Behavior-Change Action Plans in Primary Care: A Feasibility Study of Clinicians

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Purpose: **Collaborative goal-setting—with clinician and patient together deciding on concrete behavior-change goals—may be more effective in encouraging healthy behaviors than traditional clinician-directed advice. This study explores whether it is feasible for clinicians to engage patients with coronary heart disease (CHD) risk factors in collaborative goal-setting and concrete action planning during the primary care visit.**

Methods: **Primary care clinicians were trained in goal-setting and action planning techniques and asked to conduct action plan discussions with study patients during medical visits. Clinicians' experiences were documented through post-visit surveys and with questionnaires and semistructured interviews at the end of the study.**

Results: **Forty-three clinicians and 274 patients with CHD risk factors participated in the study; 83% of the patient encounters resulted in a behavior-change action plan. Goal-setting discussions lasted an average of 6.9 minutes. Clinicians rated 75% of the discussions as equally or more satisfying than previous behavior-change discussions, and identified time constraints as the most important barrier to adopting the goal-setting process.**

Conclusions: **Collaborative goal-setting between clinicians and patients for improved health behaviors is viewed favorably by clinicians in primary care. Time constraints could be addressed by delegating goal-setting to other caregivers. (J Am Board Fam Med 2006;19:215–23.)**

Coronary heart disease (CHD), the leading cause of mortality in the United States, is strongly associated with modifiable behaviors including physical inactivity, poor diet, and tobacco use.[1] Seventy-seven percent of the US adult population engages in a low level of physical activity, 58% are overweight, 23% use tobacco,[2] and 53% have more than one of these risk factors.[3] However, physicians inconsistently provide health behavior-change advice to their patients. From 1992 to 2000, diet and physical activity counseling took place in fewer than 45% and 30%, respectively, of primary care visits by adults with CHD risk factors.[4] Physicians in primary care seldom have time to engage in such discussions and may be unsure how to discuss behavior change with their patients.[5–7]

The research presented here describes a method for engaging patients in behavior-change discussions within primary care: goal-setting with action planning. This process is based on the emerging collaborative model of patient care.[8–10] In this paradigm, patients set a goal for a behavior they wish to change, and clinicians engage patients in a discussion of an action plan that can help the patient fulfill the goal. The action plan should be concrete and specific. With nonspecific action plans, eg, to exercise or lose weight, patients cannot evaluate their success and often experience failure. To enhance the likelihood that patients will succeed with their action plan, clinicians ask patients to estimate,

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on a 0 to 10 scale, how confident they are that they can carry out the action plan, and help patients make an action plan that patients feel they can accomplish.

The theoretical basis for action planning is the concept of self-efficacy developed by Bandura.[11] Self-efficacy refers to a person's confidence that he/she can carry out a behavior necessary to reach a desired goal. Patients are encouraged to choose action plans with a high probability of success because success in making a behavior change, no matter how small, increases patient self-efficacy. In several studies, increased self-efficacy has been associated with improved health-related behaviors and clinical outcomes.[12–14]

Action plans have been studied in chronic disease self-management classes separate from primary care practice.[12] Patients attending those classes may be more motivated to adopt healthy behaviors than the average patient. A study of action plans in primary care has a greater likelihood of observing the action plan process among patients at both higher and lower levels of motivation. This article provides the first-ever detailed look at how action planning takes place in primary care; these observations may help to guide future research on the impact of action planning on clinical outcomes.

The present study examines the feasibility of collaborative goal-setting and action planning between primary care clinicians and patients with CHD risk factors, including diabetes, hyperlipidemia, hypertension, overweight, and/or tobacco use. This article presents data on the feasibility of clinicians engaging in action plan discussions with their patients in the primary care setting. A companion paper describes how patients responded to the action plan discussions.[15] The research questions addressed in this article focus on the perspective of the clinician in the goal-setting process and include the following: Is it feasible for clinicians to engage in collaborative goal-setting using action plans with their patients with CHD risk factors during the busy primary care visit? Do clinicians find this method more or less satisfying than their previous behavior change discussions?

