Peer reviewed article

Patient and physician acceptance of a campaign approach to promoting physical activity: the "Move for Health" project

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Summary

Questions under study: Physical inactivity increases the risk of many chronic disorders. There is clear evidence that primary care-based interventions to promote physical activity may be effective under controlled research conditions. Yet little is known how this evidence translates into routine primary care practice.

The pilot project "Move for Health" tested recruitment of family physicians for a primary prevention project and evaluated the feasibility of systematic assessment and discussion of patients' physical activity taking daily practice routine into account.

Method: Patients aged 16–65 years completed a screening questionnaire during 8 two-week campaigns in 2004–5. Physicians evaluated and discussed questionnaire responses and offered a physical activity information leaflet and/or a voucher for a special physical activity counselling session to all inactive patients. Participating practices were interviewed to assess their experience of the project.

Results: 40 primary care physicians were motivated to participate. Recruitment was most effective through personal contacts of the project team's colleagues. 67% of the patients completed the screening questionnaire and 92% of these questionnaires were discussed during consultation. 83% of patients accepted the leaflet or the voucher, but only a minority of patients attended the special counselling session. With increasing age and readiness for behavioural change patients were more likely to attend the counselling session.

Conclusions: A campaign approach consisting of systematic screening and brief counselling of insufficiently active patients in general practice is feasible. Participating practices considered the amount of work associated with the project to be manageable and 1–3 counselling campaigns per year to be feasible if the project runs for several years.

Key words: physical activity; counselling; primary care; stages of change

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Introduction

Physical inactivity increases the risk of many chronic disorders. Numerous studies have convincingly demonstrated that undertaking and maintaining moderate levels of physical activity such as 30 minutes' brisk walking a day greatly reduces the incidence of many chronic health conditions, most notably type 2 diabetes mellitus, obesity, cardiovascular disease, osteoporosis and some types of cancer and depression [1, 2]. Despite evidence of the benefits of physical activity the results of the 2002 Swiss Health Survey indicate that 64% of the Swiss adult population do not achieve recommended levels of physical activity, requiring a minimum of 30 minutes' moderate physical activity on at least five days a week or at least three times 20 minutes' vigorous activity per week [3, 4].

Physicians could play a substantial role in effecting change in the activity habits of their patients, with 61% of Swiss adults reporting at least one family physician contact each year [5, 6]. Family physicians usually have a long-lasting relationship with their patients, and patients accept and appreciate information and advice from their physician on lifestyle-related behaviour [7–9]. A growing literature supports the efficacy of physical activity promotion in the primary care setting [10–12], although there is some disagreement as to the quality of the evidence, particularly for long

term follow-up [13–17]. Studies testing interventions for primary prevention (no explicit patient selection based on disease) and for secondary prevention (patients with existing disease) have both been shown to achieve significant effects on patients' physical activity levels [10]. In Switzerland a randomised controlled trial including five medical practices in Zürich and a recent feasibility study including two general practitioners have successfully tested the effect of physical activity counselling in a primary care setting [8, 18]. These efficacy trials provide clear evidence that primary care-based interventions can be effective under controlled research conditions or with a small number of highly motivated physicians. But little is known as to how this research evidence translates into the routine practice of primary care [11].

In contrast to previous randomised controlled trials involving a small number of highly motivated physicians and patients, the present project ("Move for Health"–"Gesund bewegt für die Umwelt") aimed to develop a campaign approach to promotion of physical activity suitable for the real-world situation of busy practices. The project has been initiated by a group of primary care physicians in urban and rural areas of the northwestern region of Switzerland who intended to motivate inactive patients to integrate physical activity into their daily life routine by, for example, replacing motorised transportation and thus increase human-powered mobility. The project team aimed to recruit at least 25 colleagues to participate in this primary prevention project for a period of one year.

This paper describes the recruitment strategies, implementation of the project in medical practices and patient participation; it presents the results of interviews conducted with all the physicians involved and their practice assistants concerning their experience of the project.

