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Physicians' attitudes towards prevention: importance of intervention-specific barriers and physicians' health habits

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Background. Several studies have explored physicians' attitudes towards prevention and barriers to the delivery of preventive health interventions. However, the relative importance of these previously identified barriers, both in general terms and in the context of a number of specific preventive interventions, has not been identified. Certain barriers may only pertain to a subset of preventive interventions.

Objectives. We aimed to determine the relative importance of identified barriers to preventive interventions and to explore the association between physicians' characteristics and their attitudes towards prevention.

Methods. We conducted a cross-sectional survey of 496 of the 686 (72.3% response rate) generalist physicians from three Swiss cantons through a questionnaire asking physicians to rate the general importance of eight preventive health strategies and the relative importance of seven commonly cited barriers in relation to each specific preventive health strategy.

Results. The proportion of physicians rating each preventive intervention as being important varied from 76% for colorectal cancer screening to 100% for blood pressure control. Lack of time and lack of patient interest were generally considered to be important barriers by 41% and 44% of physicians, respectively, but the importance of these two barriers tended to be specifically higher for counselling-based interventions. Lack of training was most notably a barrier to counselling about alcohol and nutrition. Four characteristics of physicians predicted negative attitudes toward alcohol and smoking counselling: consumption of more than three alcoholic drinks per day [odds ratio (OR) = 8.4], sedentary lifestyle (OR = 3.4), lack of national certification (OR = 2.2) and lack of awareness of their own blood pressure (OR = 2.0).

Conclusions. The relative importance of specific barriers varies across preventive interventions. This points to a need for tailored practice interventions targeting the specific barriers that impede a given preventive service. The negative influence of physicians' own health behaviours indicates a need for associated population-based interventions that reduce the prevalence of high-risk behaviours in the population as a whole.

Keywords. Attitudes, barriers, counselling, prevention, survey.

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Introduction

A number of studies[1–6] have explored physicians' attitudes towards prevention and barriers to the delivery of preventive health interventions. Collectively, these studies have identified a number of factors (e.g. lack of time, inadequate reimbursement and lack of training) that hinder the wide delivery of preventive care. Other studies have suggested that certain characteristics of

physicians, such as their age, gender, specialization, licensing status and attitudes, can influence the likelihood of them delivering good preventive care.[7–11] Some studies have suggested that physicians' own health habits may be predictors of the extent to which they address preventive health issues.[7,8,12]

As part of a series of activities at the University of Lausanne (Institute of Social and Preventive Medicine) targeting preventive healthcare issues in French-speaking Switzerland, we conducted a postal survey of physicians in three Swiss cantons. To expand upon the information compiled in earlier published studies,[2–6] we sought to determine the relative importance of previously identified barriers, both in general terms and in the context of a number of specific preventive interventions. The justification for examining the importance of barriers for specific interventions is that certain barriers may only pertain to a subset of preventive interventions. As a secondary objective, we also sought to explore the association between characteristics of physicians—demographic characteristics, professional characteristics and personal health habits—and their attitudes towards preventive health care.

Methods

Survey questionnaire

A 36 item self-administered questionnaire was developed through a process of focus group sessions (involving interns, sociologists and preventive health officers) and pilot testing. The questionnaire determined physicians' sociodemographic (age, gender) and professional characteristics [specialization, time in clinical practice, certification by the Swiss Medical Association or Federation Medicorum Helveticorum (FMH)]. The questionnaire also asked physicians about their personal habits relating to alcohol, smoking and exercise, and whether they were aware of their blood pressure or cholesterol level.

The questionnaire contained a question on the general importance (rated on four-point scales) of eight preventive strategies: (i) screening and counselling for alcohol abuse; (ii) counselling on giving up smoking; (iii) nutritional counselling; (iv) counselling about human immunodeficiency virus (HIV) infection; (v) blood pressure control; (vi) evaluation of cholesterol level; (vii) colorectal cancer screening; and (viii) breast cancer screening. Seven general 'attitude statements' were then presented, and physicians were asked how much they agreed or disagreed with each of these (on four-point scales). The specific content of these statements will become apparent in our presentation of results (Table 3).

