are “carved out” to an external staff person substantially improves implementation and allows more effective use of clinicians in a supporting role, such as reinforcing the intervention with patients.

One potential limitation of the health educator model is that clinic staff won’t accept an outsider. Contrary to this admonition, the current project demonstrated that the health educator becomes incorporated as part of the staff in a very short period of time, and other research indicates that the model works well in a variety of health care settings.2 Another potential limitation is the sustainability of the model. One solution for sustaining this model in FQHCs is to use students in health-related professional programs (eg, public health, social work, nursing, medicine). These students could be a consistent source of low-cost health educator staff at FQHCs during their practicum or independent study experience, and the program could be replicated in most large cities. This approach, however, will require the development of standardized practicum curricula within different professional schools to train students in the techniques and practice of SBI.

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Key words: Mass screening; Federally Qualified Health Centers; Medicaid; alcohol drinking; tobacco; smoking; medically uninsured; low-income population; counseling; primary health care; medically underserved area.

Submitted December 21, 2004; submitted, revised, March 2, 2005; accepted March 16, 2005.

Funding support: This project was supported by Prescription for Health, a national program of The Robert Wood Johnson Foundation with support from the Agency for Healthcare Research and Quality.

Acknowledgments: We would like to thank all participating staff at Katahdin Valley Health Center; Community Health Center, Inc; Harbor Health Services; and the St Francis/University of Connecticut Primary Care Center at the Fleet/Burchdorf Health Center. We would especially like to thank Donna Damon, Pat Gaudet, Bruce Gould, Karen McMillan, Stacy Yearwood, and Janice Vendetti for their assistance in the administration and coordination of the program.

References
1. Fine LJ, Philogene GS, Gramling R, Coup ES, Sinha S. Prevalence of multiple behavioral risk factors in the United States: results from the 2001 National Health Interview Survey. Am J Prev Med. 2004;27(2 Suppl):18-24.
2. Yphantides N, Kelso D, Whalen H. Summary: Screening and Brief Intervention for At-Risk Drinkers Delivered by Physician Extenders in Primary Care Settings. San Diego, Calif: Altam Associates, Inc; 2003.
3. Babor TF, Higgins-Biddle J, Higgins P, Gasoman G, Gould B. Training medical clinicians to conduct alcohol screening and brief intervention. Subst Abuse. 2004;25:17-26.
4. Babor TF, Higgins-Biddle J, Dauser D, Higgins P, Burleson J. Alcohol screening and brief intervention in primary care settings: implementation models and predictors. J Stud Alcohol. In press.
5. Coup ES, Gaba A, Orleans CT. Physician screening for multiple behavioral health risk factors. Am J Prev Med. 2004;27(2 Suppl):34-41.

Collaborative Goal Setting to Improve Lifestyle Behaviors: Lessons Learned From NOPCRN

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Ann Fam Med 2005;3(Suppl 2):S60-S62. DOI: 10.1370/afm.364.

Conflicts of interest: none reported

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PURPOSE

We examined the effectiveness of a multicomponent lifestyle activity intervention for overweight or obese patients with impaired fasting glucose (prediabetes). The physician-directed counseling intervention included collaborative goal setting with patients to achieve specific changes in physical activity and nutrition behaviors. Nurse surveillance was used to provide reinforcement and to monitor progress.

METHODS

We randomized 88 adult patients with prediabetes and a body mass index of 25 kg/m² or greater to either an immediate- or a delayed-intervention group. Individual-
Individualized goals for weight reduction, physical activity, and nutrition intake were negotiated between the physician and the participant. Participants used pedometers to monitor their physical activity and were scheduled for brief follow-up visits in the practice (ie, nurse surveillance). We included 4 primary care practices in the Northwest Ohio Primary Care Research Network (NOPCRN) and 2 physicians from each practice.

We used a combination of methods to identify eligible participants. In a previous diabetes screening study, we identified a large number of patients with prediabetes. These patients’ physicians sent them a letter with an invitation to participate in this study. In a less effective, alternative approach, physicians and office staff identified eligible patients during routine visits or from laboratory records.

The physician-directed counseling intervention was based on the program of the National Institutes of Health and the North American Association for the Study of Obesity.1 With the assistance of a handheld computer, physicians use the interactive guideline tool developed by the National Heart, Lung, and Blood Institute Obesity Education Initiative (http://hin.nhlbi.nih.gov/obgdipalm.htm) to establish individualized therapy targets for weight reduction, physical activity, and nutrition. It was up to the physician and patient to negotiate reasonable goals to reach those targets.

We scheduled a 3-hour group training session for the physician participants. Physicians were introduced to the aforementioned program and given copies of the material for review. They were also given a Palm 125 handheld computer (palmOne Inc, Milpitas, Calif) and instructed on the use of the Obesity Education Initiative tool. The interactive tool prompts the physician to enter the patient’s weight, height, sex, waist circumference, and individual risk factors. It instantly calculates body mass index and presents a standardized set of weight loss targets and treatment options based on individual patient parameters.

In the next step, one of the investigators (KP) demonstrated collaborative goal-setting strategies with a standardized patient volunteer. Emphasis was placed on setting simple and measurable goals with the patient. For example, if a patient’s baseline activity level was 2,500 steps per day, then working on a 10% increase in steps per day each week over the 12-week period might be an achievable goal. If the patient skipped breakfast most days per week, snacked frequently at work, and consumed most of his or her daily calories during the evening meal, then 3 reasonable and achievable goals might be not skipping breakfast, avoiding snacks in the workplace, and decreasing portion sizes at the evening meal.