Methods

Project organisation and recruitment

During 8 predefined two-week campaigns (April 2004 to June 2005) patients' physical activity levels were assessed via a patient-completed screening questionnaire distributed before consultation to all patients aged 16–65 years with sufficient knowledge of German visiting the practice (figure 1). The age-range was limited to the economically active population and was chosen so as not to interfere with a related project focusing on patients aged 65 and over. [19]. Physicians evaluated the physical activity level of each patient and discussed it during the consultation. During the first week of each screening campaign all insufficiently active patients without a medical reason for physical inactivity were offered a leaflet with ideas and tips on how to increase physical activity. The leaflet was based on the brochure of "Action d" [20]. During the second week of each campaign, inactive patients were additionally offered a voucher for two 30-min coun-

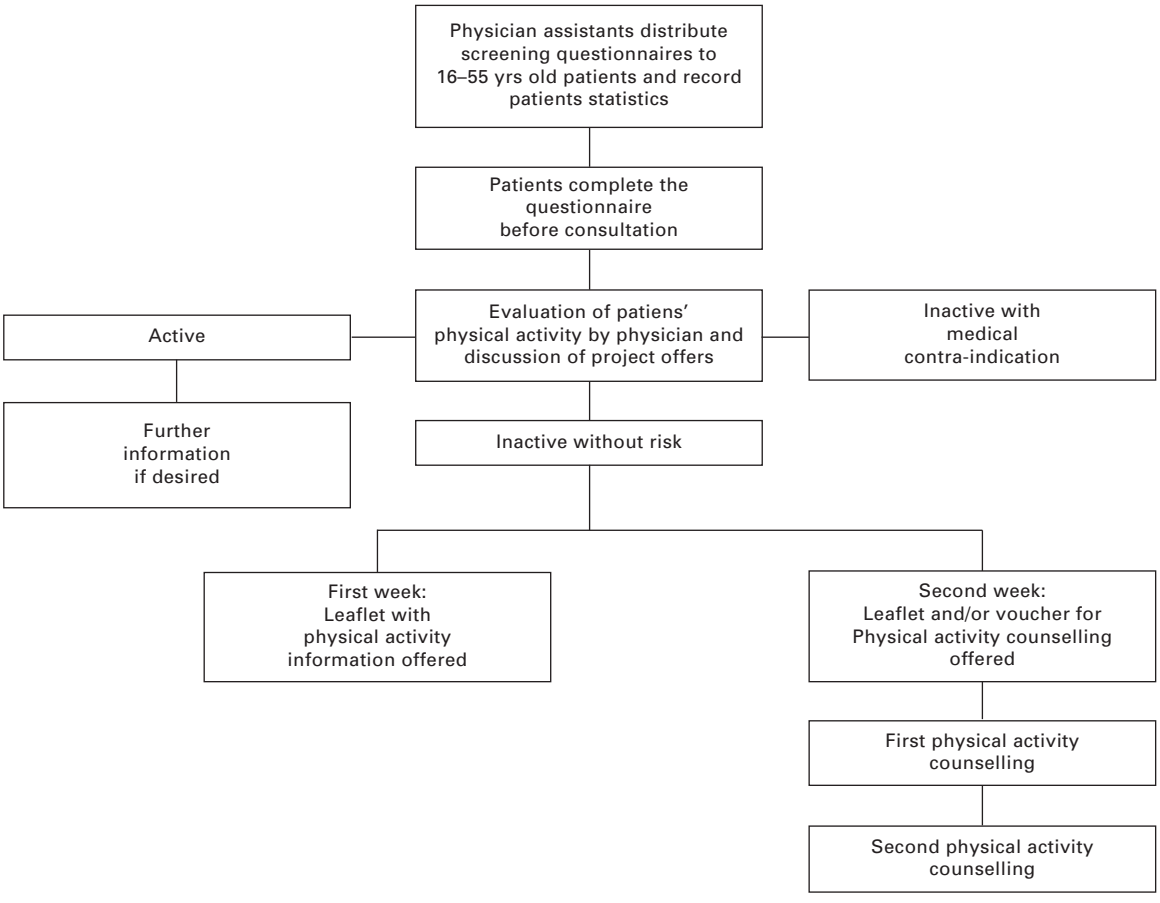


Figure 1

Flow chart of project organisation in practice.