Finally, and perhaps most importantly, the questionnaire asked physicians to rate the importance (again on four-point scales) of seven potential barriers to prevention. This was done generally (i.e. what is the general importance of each barrier?) and specifically for each of eight preventive interventions. For this assessment, the preventive interventions evaluated were screening/counselling on alcohol, smoking, nutrition, exercise and HIV, colorectal cancer screening, blood pressure control and evaluation of cholesterol levels. The seven specific barriers assessed were selected based on their identified importance in earlier studies of barriers to prevention and included: (i) lack of time for prevention; (ii) lack of training in aspects of prevention; (iii) lack of evidence for benefit from the various interventions; (iv) lack of patient interest; (v) intrusion of patient privacy; (vi) absence of clear clinical practice guidelines; and (vii) insufficient financial compensation for time spent implementing preventive strategies.

Study population

The study population consisted of all 686 generalist physicians in three French-speaking cantons of Switzerland (Vaud, Jura and the French-speaking part of the Valais). This study population was identified from records maintained by each canton. The study population included physicians with and without FMH certification, a designation that indicates the successful completion of a supervised research project and at least 5 years of post-graduate medical training. The population of generalists included both family physicians (some of whom were FMH-certified) and general interns (all of whom were FMH-certified).

The questionnaire was sent to all physicians by mail, and two reminders were sent to all physicians 2 and 3 months after the first mailing.

Analysis

Simple descriptive statistics were used to describe how physicians collectively responded to individual questions. chi-square tests and logistic regression were used to compare the characteristics of physicians with negative attitudes towards prevention with those of physicians with more positive attitudes.

Results

Characteristics of physicians

Of the 686 physicians who were contacted, 496 (72.3%) completed and returned the questionnaire. The characteristics of these 496 physicians are presented in Table 1. The majority of respondents were male. The mean ± SD age and number of years in practice were 48 ± 9 and 21 ± 9 years, respectively. Fourteen per cent of physicians reported consuming two or more drinks per day, 20% reported current smoking and 21% reported a sedentary lifestyle. Most physicians were aware of their blood pressure and cholesterol level.

TABLE 1 *Characteristics of the 496 physicians surveyed*

Characteristic	
Male (%)	86
Canton of practice (%)	
Vaud	76
Valais	19
Jura	5
Age in years, mean (± SD)	48 (± 9)
Number of years in practice, mean (± SD)	21 (± 9)
Physician type (%)	
Family physician without FMH[a] certification	35
Family physician with FMH certification	26
General intern with FMH certification	39
Alcohol consumption (%)	
None	3
Occasional (⩽1 drink per day)	83
Regular (⩾2 drinks per day)	14
Smoking status (%)	
Non-smoker	62
Ex-smoker	18
Current smoker	20
Frequency of exercise[b] (%)	
Less than once per month	21
One to three times per month	22
More than three times per month	57
Knowledge of their own blood pressure (%)	97
Knowledge of their own cholesterol level (%)	86

[a] Federation Medicorum Helveticorum.
[b] Exercise is defined as participation in activities such as jogging or tennis for at least 20 minutes.

Physicians' attitudes towards prevention

Most physicians acknowledged the general importance of preventive health strategies (Table 2). The proportion of physicians rating each of the individual preventive strategies as being important or somewhat important varied from 79% for colorectal cancer screening to 100% for blood pressure control. The eight interventions presented in Table 2 are ranked in order of importance according to physicians' responses.

Table 3 shows the extent to which the physicians agreed with various attitudinal statements. All physicians acknowledged that prevention was one of their responsibilities as a physician. Most (96%) indicated strong motivation to implement prevention in their daily practices. About three-quarters of physicians thought that patients judged their performance based on how they approach prevention, and a similar proportion agreed that patients may expect their physicians to be role models in their own health habits. Responses to questions regarding other attitudinal issues are summarized in Table 3.

Physicians' perceptions of barriers to prevention

Table 4 presents data regarding physicians' perceptions of the importance of various potential barriers to the implementation of prevention in general (first column) and to the implementation of eight specific preventive interventions (subsequent columns). We draw attention to some interesting patterns in these results: When reading across rows of the table, it is clear that, generally speaking, lack of patient interest and lack of time are the barriers that are most often considered important by physicians. Not surprisingly, these two barriers are most important in counselling-based strategies (i.e. the first six data columns in the Table). Interestingly, however, the relative importance of individual barriers is not

TABLE 2 *Physicians' opinions about the importance of various preventive health interventions (interventions are ranked in order of importance based on the proportion of physicians considering an intervention to be important or somewhat important)*

Intervention	Is this intervention important?[a] (percentage responding)[b]			
	Very much so	Yes, slightly	Not much	No
Blood pressure control	93	7	1	0
Evaluation of cholesterol level	75	22	2	1
Counselling on smoking cessation	73	24	2	1
Nutritional counselling	50	43	7	0
Screening for alcohol abuse	58	32	7	3
Counselling on HIV prevention	48	40	10	1
Breast cancer screening	45	40	9	5
Colon cancer screening	33	46	16	4

[a] The French language response options were 'oui', 'plutôt oui', 'plutôt non' and 'non'.
[b] Percentages in a row will not necessarily always add up to 100% because of rounding, and because 'no opinion' was also available as a response option. (However, this option was chosen by <1% of respondents for any given question.)