Once randomized, participants were scheduled to meet with the physician for a 30-minute counseling visit.

LESSONS LEARNED

We quickly learned that 1 group training session was inadequate preparation for the physicians. We scheduled follow-up one-on-one sessions with each physician to review the protocol and to practice establishing physical activity and nutrition goals. Physicians reported having difficulty changing from their usual practice in counseling patients to the counseling intervention designed for the study. Incorporating collaborative goal setting with participants into their counseling practice was particularly challenging. Specifically, setting simple, measurable goals for changing activity and nutrition behaviors with participants required practice.

Initially, physical activity goals were often too ambitious for most participants to achieve, and some of the nutrition goals were too vague. For example, the recommended activity goal of 10,000 steps per day most days of the week1 was far beyond the ability of most study participants. Recommending a limit on the number of calories consumed per day was also too global and failed to focus on specific eating behaviors. We recommended that physicians explore barriers that interfere with participants being more active or adopting healthier eating habits, and begin to negotiate goals around those barriers. Next, we recommended that the initial physical activity goals established with participants be limited to a 10% increase in steps per week over the 12-week period. Finally, we recommended that no more than 3 nutrition goals be established at the initial visit. Each of these goals could be reset upward or downward depending on the participant’s progress, which was being monitored by the RNC.

Although surveillance of physicians was not explicitly planned in the study protocol, the RNC did observe and monitor physicians as they attempted to
carry out the counseling intervention. In fact, some of the physicians asked her for assistance initially, and with practice they seemed more comfortable with the intervention.

Approximately 1 month after data collection began, we scheduled another group session with participating physicians to review progress and to identify any additional problems they might be experiencing.

We do not have any specific evidence to support the sustainability of the intervention other than the RNCs observations and discussions with participating physicians and their anecdotal reports. Several physicians have independently reported that they have since incorporated collaborative goal setting into their usual practice when counseling patients on weight loss.

The collaborative goal-setting intervention combined with nurse follow-up is a potentially powerful strategy for improving health behaviors; however, our study was not designed to specifically address this question. We were interested in knowing if this combination was feasible in practice to improve lifestyle behaviors and specific health outcomes.

CONCLUSIONS

To facilitate the integration of the intervention into practice, we used specific strategies: (1) electronic tools that guided physicians in setting targets for weight loss, physical activity, and nutrition intake, (2) physician training in brief behavior counseling using collaborative goal setting, and (3) nurse surveillance to provide reinforcement and monitor patients’ progress.

Limited time, skills, and resources combined with inadequate reimbursement impede physicians’ ability to provide healthy lifestyle counseling. Goal setting has been shown to be an effective strategy for modifying dietary behavior and improving adherence to exercise, particularly when the patient and health care professional establish the goals together.

Before this study, collaborative goal setting with patients to improve physical activity and nutrition behaviors had not been a routine part of the primary care physicians’ counseling practice. We underestimated the training and practice time required for physicians to use collaborative goal setting effectively with the participants. Once this intervention was learned, physicians were quick to adopt it into their usual practice.

Successful implementation of a collaborative goal-setting intervention for promoting lifestyle behavior change in practice requires an initial investment in time and training in these methods. Setting simple, measurable goals for changing physical activity and nutrition behaviors with participants requires practice. Finally, engaging nurses or other office staff in the practice may be “key to leveraging the effect” of the physician counseling intervention.

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Key words: Primary care; practice-based research; health behavior; prediabetes; obesity; diabetes mellitus; prediabetic state; computers, handheld; physical activity; weight loss; diet

Submitted December 20, 2004; submitted, revised, March 15, 2005; accepted March 21, 2005.

Preliminary findings from this study were presented at 32nd Annual Meeting of the North American Primary Care Research Group, Orlando, Fla, October 11, 2004.

Funding support: This project was supported by Prescription for Health, a national program of The Robert Wood Johnson Foundation with support from the Agency for Healthcare Research and Quality.

Acknowledgments: We would like to thank the physicians and staff of the Medical University of Ohio at Toledo, Family Practice Center, South Toledo Internal Medicine, Oak Valley Primary Care Physicians, and Mercy Health Partners Gandy Family Practice; our research staff members Jona than Crow and Danielle Mckeensturm; research associates Justin Forman and Dr Marc-Y Borieux; and research assistants Christian Vanegas, Craig Shannon, Eric Helm, and Alex Farag.

References

1. National Institutes of Health; National Heart, Lung, and Blood Institute; and North American Association for the Study of Obesity. The Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. Bethesda, Md: NIH; 2000. NIH publication 00-4084.
2. Stange KC, Woolf SH, Gjeltema K. One minute for prevention: the power of leveraging to fulfill the promise of health behavior counseling. Am J Prev Med. 2002;22:320-323.
3. Stevens MB, O’Connor FG, Deuster PA. Exercise and Nutrition [AAFP Home Study]. Leawood, Kan: American Academy of Family Physicians; 2002.
4. Hardenman W, Griffin S, Johnston M, Kinmonth AL, Wareham NJ. Interventions to prevent weight gain: a systematic review of psychological models and behaviour change methods. Int J Obes Relat Metab Disord. 2000;24:131-143.
5. Duncan KA, Poehl B. Staying on course: the effects of an adherence facilitation intervention on home exercise participation. Prog Cardiovasc Nurs. 2002;17:59-65.