selling sessions with a specially trained physiotherapist or physician. The practice assistants of all participating practices recorded the number of patients visiting the practice during this time period and reported the reasons for non-response to the screening questionnaire. The questionnaires and practice statistics were then returned for evaluation to the organisation managing the project. For each completed questionnaire the practice assistants received one Swiss franc as token reward for the additional effort. All insufficiently active patients and a random sample of active patients who had completed the screening questionnaire have again been surveyed after 12 months. Evaluation of this data is still ongoing and will be the subject of a separate paper.

The project was approved by the local ethics committee. Patients received written information on the project and were required to give written consent.

To recruit a sufficient number of physicians and to motivate physiotherapists to attend training in specialised physical activity counselling offered by the Swiss Federal Office of Sports (BASPO) [21], information on the project was distributed through press articles in professional journals. Moreover, members of the project team gave oral presentations at meetings of the professional associations and attended small quality control circles of physicians to brief them on the project. As a further avenue for recruitment of physicians, participating physiotherapists were asked to provide the names of physicians with whom they usually collaborated. These colleagues received a letter asking them to join the project and non-responders were contacted by phone. All physicians interested in participating in the project were invited to attend a workshop explaining the project in detail or were visited in their practices.

Screening questionnaire

Patients' physical activity levels were assessed by ad hoc questionnaire based on questions from the Swiss Health Survey 2002 and the Health Enhancing Physical Activity (HEPA) Survey 1999/2001 [4, 22]. To measure moderate physical activity levels, patients were asked how many days per week and for how many minutes per day they performed activities such as brisk walking, hiking, dancing, or gardening. Vigorous intensity physical activity levels were determined by asking participants how many days per week and for how many minutes per day they performed activities such as aerobics, tennis, team sports, swimming, weight training or heavy gardening such as shovelling or digging. Combining the answers to these two questions, patients who engaged in at least 90 minutes' vigorous exercise per week or who spent at least 150 minutes on moderate physical activity per week were classified as sufficiently active. The screening questionnaire also asked whether or not patients intended to change their physical activity behaviour during the next six months or during the next four weeks (stage of change). In addition, patients indicated their age, sex, weight and height in the screening questionnaire and the body mass index (BMI) (weight/height^2) was calculated.

Telephone interview with participating practices

Between March and November 2005 a doctoral student and a medical student conducted a pretested semi-structured telephone interview with the 40 participating physicians (including dropouts) and the respective practice assistants to inquire about experience of the project. Interviews were arranged in advance and up to 4 phone calls attempted to schedule them.

The interview included an overall rating of the project idea and its execution (5 was the best mark, 1 the worst) and physicians and assistants were asked about the number of screening campaigns that would be feasible if the project were to continue for 3 years. Further, it was of interest to inquire whether physicians' evaluation of patients' inactivity based on the answers to the screening questionnaire created problems and how much time on average the physicians needed to discuss the physical activity status and the project with the patient. Other questions were designed to ascertain whether patients were interested in the project and whether the screening questionnaire provided an opportunity to raise new or different topics from the usual ones during the consultation, and whether physicians brought up physical activity issues during subsequent patient visits. Finally, physicians were asked whether or not the project had influenced their usual manner of discussing physical activity with their patients. Physicians who dropped out during the project were also interviewed to ascertain their reasons.