Methods

Clinician Recruitment and Training

Between November and December of 2003, we recruited 4 safety-net health centers and 4 private practices, all members of the University of California at San Francisco (UCSF) Collaborative Research Network, a practice-based research network, by contacting the medical directors of each practice. Practices were selected because they provided diversity in clinic setting (private and public) and size, had many English-speaking adult patients with cardiovascular disease risk factors, and were not currently involved in similar interventions. Practice size ranged from small (2 full-time equivalent clinicians and 145 patients per week) to medium-sized (14 clinicians and 1500 patients per week). At each site, research staff presented the study to clinicians during regular meetings. Clinicians who attended the meetings were invited to participate in the study; at each site, most were interested in participating whereas some were not. Although some clinicians were familiar with motivational interviewing techniques, none had engaged patients in action plan discussions. Clinicians who agreed to participate were trained for 45 to 60 minutes, individually or in groups, and were presented with a description of the goal-setting concept and how to negotiate action plans with patients. Scripted and impromptu role plays were used to demonstrate examples of goal-setting discussions. Training materials are available on request.

Conducting Goal-setting Discussions with Study Patients

Clinicians were asked to undertake goal-setting discussions and to use the action plan form (Figure 1) with at least 6 of their patients who would be enrolled by research assistants at the site. It was emphasized that clinicians should engage in goal-setting discussions with study patients only if such discussions seemed appropriate. The action plan form was designed to elicit information on the health behavior domain the patient felt was most important to address. Clinicians were asked to encourage patients to identify a behavior that could be altered to improve their health. The action plan form includes several domains that patients can choose from: physical activity, food choices, taking medications, smoking, stress, and an open-ended category ("work on something that is bothering me"). Once a specific action plan was chosen by the patient, the clinicians were asked to assess the patient's level of confidence in achieving the action (using a 0 to 10 scale) and to reset the action plan with the patient if the confidence level was less than

