

A Systematic Primary Care Office-Based Smoking Cessation Program

Leif I. Solberg, MD, Patricia L. Maxwell, Thomas E. Kottke, MD, Gregory J. Gepner, MD,
and Milo L. Brekke, PhD

Minneapolis, Minnesota

There is a large discrepancy between apparent potential and actual practice of smoking cessation activities by physicians. This paper describes the 2-year results of an integrated system to support such physician activities with all of their tobacco-using patients. The system consists of organized identification, progress records, brief physician messages, follow-up, and assistance; it focuses on those most interested in quitting. Introduction of the system to one clinic was associated with an initial threefold to fivefold increase in quit rates of all clinic patients using tobacco. After 2 years, the overall quit rate was approximately 20%, rising to 33% for those tobacco users with more clinic contacts or at least 1 year from the first to the latest contact. Such a program has been well accepted by patients, physicians, and office staff and seems to provide the support needed for a feasible and effective long-term smoking cessation intervention in primary care practices. J FAM PRACT 1990; 30:647-654.

No longer is there any serious national disagreement with Surgeon General Koop's statement that "smoking is the chief, single, avoidable cause of death in our society."¹ That statement is dramatized by the estimate that each year there are more deaths due to tobacco use than there are from the combined effects of acquired immunodeficiency syndrome (AIDS), suicide, homicide, alcoholism, cocaine, heroin, traffic accidents, and fire.²

As a result of this national consensus, there is a growing number of laws, regulations, and social pressures aimed at reducing smoking in public places and encouraging smokers to quit. At least 60% to 70% of smokers say they would like to quit,^{3,4} up to 50% of them may try to quit each year,^{5,6} and the proportion of smokers in the adult population continues to decline.⁷

When smokers are asked what would be the strongest motivating influence on them to quit, physician advice is given far more force than regulations, increased tobacco taxes, family pressure, or public campaigns.³ Yet only 40% to 50% of smokers report that any physician ever has

advised them to quit, much less provided them with help in doing so.^{8,9}

Why should physician advice be so infrequent when physicians and dentists have the lowest rate of tobacco use of any adult group in society¹⁰ and when physicians consistently rank smoking cessation as the most important thing their patients can do to improve their health?¹¹ To add confusion, physicians report that they routinely ask patients about smoking and advise cessation.¹²⁻¹⁵

Even allowing for smoker denial and selective memory, it appears that physicians are not making effective use of their opportunity to help patients, which is particularly unfortunate because so many randomized controlled trials have now demonstrated how successful physician advice and follow-up can be.¹⁶⁻¹⁹ The National Cancer Institute has established a high priority for expanding physician activities in smoking cessation.²⁰

One reason the success of research trials has not been translated into practice may be a lack of awareness that physicians can make an impact, since most of the early trials have been reported from Canada, Britain, and Australia. Another reason, however, may be the lack of a clear description of a smoking cessation program that is feasible and acceptable to patients and physicians in a busy primary care office practice focused on problems as they are defined by the patient.

This paper describes such a feasible approach and the

Submitted, revised, October 9, 1989.

From the Department of Family Practice and Community Health, The University of Minnesota Medical School, The Cardiovascular Division, Mayo Clinic, and Brekke Associates, Minneapolis, Minnesota. Requests for reprints should be addressed to Leif I. Solberg, MD, Blue Plus, 3535 Blue Cross Rd, PO Box 64179, St. Paul, MN 55164.

descriptive results from 2 years of demonstration operation in a neighborhood family practice clinic. The approach was designed and modified to fit into a busy primary care practice using recently identified information about what is needed in an effective medical approach to smoking cessation. The program was developed as part of the Doctors Helping Smokers clinical trial, which needed a realistic model to train physicians in smoking cessation. In developing the model, it was valuable to know that most smokers quit on their own,²¹ and that the most effective interventions are those that are applied consistently over the longest time.²² The experience of the Doctors Helping Smokers research project in working with many private physicians on smoking cessation over the past 4 years has been of even greater value.⁶ This experience has confirmed that an individual physician approach to smoking cessation will not work; what is needed is a clinic-based system that identifies users, reminds physicians of the need to include cessation negotiations in the course of every normal visit, and assures supportive follow-up.

METHODS

Intervention

The smoking cessation program at the demonstration clinic (Nokomis Clinic) was developed and modified as use revealed the need for changes. The following basic elements and the central focus on the program's systematic nature have remained intact.