Practice assistants were asked to evaluate the amount of additional work the project had generally imposed on them, and how difficult and time-consuming the patient statistics were to complete. As the practice assistant had to distribute the screening questionnaires to patients, we further inquired whether the patients had any difficulties in completing the screening questionnaires and how they generally responded to the project.

Data analysis

Data analysis was performed at the Institute of Social and Preventive Medicine of the University of Basel. The Mann-Whitney rank-sum test was used for comparison of means. To evaluate the factors associated with acceptance of a voucher for physical activity counselling and those associated with attendance at a counselling session, multivariate logistic regression analyses were run including age, sex, BMI, readiness to change and professional background of the physical activity counsellor as potential explanatory variables. In accordance with the Stages of Change Theory [23], patients who did not intend to change their physical activity behaviour in the next six months were considered to be precontemplators, patients who intended to change in the next 6 months but not in the next four weeks were classified as contemplators, and those who intended to change their physical activity behaviour in the next four weeks were considered to be in preparation. All analyses were conducted with SAS Version 8 (SAS, Inc. Release 8.02. Cary, NC: SAS Institute, 2001).

Results

Recruitment

Recruitment of physicians to take part in the project was most successful when effected through personal contacts of a project group colleague. 44 of some 250 colleagues (17.6%) who were met at quality control circles or known to collaborating physiotherapists initially decided to take part in the project. Articles in professional medical journals and presentations at meetings of the physicians' association did not generate a high degree of interest in taking part. The main reasons for non-participation included time constraints, scepticism

Figure 2

Number of physicians participating in each screening campaign and proportion of first attendance.