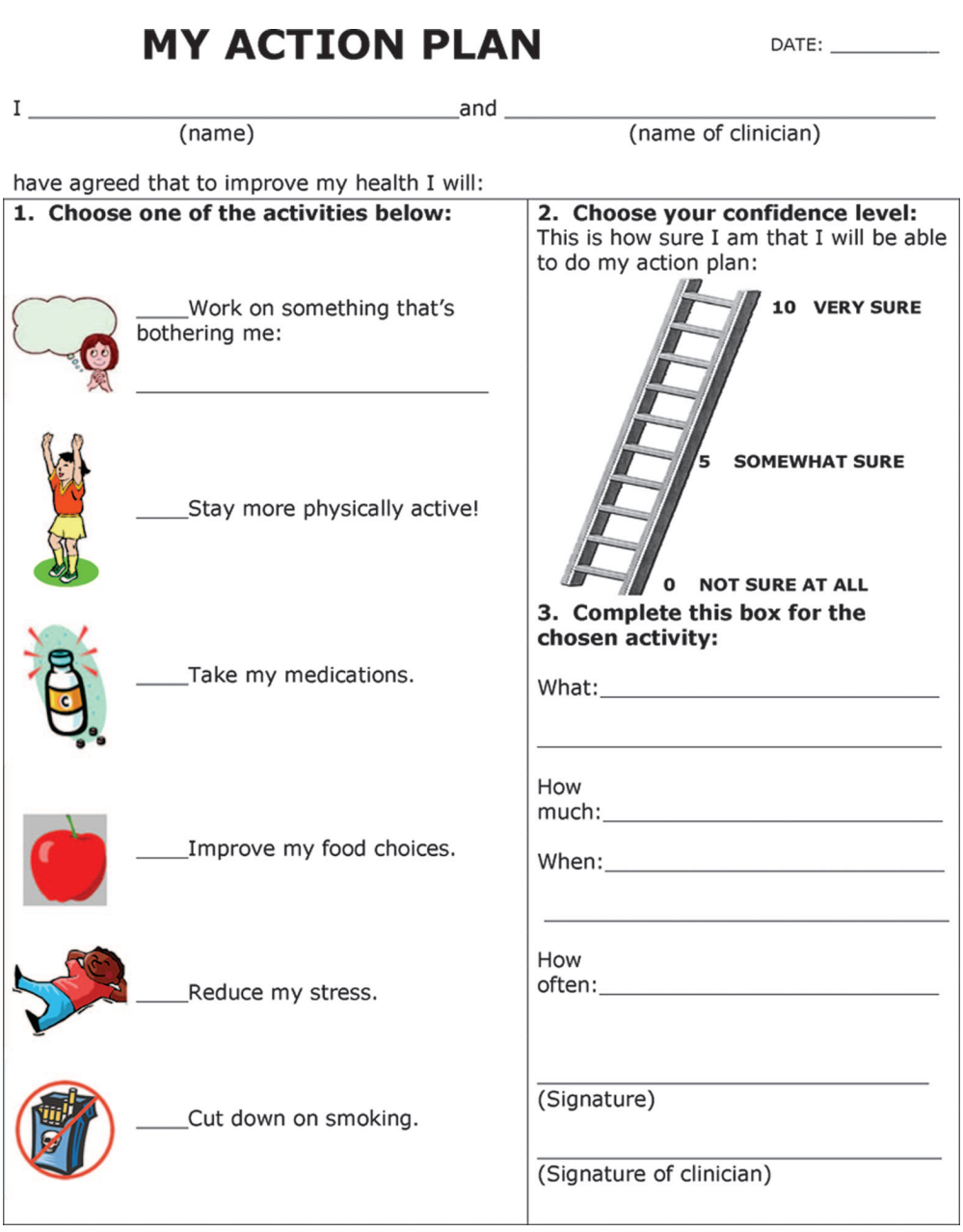

Figure 1. The Action Plan Form ⟨www.familymedicine.medschool.ucsf.edu/research/research_programs/actionPlan.aspx⟩.

7. Once this target confidence level was achieved, specifics regarding the action plan (what, when, how often, etc) were to be recorded on an action plan form. The study was approved by the UCSF Institutional Review Board.

Patient Recruitment

Trained research assistants reviewed patient charts to determine eligibility for patients with upcoming appointments with study clinicians. Patients were eligible for the study based on the presence of CHD risk factors including diabetes, hyperlipidemia, hypertension, overweight (clinical note indicating obesity), tobacco use, or a diagnosis of coronary heart disease. Exclusion criteria included limited English proficiency, planning to be out of the area during the period of the study, or having severe mental or terminal physical illness. Patients who agreed to participate were interviewed by a research assistant immediately before their clinician

visit. An action plan form was clipped to enrolled patients' charts along with a questionnaire for clinicians to complete immediately after the visit.

Clinician Follow-up

For each enrolled patient, clinicians were asked to fill out a brief post visit questionnaire to measure their own satisfaction with the action plan discussion, to estimate the time required for the discussion, and for visits in which an action plan discussion did not take place, a brief explanation. A sub-set of clinicians was also asked to audiotape the study visits if the patient had provided consent for the audio recording. The goal-setting portion of these recordings was timed by one member of the research team (CS) to determine the length of the discussions.

Within 6 weeks of the study's conclusion, the research team met with clinicians at each site, individually or in small groups. Each clinician was asked to anonymously rate the acceptability of the goal-setting method, using a 1-page questionnaire. During the follow-up meetings, the research team also conducted semistructured interviews with clinicians using open-ended questions to elicit their impressions about the goal-setting process. These group interviews were audiotaped, transcribed, and coded for themes associated with the implementation of action plans by 3 researchers (KM, SW, CS) separately, with discussion of results to achieve agreement.[16]

Data were entered into an Access database. All statistical analyses were performed using the SAS statistical software package (SAS Institute, Inc.). χ^2 tests were conducted to determine whether differences existed between safety net and private practice clinicians in their questionnaire responses.

Results

Clinician Characteristics

Forty-three clinicians from the 8 primary care sites participated in this study. Nineteen clinicians practiced in safety net settings and 24 in private practices. Sixty-seven percent were women and 88% were white. Two of the clinicians were nurse practitioners and 2 were physician assistants; the rest were physicians in family practice or internal medicine. The average number of years in practice was 14 (range 5 to 35) for private practice clinicians and 15 for safety net clinicians (range 3 to 32 years).

Goal-Setting Discussions

Research assistants approached 375 patients for the study. Of these, 40 were ineligible because of the exclusion criteria (11%), 61 refused (16%), and 274 (73%) enrolled in the study. We enrolled 128 patients from safety net clinics and 146 from private practices. Seventy percent were non-white (33% African American, 16% Asian, 10% Latino, and 11% mixed or "other") and 64% were women. The mean age was 52.3 years (S.D. = 12.7), and 42% had completed a high school education or less at the time of the study. All had chart or clinician confirmation of one or more CHD risk factors, with 86% having multiple risk factors. More extensive information on patient demographics, disease characteristics, enrollment and patient outcomes are described in a separate paper.[15]

Two hundred twenty-eight patients (83%) had goal-setting discussions with their clinician resulting in an action plan. The percentage of patients making action plans with their clinician on the day of the study visit was nearly identical (82% versus 84%) for safety net versus private practice settings.