Identification. The medical assistant asks all patients about tobacco use, including current amount, during office visits as a part of normal intake procedures. Prominently labeling each chart with a star for nonusers and a black dot for users helps to remind the assistant to repeat the query for users only at each subsequent visit.

Progress Record. The assistant also starts a Smoke Card (Figure 1) on each newly identified tobacco user, clipping it to the outside of the chart during visits and storing it in a special file box between visits. At each visit the date and current amount of tobacco used is entered by the assistant; the physician is responsible for recording the patient's current category of quitting intentions (Table 1) and specific plans. The Smoke Card thus serves both as a reminder to the physician to bring up the topic and as a summary of previous intentions and plans. It also communicates to staff any need for follow-up and is readily available for telephone calls or counseling visits without requiring a search for the chart.

Brief Physician Role. At some time in the course of every visit with a tobacco user (usually after dealing with the patient's main concern), the physician uses the information on the Smoke Card to spend no more than 1 to 3

minutes on tobacco use cessation. After identifying the user's attitude toward quitting (category), the physician spends most of that limited time negotiating specific plans and follow-up arrangements for those interested in quitting (Table 1). The goal of this discussion is to be as specific and supportive as possible. Little time is spent trying to motivate the few patients uninterested in cessation.

Self-help Materials. Each patient expressing an interest in quitting is offered a copy of *Quit for Good*.*

Follow-up. Each patient willing to set a quit date is called by the office nurse 3 to 7 days after that date to reinforce the physician's interest and to identify any need for additional help. Recent quitters (within the past few weeks) are also called in a week, since they are at high risk for restarting.

Counseling. Everyone needing more help than is possible in the 3-minute physician encounter is advised to make an appointment for cessation counseling, which in this clinic is provided by the office nurse. Candidates for nicotine gum must participate in this counseling system and are selected by patient choice and evidence of withdrawal symptom control problems, usually after quit attempts without gum have been unsuccessful. A spouse or significant other is usually encouraged to accompany the user. A charge of \$25 is made for the first counseling visit and \$15 for subsequent ones. Although a four-visit package at reduced cost is recommended (\$60), any number of visits can be used. Few insurance carriers or health maintenance organizations (HMOs) cover this cost.

Site

Nokomis Clinic is a demonstration and faculty practice site for the Department of Family Practice and Community Health at the University of Minnesota Medical School. Equivalent to a single-physician practice, it is staffed by two family physicians who each practice there part-time. Located in an established middle-class neighborhood of Minneapolis, the clinic provides full family practice services (including pregnancy care) to its patients, who are 95% white and from the immediate area. About one half of the patients are covered by various HMO plans, and the practice has 500 to 600 office visits a month. Health care competition and physician-switching are very high in the area.

Entry Criteria

In this study, the smoking cessation intervention program was applied to patients as they happened to be seen in the

*A more current version of this booklet is called *Clearing the Air*, available free in quantity from the National Cancer Institute, Office of Cancer Communications, Public Inquiries, NIH Building 31, Room 10A18, 900 Rockville Pike, Bethesda, MD 20814 (301-496-5583).

SMOKE CARD

W
Winner
S
Stop on own
H
Stop with help
L
Later
↓
Decrease
?
Uncertain
N
No
O
Omitted

Name: _____ Phone (H) _____ (W) _____

Address: _____ Birth Year: _____ Sex: _____

Smoke History — Type: _____ Years: _____ # Quits: _____ Longest: _____ Latest: _____

Diseases: _____ Comments: _____

Household: _____ Smokers _____

_____ Nonsmokers _____

_____ Children _____

Date	Amount	Who	History	Category	Plans	Follow-up

Figure 1. Smoke Card used in office program for smoking cessation. Amount denotes amount smoked. The Who column is for initials of physician or nurse seeing the patient at that visit. Category denotes category of user attitude toward quitting, using initials or symbols along top edge of card.

Nokomis Clinic for their own reasons. Patients were entered into the program if they were aged 18 years or older and self-reported tobacco users. Thus, entry into the program occurred whenever the patients made their first visits after the program began in December 1984. Data came from the information recorded on the Smoke Cards during the course of visits, plus a follow-up survey.

