctors had smoked in the past (52.0 versus 26.7%,  $P < 0.005$ ). Personal smoking habits were not significantly associated with attitudes towards health

promotion or beliefs in the effectiveness of lifestyle counselling. A large proportion of responders (59.8% of GPs and 42.6% of practice nurses) had never had their blood cholesterol measured. Their personal experience was unrelated to attitudes towards health promotion generally, or the likelihood that they included detection of high cholesterol within their day-to-day work. Participants rated their diets as high, medium, low or very low in fat. Significantly more doctors than nurses rated their diets as high or moderate in fat (59.2 versus 36.4%,  $P < 0.01$ ). However, attitudes to health promotion and lifestyle counselling were not associated with personal dietary habits.

The proportion of responders with a body mass index (BMI) greater than 25 was 25.3%, and did not differ by gender or across professional groups. There were no differences in attitudes towards the effectiveness of lifestyle counselling for modifying obesity or physical activity related to the BMIs of doctors or nurses. Similarly, personal exercise habits were uncorrelated with attitudes to health promotion generally, and to lifestyle counselling for modification of physical activity in particular. In total, 59% of GPs and 37.5% of practice nurses reported at least one episode of vigorous physical activity (e.g. jogging, bicycling) over the past 2 weeks, while more nurses (55.4%) than doctors (29.2%) had engaged in moderate activities such as walking or gardening ( $P < 0.005$ ). Overall, therefore, no association between personal health behaviours and attitudes to cardiovascular health promotion emerged in this study.

## Discussion

This study involved a relatively small sample of GPs and nurses compared with recent postal surveys. However, the small numbers are offset by the response rate of 100%. Other surveys have reported response rates

of 49–71%.<sup>5,8,10</sup> Our study did not set out to assess a representative sample of GPs and practice nurses. It is likely that participants had a more favourable attitude to health promotion than primary health professionals in general, in that they were sufficiently interested to become involved in systematic investigations. On the other hand, surveys with lower response rates are also subject to response bias, with those health professionals with an interest in health promotion being more likely to take the trouble to complete research questionnaires on this topic.

GPs and practice nurses agreed that health promotion was the prime responsibility of nurses, although doctors also felt that at least part of their role was to act as health educators. This demarcation of roles has been observed in other recent studies, and has been reinforced by the reforms in general practice health promotion activities in the UK over the past decade.<sup>8</sup> This trend is likely to be accentuated further by developments arising from the 1996 White Papers on Primary Care.<sup>24,25</sup> Practice-based contracts and pilot proposals for the provision of personal medical services offer opportunities for health educators to take responsibility for health promotion within practices.

It has been recognized increasingly in general practice in recent years that health promotion involves more than the simple provision of information and advice. Although ours was a sample of GPs and practice nurses with a more than average interest in coronary risk prevention, fewer than half the sample perceived themselves as being properly trained in lifestyle counselling. This is consistent with studies of attitudes to the promotion of physical activity<sup>9</sup> and smoking cessation<sup>10</sup> that have highlighted a lack of confidence in counselling skills. The majority of this sample also felt that lifestyle counselling was difficult, and that the influence of health professionals on their patients was limited. Poor patient adherence with lifestyle counselling is widely cited by health professionals as a central limitation to health promotion.<sup>4,5</sup>

The lack of confidence in the effectiveness of cardiovascular risk counselling may be a legitimate reflection of the current state of knowledge and techniques. However, the fact that confidence was stronger among health professionals who felt that they were properly trained in behavioural counselling suggests that negative attitudes may reflect a lack of familiarity with effective counselling methods. Health professionals who felt that they had no time for health promotion tended to have a more sceptical view of lifestyle counselling than did others. For most of the risk factors, it was evident that favourable attitudes to detection were associated with beliefs that they could usefully be modified. This was not the case for smoking: both GPs and practice nurses stated that detection was part of their work, but beliefs in the effectiveness of lifestyle counselling were low. Doctors and nurses who included screening for smoking in their

daily work were no more likely than others to believe that counselling was effective.

Interestingly, we found no important associations between personal health behaviour, attitudes to health promotion or activities in cardiovascular risk prevention in this study. This contrasts with other studies of health professionals, in which attitudes to smoking cessation have been found to be less positive among doctors and nurses who smoke,<sup>21</sup> and the likelihood of counselling about physical activity was lower among unfit than physically fit doctors.<sup>22</sup> The reasons for this discrepancy with previous studies are not clear. Many changes in health-related lifestyle permeate through populations by means of social diffusion, beginning in privileged and influential groups. One possibility is that personal behaviours are likely to be more significant in healthcare systems where prevention activities depend to a great extent on personal enthusiasm and conviction. In the present day National Health Service, cardiovascular health promotion may be driven more by financial considerations and contractual obligations than personal conviction, so the lifestyles of health professionals may be less relevant.

It is likely that approaches to cardiovascular disease prevention in primary care will be much more varied in the next few years. It will be important to identify which styles of health promotion offer the best chances of success, and which health professionals are the most appropriate to be responsible for them.

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