Clinician Reports following the Goal-Setting Discussions

Clinicians completed post visit questionnaires for 92% of enrolled patients (Table 1). For the 38 visits with completed questionnaires that did not result in an action plan, clinicians cited: "not enough time" (39%), "patient too ill" (29%), and "lack of patient interest" (13%) as reasons for not engaging in a goal-setting discussion. Reasons for not completing an action plan were different between safety net and private practice settings ($P = .03$). Safety net clinicians cited patients being too ill as the major reason for not completing an action plan whereas private clinicians reported lack of time as the main factor. The average amount of time for the goal-setting discussions was 6.9 minutes in safety net settings and 6.8 minutes in private practice (range 1 to 20 minutes in both settings). Seventeen of the 43 clinicians agreed to audiotape one or 2 study visits, resulting in recordings of 22 visits. The time of the goal-setting portion of these visits measured from the audiotapes was similar to the discussion times estimated by clinicians.

Forty-seven percent of clinicians rated the goal-setting discussions as more satisfying than previous behavior-change discussions with the same patient; 28% found the discussions equally satisfying. Only

Table 1. Action Plan Completion Rates and Post-Visit Questionnaires

	Safety Net (n = 128) (%)	Private Practice (n = 146) (%)	Overall (n = 274) (%)
Completed action plans	82	84	83
Clinician post-action plan discussion questionnaires returned	92	92	92
For patients with action plan	93	93	93
For patients without action plan	86	87	86
Clinician reasons for not completing action plans*			
Patient too ill	44	15	29
Too little time	28	50	39
Patient not interested	17	10	13
Other	11	25	18
Clinician satisfaction with discussion†			
No different than previous behavior change discussions	32	24	28
Less satisfying than previous discussions	8	6	7
More satisfying than previous discussions	42	50	47
Not applicable‡	16	16	16
Question not answered	<1	4	3

Estimated time to complete action plan discussions (minutes)§	Safety Net (n = 93)		Private Practice (n = 113)		Overall (n = 216)	
	Average	Range	Average	Range	Average	Range
	6.9	1 to 20	6.8	1 to 20	6.9	1 to 20
SD	4.5		4.1		4.32	

* Mantel-Haenszel χ^2; $P = .03$

† Response to question: 'Was today's discussion about behavior change more satisfying, less satisfying, or no different than previous behavior change discussions with this patient (or not applicable)?'

‡ Patients for whom an action plan was not developed for reasons of time, patient illness, new patient, etc.

§ For 12 action plans discussions, clinicians did not estimate the time; thus the n = 216 rather than 228.

7% found goal-setting discussions to be less satisfying than previous discussions, with no significant differences identified between private and safety net practice settings ($P > .05$).

Poststudy Clinician Follow-up

Most clinicians (91%) returned the 1-page questionnaire at the end of the study and more than half (67%) also participated in the poststudy semistructured interviews. Fifty-six percent of clinicians responding to the questionnaire reported that the action plan training made it easier to discuss behavior change with their patients; 33% found using action plans to be the same, and 10% found it harder. Seventy-four percent reported that the training had changed the way they discuss health behavior with patients; 82% said they would continue to use the action plan with some of their patients after the study; 87% felt that all primary care clinicians should be trained in goal-setting and the use of action plans; and 33% reported they had recommended the action plan idea to other clinicians. Most (59%) believed that other caregivers would be appropriate to engage in action plan discussions with patients (Table 2).

Two thirds of clinicians responded that "inadequate time" was a major barrier to conducting action plan discussions (Table 3). Clinicians also cited difficulty with the research methodology or the action plan form as a barrier (39%); examples included having to deal with an additional piece of paper, remembering to engage in the action plan discussion, using the 0 to 10 confidence scale, and negotiating the behavior-change goals. Quotes from the poststudy interviews (Table 3) shed light on clinicians' views regarding the action plan technique.