Evaluation

In addition to describing the process and outcome of the program during the first 2 years of operation, this report

includes a before-and-after substudy of cessation rates. The substudy was done by sending questionnaires to a random sample of 206 adult patients who happened to have an office visit during the 15 months immediately preceding the start of the program on December 1, 1984. Those who responded that they had used tobacco at the time of their first visit during that 15 months constitute the "before" or comparison group. In this group of tobacco users, those reporting nonuse as of December 1, 1984, constitute the quit rate.

The "after" or treatment group's quit rate was determined by conducting a telephone interview at 15 months

TABLE 1. OFFICE SMOKING CESSATION PROGRAM PHYSICIAN GUIDELINES

Category	Explanation	Plan	Follow-up
W	<i>Winner.</i> Previous daily use but not in past day	Congratulate! Ask if help needed.	Arrange office phone follow-up, if patient has quit recently.
S	Willing to set quit date in 1 to 4 weeks but prefers to stop by <i>self</i> .	Congratulate! Set quit date, provide self-help materials.	Arrange office phone follow-up 3 to 7 days after quit date.
H	Willing to quit within next month but wants <i>help</i> .	Congratulate! Provide self-help materials.	Set appointment with office counselor or MD.
L	Interested in quitting, but not now (<i>later</i>).	Advise of your desire to help when ready.	If patient gives a date for readiness, arrange office phone follow-up at that time.
?	Uncertain of need or desire.	Provide information and motivation.	Follow-up at routine visits.
↓	Only willing to <i>decrease</i> amount of tobacco used.	Advise of unlikelihood of benefit and of your desire to help when ready.	Follow-up at routine visits.
N	<i>No.</i> Not interested in quitting.	Advise of your desire to help when patient changes mind.	Do not ask again at routine visits for 6 to 12 months.
O	<i>Omitted.</i> No MD discussion of tobacco use because of inadequate time, inappropriate, or forgot.	—	Be sure to bring up at next office visit.

Modified from Medical Times 1988; 116:23. Reprinted with permission.

after the program started with the tobacco users who had been identified during that 15 months as they came to the clinic for care. This group was also asked about their reactions to the efforts at Nokomis Clinic to motivate and support their tobacco cessation efforts. Finally, those who reported that they had quit using tobacco were invited to come to the clinic for a blood sample to verify their quit status. This analysis of serum nicotine and cotinine (a metabolic product of nicotine present for days after the last tobacco use) was performed by the laboratory of the Epidemiology Division of the School of Public Health at the University of Minnesota.

The results of both parts of the study are reported separately. The first part is based on the data recorded on the Smoke Cards during normal visits in terms of self-reported amount used and physician-perceived readiness to quit. The second part reports on the users sampled from the 15 months before compared with the users identified during the 15 months immediately following the initiation of the system.

Chi-square analysis was used where statistical comparisons were feasible.

RESULTS

Clinic Program

In the first 2 years after initiation of the program (December 1984 to December 1986), 571 tobacco-using patients were identified in the course of normal patient encounters, and Smoke Cards were maintained for them. Reassurance that this group represented nearly the total population of

tobacco-using patients over the age of 18 years comes from a random chart audit of 374 adult patient visits, which showed that 362 (96.8%) of the patients' charts were labeled for tobacco use and 98% of the labeled tobacco users had a Smoke Card on file.

To determine the necessary frequency of tobacco discussions, all visits were tracked during a 4-week interval in the first 3 months. Thirty-two percent of adult (over the age of 17 years) visits with physicians during this period were made by tobacco users; however, only about one in five visits required the physician to raise the issue of tobacco use. Furthermore, although 48 new cases per month were identified during these first 3 months, the first year averaged 31 new cases per month and the second year averaged only 17, since tobacco-use patterns of most established patients had been identified by that time.

Approximately 60% of the 571 tobacco users were female, nearly identical to the proportion of female patients in the practice. Only 5.1% were over 64 years old; 25.2% were aged 41 to 64 years, 31.0% were aged 31 to 40 years, and 38.7% were under the age of 31 years. Only 3.3% used pipes, cigars, or smokeless tobacco as opposed to cigarettes. The mean duration of use and previous quit attempts are noted in Table 2.