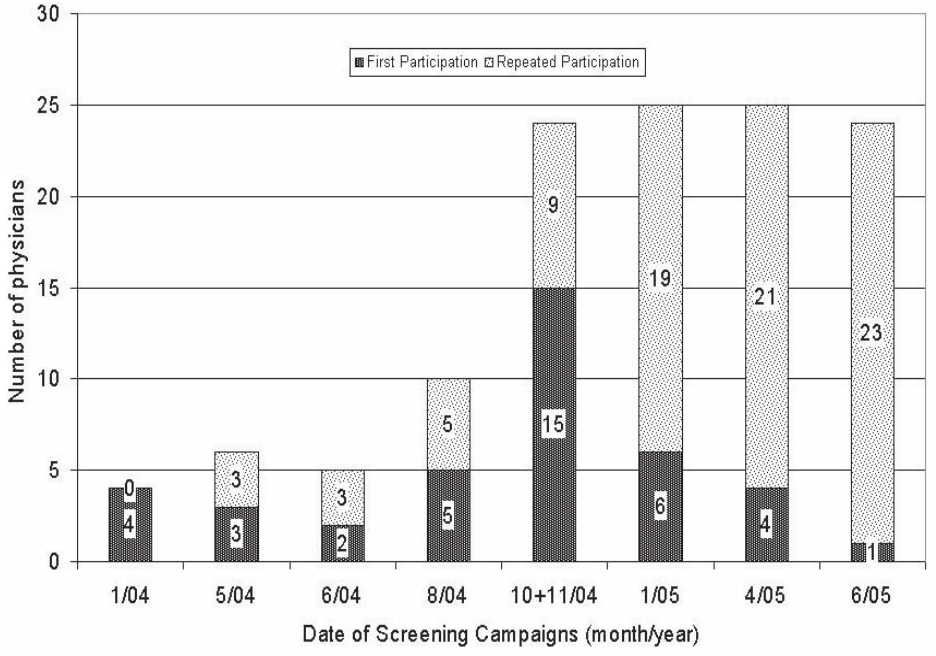
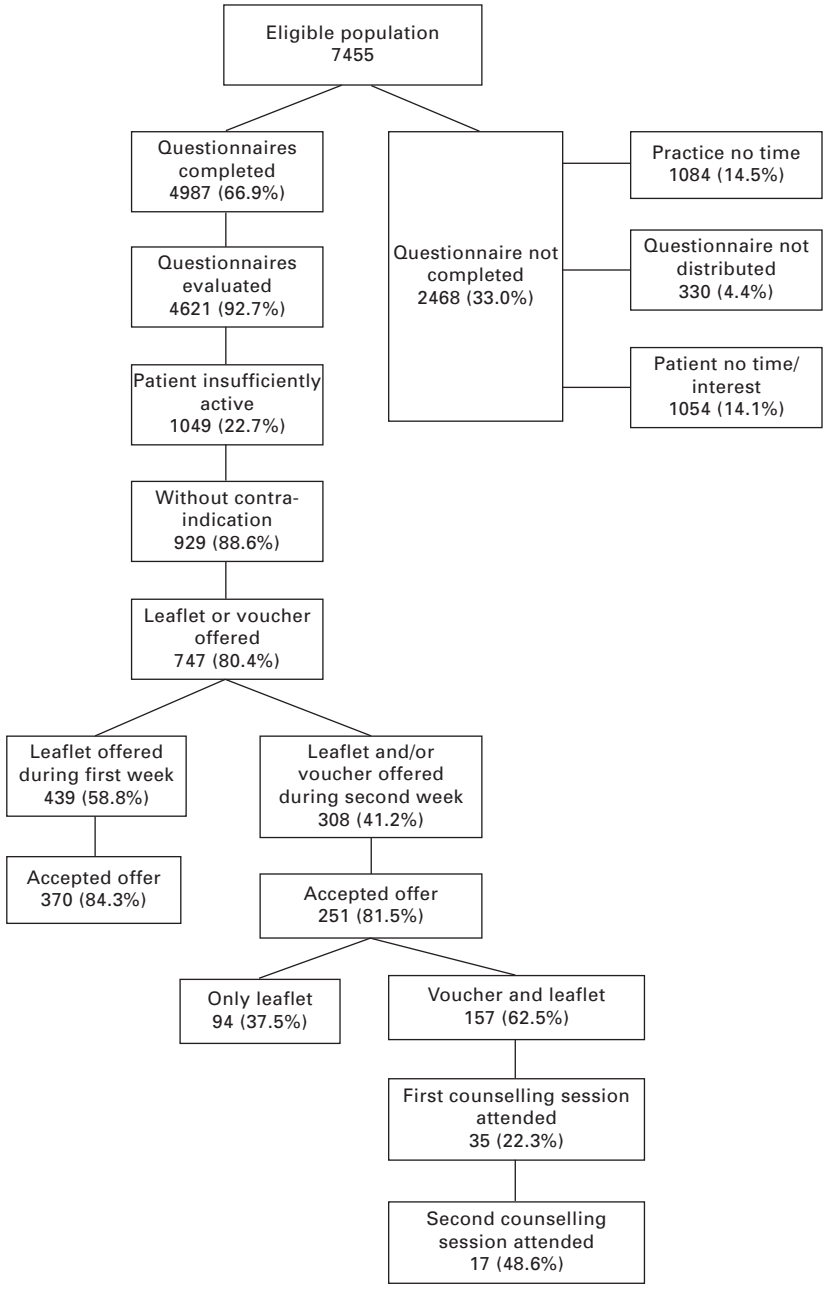


Figure 3

Implementation of project in medical practices.



about the efficacy of the approach, competing demands and lack of confidence in their ability to provide inactive patients with exercise counselling.

After a detailed introduction to the project organisation 40 physicians decided to start the project but 8 failed to successfully complete the campaigns. The main reasons for dropout were time constraints or specific practice characteristics (lack of practice personnel, other studies running, only a few patients in the economically active age group, or too high a proportion of patients not fluent enough in German).

Introduction to the practical and theoretical details of the project was largely (68%) carried out face to face in the colleague's practice because attendance at introductory workshops was poor due of a lack of time. Although time consuming, direct project instruction in the respective practices made it possible to simultaneously involve practice assistants.