Discussion

Despite evidence that shared decision making can improve health-related behaviors,[17] only a handful

Table 2. Clinician Post-study Questionnaire Responses

a. In general, do you feel that action plans make behavior change discussions:				
			Easier?	The same?	Harder?
Private practice (N = 21)			52%	43%	5%
Safety net (N = 18)			61%	22%	17%
Overall (N = 39)			56%	33%	10%
Clinician Post-study Ratings of the Acceptability and Usability of Action Plan Methods					
				Yes	No
b. Did the study change the way you like to discuss health behavior with patients?					
Private practice				62%	38%
Safety net				89%	11%
Overall				74%	26%
c. Did you use action plans with patients outside the study?					
Private practice				76%	24%
Safety net				72%	28%
Overall				74%	26%
d. Have you recommended the action plan idea to other clinicians?					
Private practice				43%	57%
Safety net				22%	78%
Overall				33%	67%
e. Will you continue to use the action plan with some of your patients?					
Private practice				81%	19%
Safety net				83%	17%
Overall				82%	18%
f. Should all primary care clinicians be trained in the use of action plans?					
Private practice				86%	14%
Safety net				89%	11%
Overall				87%	13%
Clinician Post-study Assessment of Action Plan Effectiveness					
g. Do you think Action Plans can be helpful in encouraging behavior change?		No	Rare patients	Some patients	Most patients
Private practice		0%	0%	67%	33%
Safety net		0%	6%	59%	35%
Overall		0%	3%	64%	33%
Clinician Post-study Assessment of Barriers to Goal-setting Discussions					
h. What is the barrier that makes it most difficult to use Action Plans in primary care visits?*	Time		Methods†	Other	Resources
Private practice	67%		38%	10%	5%
Safety net	65%		41%	0%	29%
Overall	66%		39%	5%	21%
Clinician Opinion on Goal-setting by Other Health Caregivers					
i. Do you think it would be more appropriate for other caregivers to engage patients in goal setting since physicians have very little time?				Yes	No
Private practice (N = 21)				52%	48%
Safety net (N = 18)				67%	33%
Overall (N = 39)				59%	41%
j. If "Yes," what type of caregiver would be appropriate?	Health Educators		Medical Assistants	Nurses	Social Workers
Private practice	67%		29%	57%	29%
Safety net	67%		33%	61%	39%
Overall	67%		31%	59%	33%

* More than one barrier was identified by some clinicians.
† Methods refers to difficulties associated with using action plan forms and engaging in collaborative discussions.

Table 3. Sample Clinician Quotes from Post-Study Semistructured Interviews

Topic	Quotes	Practice Setting
Time	". . . that was the big inhibition for me—the time factor. When patients come here they often have four or five issues, and you can't add another thing."	Private practice
	". . . it's difficult when it's busy and it's difficult not to be directive. Being directive doesn't take much time."	Private practice
	". . . [the action plan] helped me prioritize that as opposed to the 16 other priorities . . ."	Safety net
Resources	"It would be kind of nice to have an appointment just to talk about the action plan."	Private practice
	"Anything that adds more paper is a problem."	Safety net
	"[The action plan] made it more real and achievable for patients to set goals . . . and by doing that and calling them back a week later it was extremely helpful for them. . . . It would be really nice if we could continue that. We don't have the resources to do that."	Private practice
General comments	"It would be hard to totally let [the action plan] be patient-driven."	Safety net
	"I get to the point where I say, 'The action plan is you're going to take a lipid-lowering medicine, you're going to take it for 4 weeks, here's the lab slip.' "	Private practice
	"The emphasis on getting patients to assume some responsibility for their own care is good."	Private practice
	". . . paring down to one thing, pin it down, that was a shift for me."	Safety net
	"[The action plan] really gives you a chance for buy in and I found it's more successful to give them a chance to talk about their health and what's important for them, so I like it."	Safety net
	"When a patient didn't do the action plan I was flummoxed. I didn't know what to do next."	Private practice
	"I really felt like [the action plan] impacted the way I did health education with lots and lots of patients . . . "	Safety net
	"I felt disappointed when patients did not reach their goals, even if they only did 50%."	Private practice
	"If an action plan comes up naturally in a visit then it's a good idea."	Private practice
	"I like the concept, but most doctors, and probably myself, will do [action plans] for a while and then go back to the old pattern of yelling at the patients to change their behaviors—because that is how we were taught."	Private practice
Other caregivers	"I think [the action plan] would be much better for the non-clinician to do, because of time."	Private practice
	"I think it would be empowering for our nurses to do action plans when they're not busy doing other stuff."	Safety net
	". . . if we had our nurse and MAs trying to do [action plans] it would slow things down even more."	Safety net
	"All those medical assistants, health educators, social workers, that would be awesome if they could [do action plans] before or after the visit."	Private practice

of studies have examined one central component of shared decision making—collaborative behavior-change goal-setting—to determine its feasibility in the primary care setting.[18–23] None of these studies systematically examined clinicians' attitudes or satisfaction regarding collaborative goal-setting techniques.