Table 3 describes the initial reactions of tobacco users by physician-assessed category (as defined in Table 1) when they were asked by their physician about their willingness to quit. Forty-one of the total 571 identified are not included in this table because they never had a physician discussion at their first visit and did not return for care during the 2 years of this study. Those who had quit up to 2 weeks before that first encounter were included in

TABLE 2. CHARACTERISTICS OF QUITTERS IN COMPARISON WITH ENTIRE GROUP OF IDENTIFIED USERS

Characteristics	Quitters (n = 108)	All Identified Users (N = 571)
Age, mean (years)	38.3	38.3
Female (%)	58.3	60.6
*Amount smoked, mean (cigarettes per day)	14.8	20.1
Duration smoked, mean (years)	15.7	16.6
Previous quit attempt (%)	77.9	77.5
*Longest quit attempt, mean (months)	21.9	13.1
*Latest quit attempt, mean (months ago)	32.7	41.5
*P < .05		

the user group because of the very high reported recidivism of recent quitters. Thus, although categorized as quitters (quit for 1 to 30 days), most of this 4.9% had been without tobacco for only 1 to 2 days as a result of the illness that brought them in for the visit.

Quit rates are based on patient self-reporting of current tobacco use as of the most recent office visit. Only 472 of the 530 tobacco users who had a cessation encounter with a physician had at least two encounters (89%), thereby permitting knowledge of the effect of previous encounters on tobacco use by those 472. Only 176 (37%) of the 472 had 1 year or more separating their first encounter from their most recent one, since new users were being identified right up to the end of the 2-year report period. Thus, there is a wide range of encounters, from patients who had only two smoking cessation encounters to others who had 12 to 15; these encounters occurred at intervals of from 2 days to 1 year, depending on individual patient desires or needs for medical care visits. The category at the latest encounter for the 472 and the 176 are reported in Table 3.

Smoking patterns, age, and sex of the quitters, as com-

TABLE 3. SMOKER REACTION (BY CATEGORY) AT OFFICE CONTACTS (PERCENT)

Category	Initial Challenge (N = 530)	Latest Contact	
		≥2 Contacts (n = 472)	≥1 Year Involvement (n = 176)
Winner	4.9	22.8	30.7
Stop on own	29.4	20.8	17.0
Help to stop	19.6	10.8	11.4
Later	33.4	27.1	21.0
↓ Decrease	4.5	8.5	6.8
? Uncertain	0.8	3.0	3.4
No	7.4	7.4	9.6
Total	100.0	100.0	99.9

pared with those of the overall group, are shown in Table 2. The quitters tended to be lighter smokers, their longest previous quit interval was longer, and their latest quit attempt had occurred more recently. As of their most recent contact before identification at Nokomis, these current quit attempts had lasted an average of 14.5 months. Only 20% had been smoke-free for 3 months or less, while 33.7% had been smoke-free for over 1 year.

Further review of the records of these quitters reveals that only 11.1% of them had used nicotine gum and only 17.5% had had at least one nurse counseling visit. More than three quarters (77.9%) had quit with no more help than the brief physician encounters on repeated office visits and a follow-up telephone call made after the quit date. Of the overall 472 users, 5.1% had used nicotine gum, 14.8% had had at least one nurse visit, and 64.9% had received a nurse telephone call after a promised quit date.

Before-and-After Comparison

Of the 54 sampled patients reporting tobacco use at the time of their first visit in the "before" period, only two (3.7%) reported being nonusers at the end of that period; however, 48 of 257 (18.7%) smokers identified during the comparable period after the program began reported being nonusers at the end of that period ($P = .013$).

To verify the self-reported quit status of those in the "after" treatment group, the patients were requested to come to the clinic for a serum sample to test for cotinine and nicotine levels. Nine of the quitters were still using nicotine gum, eight refused to come in, one sample was misplaced, and two of the other 30 had normal nicotine levels but elevated cotinine levels (136 and 558 ng/mL). Thus the minimum verified quit rate was 10.9% (assuming that all refusers were still using tobacco).

Finally, the 257 tobacco users identified during the "after" period were asked at the 15-month survey interview about their reactions to the smoking cessation activities at Nokomis Clinic. Only 3.1% felt that it was not appropriate for the clinic to be trying to get its patients to stop smoking. In response to a question about how the "effort to get you to stop smoking" has seemed, 78% reported it to be about right, 10.8% said it was too much, and 11.2% said it was too little. Finally, 75.2% agreed that they were more satisfied with their overall care at the clinic because of the stop-smoking efforts there, and 27% said that they would recommend the Nokomis Clinic to others because of those efforts.