Once the 32 general practitioners were recruited into the project, effort was devoted by the project management to keeping them in the project and to adapting the screening schedule most flexibly to the needs of the individual practices. Eight screening cycles were organised during the whole study period. On average, practices took part in 3 cycles because recruitment was delayed. Figure 2 shows the number of participating physicians in each screening cycle and the proportion of first project attendance. The figure also indicates that the project was successful in motivating the intended 25 colleagues to take part regularly in the project, but this goal was only achieved after several months.

Implementation of the project

During the whole study period 20442 patient visits were recorded by the participating practices, but only 7455 patients were eligible for the project: 56.2% of the non-eligible patients were over 65, 21.1% had already completed a questionnaire during an earlier screening cycle, 11.4% had insufficient knowledge of German and 11.3% visited the practice without consulting the physician. 67% of the eligible patients completed the screening questionnaire (figure 3). The main reasons for non-completion were time constraints on either practice or patient; only a few patients refused to participate. In some instances the practice assistant forgot to distribute the questionnaire (4.4%). 92.7% of all completed screening questionnaires were evaluated by the physician with respect to the activity behaviour of the patient and discussed during the consultation. 22.7% of these patients were considered to be insufficiently active. Most patients (83%) accepted the leaflet and/or the voucher. However, only a minority of the 157 insufficiently active patients made an appointment for a first counselling session and even fewer attended the second session.

Table 1 shows that inactive patients already prepared for a change in their physical activity behaviour were significantly more likely to accept the voucher for a free counselling session. No difference in acceptance of the voucher was seen when physicians offered the counselling sessions themselves or delegated it to a physiotherapist. In the one case where the counselling physiotherapist was part of the practice team the patients tended to accept the voucher more readily, although the

Table 1

Acceptance of voucher and attendance at physical activity counselling.

		Accepted voucher			**Attended counselling**		
		Yes (n = 157)	No (n = 94)		Yes (n = 35)	No (n = 122)	
Factor	Value	n (%)	n (%)	Adj. OR (95%CI)	n (%)	n (%)	Adj. OR (95%CI)
Sex	Women (ref)	92 (63.0)	54 (37.0)	1.0	20 (21.7)	72 (78.3)	1.0
	Men	65 (61.9)	40 (38.1)	0.93 (0.53–1.63)	15 (23.1)	50 (76.9)	0.51 (0.20–1.28)
BMI [1)]	<25	71 (56.8)	54 (43.2)	1.0	13 (18.1)	58 (81.7)	1.0
	25–29	50 (67.6)	24 (32.4)	1.64 (0.85–3.18)	11 (22.0)	39 (78.0)	0.91 (0.33–2.57)
	30 and more	30 (69.8)	13 (30.2)	1.70 (0.77–3.71)	10 (33.3)	20 (66.7)	1.43 (0.47–4.34)
Age	Mean (StdDev)	43.9 (12.5)	42.4 (12.8)	1.0 (0.98–1.02)	49.7 (7.7)	42.2 (13.1)	1.06 (1.02–1.12)*
Counsellor	Physiotherapist (ref)	128 (63.4)	74 (36.6)	1.0	24 (18.8)	104 (81.2)	1.0
	Physio in physician's practice	7 (77.8)	2 (22.2)	1.79 (0.31–10.33)	11 (37.9)	18 (62.1)	3.40 (1.24–9.34)*
	Physician	22 (55.0)	18 (45.0)	0.88 (0.41–1.85)			
Stage of change [2)]	Pre-contemplation (ref)	40 (48.8)	42 (51.2)	1.0	10 (13.7)	63 (86.3)	1.0
	Contemplation [3)]	33 (62.3)	20 (37.7)	1.60 (0.76–3.37)			
	Preparation	82 (71.9)	32 (28.1)	2.51 (1.35–4.67)*	25 (30.5)	57 (69.5)	3.36 (1.33–8.50)*

* $p < 0.01$

1) Missing values for 9 patients

2) Missing values for 4 patients

3) Only one patient in contemplation stage attended counselling session

Table 2
Results of the interviews conducted with participating physicians and practice assistants.