This study explored 2 research questions. Is it feasible for clinicians to engage in collaborative goal-setting, using action plans, during the busy primary care visit? Do clinicians find this method more or less satisfying than their previous behavior-change discussions?

This study demonstrates that collaborative goal-setting can be accomplished during the primary care visit despite several barriers. Immediately after the goal-setting visits, approximately half the discussions were rated as more satisfying than previous behavior-change discussions. In poststudy interviews, a clear majority of clinicians indicated that they would continue to use the action plan techniques they had learned. The feasibility and acceptability of engaging in goal-setting discussions did not vary markedly between safety net and private practices.

Clinicians' views about action plans may have been influenced by the artificial circumstances cre-

ated by conducting research in a busy medical practice. Clinicians may have felt pressure to initiate an action plan with a "study" patient for whom a recruitment and consent process had just been completed. Clinicians may have given the interactions even higher satisfaction ratings had they been able to choose when and with whom to use the action plan method. Few patients per clinician were enrolled in the study and clinicians may not have achieved mastery of the new skill. One clinician commented ". . . I need more repetition, practice to truly incorporate it into routine patient care." The brevity of the training sessions necessitated by the clinicians' busy schedules may not have allowed for uptake of this new counseling method. Most importantly, there are competing demands for clinicians' time. In a recent study, physicians reported managing an average of 3 problems per encounter; in 37% of all primary care visits, more than 3 problems were addressed.[24]

Clinicians expressed greater acceptance of goal-setting in the poststudy questionnaires compared with their responses immediately after the goal-setting discussion. Perhaps the rushed atmosphere of primary care practice occasioned more negative responses toward anything that takes more time, whereas the calmer atmosphere of a meeting conducted outside of clinical time allowed clinicians to reflect more positively on the new behavior-change method. The clinicians in the study seemed to have a general desire to find new ways to help patients achieve healthy behaviors. A report of focus groups with primary care clinicians managing patients with CHD risk factors found agreement "that one is more likely to be successful by beginning with what the patient perceives as a priority."[5]

A major barrier was the time it took to engage in goal-setting discussions—an average of 6.9 minutes. With continued practice, clinicians may become more facile with the technique. A related barrier is the lack of time for sustained follow-up on patients' action plans; regular follow-up is an essential element of successful behavior change.[25] These barriers could be addressed by delegating goal-setting discussions and follow-up to other caregivers, a concept endorsed by the majority of clinicians. A greater percentage of clinicians in safety net settings endorsed the delegation of action planning; this may represent the reality that, compared with private practices, safety net clinics usually have nurses, social workers, and health educators available. For private practices to involve these caregivers, patients would probably need to be referred to hospital outpatient facilities where these personnel work; such referrals constitute yet another barrier for both private clinicians and patients. Moreover, few health plans pay these caregivers for their time.

Limitations

This study was exploratory in nature and therefore has the limitations associated with preliminary work. Participating practices and clinicians were self-selected and possibly more inclined than their peers were to engage in a collaborative paradigm. The research protocol encouraged clinicians to hold goal-setting discussions with patients enrolled in the study rather than with patients for whom behavior change was an important issue in the primary care visit. We did not assess preintervention knowledge of, attitudes toward, or experience with shared decision making, which might have affected clinicians' opinions on the feasibility and acceptability of the goal-setting technique.

Conclusion

Although unhealthy behaviors are a leading cause of coronary heart disease mortality, physicians frequently fail to provide effective behavior-change counseling to their patients.[4] Collaborative goal-setting—with clinician and patient together deciding on behavior-change action plans—has been shown to be a promising technique for assisting patients to improve physical activity and diet.[20–23] The study reported here finds that a sample of primary care clinicians who volunteered to engage in goal-setting discussions with patients with cardiovascular risk factors had generally positive attitudes toward this behavior-change technique. However, lack of time in the multiagenda primary care visit was a significant barrier to holding these discussions and sustaining this paradigm in practice. Most clinicians were favorably disposed to delegating the goal-setting process to other members of the primary care team. Future interventions need to be tested in primary care settings to determine whether non-physician caregivers, in partnership with physicians, can engage in behavior-change discussions using goal setting, to make this tool a realistic and sustainable component of primary care practice.

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