TABLE 3 *Physicians' attitudes on various issues relating to the implementation of preventive health strategies in their medical practices*

Attitudinal statement	Agree[a] (%)	Disagree[b] (%)	No opinion (%)
Your patients consider prevention to be part of your usual activities	86	10	4
Patients expect their physicians to be role models in their own personal health habits (e.g. non-smokers)	74	14	12
Patients judge your performance not only on how you treat disease but also on how you approach prevention	76	17	7
You are motivated to implement preventive health interventions in your daily practice	96	4	0
You consider prevention to be one of your responsibilities as a physician	100	0	0
In general, you find it easy to incorporate preventive health interventions into your daily medical practice	84	16	0
Current postgraduate training provides you with the skills to be proficient in prevention and health education	74	24	2
You incorporate preventive health recommendations into your own life	90	10	0

[a] Physicians who agreed with a statement responded 'oui' or 'plutôt oui' on the French language questionnaire. Physicians who disagree responded 'non' or 'plutôt non'.

TABLE 4 *Physicians' opinions of the importance of specific barriers to each of eight preventive interventions*

Barrier	Percentage of physicians rating each barrier as important[a]								
	Generally	Alcohol	Smoking	Nutrition	HIV	Exercise	Colorectal	Hypertension	Cholesterol
Lack of patient interest	44	77	53	42	16	53	40	36	30
Lack of time	41	53	34	55	28	32	21	20	22
Insufficient compensation	36	34	29	35	23	28	18	19	20
Lack of evidence for benefit	28	58	38	46	10	28	34	25	24
Absence of clear practice guidelines	24	29	15	32	9	20	39	13	10
Intrusion into patient's privacy	19	43	15	13	40	8	22	5	5
Lack of training	16	35	16	51	21	20	19	10	8

[a] Barriers were considered 'important' if physicians responded 'oui' or 'plutôt oui' to the French language questions that asked if a specific factor was a barrier to implementing a given preventive intervention.

uniform for all preventive interventions. For example, lack of patient interest was very often considered important for alcohol screening and counselling (77% of physicians), but only occasionally considered important for HIV counselling (16%). Similarly, the importance of lack of time as a barrier is not uniform across preventive interventions.

Of the eight preventive interventions presented in Table 4, alcohol and nutrition counselling have the highest proportions of 'important' ratings across the various barriers assessed. This suggests that, in the practices of these physicians, these two counselling-based preventive interventions are particularly difficult to implement.

Predictors of negative physicians' attitudes towards prevention

Fifty-eight physicians (12% of the respondents) assigned low importance to screening and counselling for alcohol abuse or smoking. A logistic regression analysis (Table 5) identified four physician characteristics that are associated with the physicians holding negative views on alcohol and smoking counselling: consumption of more

TABLE 5 *Physicians' characteristics that are significantly[a] associated with providing low importance ratings to screening and counselling on alcohol abuse or to counselling on giving up smoking (*n = *58, 12%)*

Variable	Odds ratio	95% confidence intervals
Heavy alcohol intake (>3 drinks/day) versus abstinence	8.4	1.1–63.9
Exercise less than once/month versus more than three times/month	3.4	1.1–11.1
Absence of FMH[b] certification	2.2	1.2–4.0
Unaware of own blood pressure and/or cholesterol level	2.0	1.0–3.9

[a] The other variables considered in this logistic regression analysis—age, gender and smoking status of the physicians—were not significantly associated with negative attitudes towards prevention of alcohol and smoking-related disease.
[b] Federation Medicorum Helveticorum.

than three alcoholic drinks per day (odds ratio = 8.4), sedentary lifestyle (odds ratio = 3.4), lack of FMH certification (odds ratio = 2.2) and lack of awareness of their own blood pressure (odds ratio = 2.0). Physician age (>50 years), gender and smoking status were not significant predictors of negative physician attitudes towards prevention.