Question		Physicians mean (range)	Physician assistants mean (range)	p-value
Rating for project idea (5 = best, 1 = least)		4.5 (3–5)	4.2 (1–5)	0.175
Rating for project Implementation (5 = best, 1 = least)		3.6 (2–5)	3.6 (2–5)	0.925
	Number of cycles	**Physicians n(%)**	**Physician assistants n(%)**	
Number of feasible screening cycles	0 cycle	2 (6.2)	1 (3.6)	
	1-3 cycles	26 (81.3)	17 (60.7)	
	4-6 cycles	4 (12.5)	10 (35.7)	
	Week type	**Active patients mean (range)**	**Inactive patients mean (range)**	**p-value**
Time needed to discuss Questionnaire (minutes)	Leaflet week	3.7 (0.5–7.5)	6.1 (1.5–12.5)	0.004
	Voucher week	3.7 (0.5–9.5)	6.3 (1.5–12.5)	0.004

difference was not statistically significant due to small numbers. Readiness to change, counselling offered by physicians or by the physiotherapist in the same practice, and increasing age of the patient were the factors significantly associated with attendance of a counselling session.

Physicians' and practice assistants' experience of the project

When interviewed about their experience of the project, physicians and practice assistants gave very high ratings to the project idea and somewhat lower, but still high, ratings to the practical implementation of the project (table 2).

Both physicians and practice assistants considered 1–3 cycles per year to be feasible if the project were to continue for several years. The main barriers to more counselling campaigns were time constraints, disturbance of daily routine and too complex project organisation. Physicians also reported that many chronically ill patients visit the practice regularly and thus would be repeatedly approached if the screening took place at short intervals.

Three quarters of the physicians found it easy to assess their patients' current physical activity on the basis of simple classification of answers to the screening questionnaire. However, several physicians had doubts whether the patients' responses to the questionnaire always reflected the actual situation. Physicians needed more time to discuss the questionnaire with insufficiently active patients compared to active patients, but no difference in counselling time was observed in relation to the additional information offered (leaflet versus voucher) (table 2).

According to physicians' and practice assistants' perception, the majority (75%) of patients were interested in this physical activity counselling project. 75% of the physicians indicated that discussion of the screening questionnaire gave them the opportunity to raise physical activity as a topic, which they would not otherwise have done. 25% of the physicians brought up physical activity during patients' subsequent visits, 31% did so occasionally and the rest did not. Most physicians (87%) indicated that the project had not changed their usual manner of discussing physical activity with their patients.

Nearly 40% of physician assistants considered the administrative effort associated with the project to be minimal, one third perceived it to be marked during stress situations, yet 28.6% found the effort in general to be marked. Most practice assistants considered the time investment to complete the practice statistics to be slight (63%) or moderate (33%) and they did not encounter major difficulties with the forms. In the practice assistants' assessment almost half of patients could complete the questionnaire without problems, approx. 40% had some difficulties and 7% needed support.

Discussion

In contrast to previous research [8, 18] the present project was aimed at developing a primary prevention concept suitable for the routine conditions of a busy practice. Thus, during specific two-week campaigns all patients of a certain age group were approached and their physical activity assessed on the basis of a simple combination of answers to two of the screening questionnaire questions. Physical activity was briefly discussed with all patients and additional offers made to all the insufficiently active. To minimise the practice workload physical activity counselling sessions were usually delegated to a specially trained physiotherapist. Thanks to the manageable workload the concept was acceptable to many colleagues and finally allowed successful recruitment of the in-

tended number of at least 25 primary care physicians, although more time and effort was needed than anticipated.