A second logistic regression analysis that only included physician responses to attitude questions as independent variables demonstrated that physicians who consider that "there is lack of evidence to support the use of preventive interventions" and that "there is lack of interest in prevention" were far more likely to hold 'negative' attitudes toward alcohol or smoking prevention (odds ratios of 1.9 and 2.7, respectively, for these two attitudes).

Discussion

Our study reveals a population of physicians in French-speaking Switzerland who acknowledge the general importance of preventive health care and who indicate motivation to implement preventive health interventions in their daily practices. Despite these positive opinions, the physicians point to many of the barriers identified in earlier studies.[2–6] In particular, these physicians most frequently identify lack of time and a perceived lack of interest among patients as important barriers to prevention, particularly when the intervention in question involves counselling, rather than the simple ordering of a diagnostic test (e.g. a blood test to measure cholesterol level). Notably, the importance of individual barriers was not uniform across the eight preventive interventions presented in Table 4. The results also show that physicians' characteristics and their personal health habits predict their attitudes towards prevention.

Our study adds to earlier work by addressing the importance of various barriers for a number of specific health interventions (Table 4), rather than just globally. Such an assessment is important, because the nature of the various interventions varies considerably, both in their impact on patients and in the time and energy required from physicians for their delivery. So, while lack of time and perception of lack of interest among patients were most frequently rated as important barriers by these physicians in the global rating of importance (first column of Table 4), their importance varied across interventions.

Practice-based or system interventions to improve uptake of specific preventive services will be most likely to succeed if they target the barriers that are most important for that service.[13] To explain this point further, we will use smoking cessation counselling as an example: We see in Table 4 that physicians point to lack of time, perceived lack of patient interest and lack of evidence for benefit as the most important barriers to this intervention. A targeted intervention to increase counselling about giving up smoking could then perhaps (i) address the time factor by educating physicians in the use of brief counselling strategies that could be administered over a series of visits; (ii) teach physicians to assess patients' readiness for change objectively, using for example the framework of Prochaska and Goldstein;[14] and (iii) teach physicians regarding the evidence for modest but important benefit from even limited counselling on giving up smoking.[15]

Similarly, we see from Table 4 that physicians report lack of training to be a particularly important barrier to counselling in the areas of alcohol and nutrition. This indicates a need among Swiss physicians for improved formal training, particularly in these two areas. To act on this identified need for training, we can consider drawing from the successful work of others[16,17] in educating physicians in these counselling domains.

As in other studies,[7–12] we find that physicians' characteristics predict negative attitudes of physicians towards preventive counselling. In our multivariate analysis, four characteristics of physicians were significant predictors of negative attitudes; two of these relate to lifestyle (alcohol intake and exercise) and one is a measure of physicians' general level of awareness regarding their own health. Perhaps not surprisingly, it is physicians who

are inattentive to their own health who are also inattentive to preventive healthcare issues for their patients.

From a public health perspective, this latter finding leaves us somewhat pessimistic about the ability of isolated health system and practice-based interventions to improve the delivery of preventive services. In this regard, the important distinction made by Geoffrey Rose[18,19] between 'sick patients' and 'sick populations' suggests that we need to intervene not only in the health-care system at the level of individual physician practices (as has been done somewhat successfully in many instances[16,17,20–22]), but also at a population level to reduce smoking and alcohol abuse. The physicians in this particular study are themselves members of a population—French-speaking Swiss—in which population-based interventions may be needed. Indeed, the rather high rates of current smoking and moderate to heavy alcohol intake among these physicians suggest a need for reducing these risk factors in the Swiss population as a whole. Unless such a shift occurs, there will always be reasonable numbers of physicians with personal lifestyle characteristics that predict negative attitudes towards prevention. A discussion of how to intervene at a population level is beyond the scope of this paper, although the general objective of such interventions is to alter societal norms through a combination of strategies such as legislation, public education and the provision of safer alternatives to high risk behaviours.

To summarize, our survey of 496 Swiss physicians has improved our understanding of the relative importance of various barriers to the implementation of preventive health services. The importance of individual barriers varies across interventions, a finding that points to a need for tailored interventions targeting the specific barriers that impede a given preventive service. The potential negative influence of physicians' own health behaviours reminds us that physicians are themselves members of 'sick populations' for which population-based strategies are needed to reduce the prevalence of high risk behaviours.

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