However, of the 250 physicians invited it proved possible to motivate only 13% to participate in the project, thus illustrating the difficulty of implementing preventive activities in primary care. Participating physicians were generally physically active themselves, only 10% reported their own activity levels to be below those recommended. This indicates that physically active physicians are more easily motivated to participate in a primary prevention programme for physical inactivity.

As reported by others [24, 25], personal contacts from colleague to colleague and direct visits to practices were the best way to introduce and explain the project. Barriers to engaging in a project of this nature were similar to those reported by others and included time constraints, scepticism about the project's efficacy, competing demands and doubts about being able to provide inactive patients with exercise counselling [10, 26, 27].

Physicians perceived the assessment of physical activity based on two of the screening questionnaire questions as simple and straightforward, but had doubts as to the validity of patients' answers. Although a recent validation study in a sample of 35 volunteers found significant agreement when comparing answers to the same questions with accelerometer measurements [28], the small number of insufficiently physically active patients in the present study compared to the results of the Swiss Health Survey [4, 29] (22.7% versus 38%) suggests that patients may have overestimated their physical activity due to social desirability and the anticipated discussion of the answers with the physician. It is therefore likely that the project identified a subset of truly inactive persons.

Among these inactive patients 45.8% indicated in the questionnaire completed before consultation with the physician that they planned to change their physical activity behaviour within the next month, and 21.3% within the next 6 months. More than one third of the patients indicated that they did not intend to change. According to the transtheoretical model [23] the first group would be classified as stage 3 (preparation), the other two groups as stage 2 (contemplation) and stage 1 (precontemplation). As expected, the stage of change had a significant impact on acceptance of a voucher for a special counselling session and attendance at this session. It thus seems worthwhile to assess stage of change. Yet 14% of those attending the counselling session had been classified as precontemplators, thus raising doubts about basing a physical activity intervention exclusively on contemplating and prepared patients (stage 2 and 3) [18, 26, 27].

The present study chose to approach all inactive patients irrespective of whether their disease status was related to physical activity, thus aiming at primary prevention. Three quarters of physicians reported that discussion of the screening questionnaire had offered them an opportunity to address patients' physical activity behaviour, which they otherwise would not have done. Research in the US has shown that under routine conditions physicians encourage physical activity in patients with elevated BMI, diabetes, high blood pressure and high cholesterol [30]. However, the spectrum of patients in need of increased physical activity is much broader

The number of inactive patients attending a special session to discuss ways of increasing physical activity was small. Attendance was higher in older patients and in those who attended a session provided by their physician. Time constraints may be an important reason for non-attendance of this counselling session, as the study population consisted of the economically active age group. In addition, patients had to arrange a meeting with a counsellor, a fact which required additional activity and motivation.

In summary, the pilot project "Move for Health" successfully motivated 32 primary care physicians to participate in this primary prevention project. Implementation and acceptance of the project in participating practices was good. However, of primary care physicians it proved possible to motivate only a minority to take part in these preventive activities.

The project was successful in approaching a large number of inactive patients during normal consultation hours and briefly counselling patients regarding their physical inactivity. This type of intervention has previously been shown to be effective [8, 27, 31]. As only a minority of patients attended a special counselling session offered free of charge, it is questionable whether this offer should be made in future if the project were to continue.

For the future implementation of a preventive programme of this kind there are additional lessons to be learned.

A campaign approach systematically screening patients' physical activity levels by means of a questionnaire is well accepted by primary care physicians if conducted about twice a year. It would also be advisable to include elderly patients, as they represent a relevant proportion of patients seen in primary care. In addition, promotion and maintenance of sufficient physical activity is especially valuable in this age group.

Experience further shows that physicians' evaluation of patients' physical activity based on a short questionnaire should be straightforward and may be based on simple scoring, as proposed and validated by others [32]. In addition, the administrative load preventive activities impose on practices should be kept to a minimum, thus requiring professional and adequately rewarded management of the project. And, last but not least, it was essential to involve primary care physicians in developing the project, to ensure successful integration into the daily routine of a practice.

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