DISCUSSION

One must be cautious about generalizing from a single clinic's experience. Unique aspects of the patients, com-

munity, clinic, or physicians may mitigate against replication of that experience in other primary care settings. There are many reasons to believe, however, that the results reported here may represent an important experience that requires replication efforts and that this program may illustrate important concepts.

First, the before-after comparison showed a large (five-fold) increase in quit rates once the system was put into place. Even if all those in the "after" group who refused to come in for a validating blood sample were lying about their nonuse of tobacco, there was a threefold increase in quit rates (it was not possible retrospectively to offer such a test to the two quitters in the "before" group). Since the patients were unaware that their visits had any research aspect, it is not surprising that some might refuse to cooperate with survey or validation efforts. The physicians were already enthusiastic about smoking cessation and believed that they were being unusually active about it during the "before" period. Most of the biases created by the different methodologies used for this comparison should have minimized the differential (ie, exaggerated the "before" quit rate).

The primary difference in the "after" period was that a system was in place then that made everyone on the clinic staff a participant in the program. The system made it much more likely that tobacco users would not only be identified but would receive multiple reinforcing messages in all of their relationships with the clinic. That activity was in fact the key finding in the meta-analysis by Kottke et al²² of 39 controlled trials of smoking cessation interventions: the most difference was made not by any single intervention, but by multiple interventions applied consistently over a prolonged time with both physicians and others involved. The data from the Nokomis Clinic showing improvement in quit rates for those with more contacts and for those involved for longer periods reinforce that conclusion.

Finally, the results at Nokomis Clinic are compatible with the results from the Doctors Helping Smokers project's earlier studies as well as other trials. In a randomized controlled trial, the smoking cessation effectiveness of physicians trained in a special workshop was compared with that of physicians given only special smoker self-help materials or no assistance at all.⁶ That these three groups of physicians had identical quit rates was not surprising in light of the Nokomis Clinic demonstration. The workshop-trained physicians had been trying to apply the latest techniques, but were doing so as individuals in clinics with no supporting system or reinforcement of their efforts. That so many research trials of physician advice on smoking cessation have shown efficacy may also be due in part to the system imposed by the research project, a system that identified smokers and ensured that clear messages and follow-up were provided.

The absence of such systems in normal practice may be the main factor explaining the dismal findings of Anda et al⁸ or Wallace et al,⁹ where most smokers deny that any physicians have ever told them to quit.

In fact, the system at Nokomis Clinic was designed to counter most of the handicaps physicians suffer when they use their traditional individual approach to smoking cessation²³:

1. Lack of awareness about which patients use tobacco
2. Particular awareness of those most resistant to quitting (eg, patients with emphysema or chronic bronchitis) and lack of awareness of those most interested in quitting⁸
3. Lack of reminders or cues to bring up the topic²⁴
4. Lack of easily accessible information about previous attitudes and plans of a particular patient about cessation, requiring each discussion to start anew
5. Lack of any accessible and acceptable help for those who want such help
6. Lack of follow-up and reinforcement
7. Lack of feedback to physicians about good outcomes (as opposed to selective negative feedback, mostly about those failures that are especially frustrating to physicians, eg, chronic lung patients)

The system at Nokomis Clinic attempts to correct all of these problems. Another advantage is added when that system supports a more effective physician approach—one that avoids the traditional confrontational and preaching tone that raises counterproductive guilt and fear. Consistently applying a supporting and helpful approach is currently believed to be much more effective, avoiding argument with those uninterested in quitting and focusing on those who are amenable to help.¹⁵ The findings of other studies that most smokers want to quit were confirmed in this study, and when approached in a supportive way, 50% made specific quitting plans (Table 3).

Much of the recent literature on physician roles in smoking cessation centers on only this latter change in the way individual physicians approach smokers.^{15,23} Although this approach is a commendable improvement over more traditional approaches, such a change seems likely to be of little avail without the supporting system to ensure regular messages and follow-up.

The quit rates and patient attitudes reported in this article speak for themselves. Quit rates in randomized controlled trials of physician advice range from 3% to 10% above control quit rates. Preliminary data after 3 years of the system at the Nokomis Clinic suggest that the overall quit rate has risen to about 26%, even though new smokers keep entering the system and other less involved physicians now provide a substantial share of the patient encounters. Good stop-smoking groups typically achieve a 20% to 25% quit rate, but in a highly motivated and

self-selected small subgroup that has made the effort to attend such programs.⁵ The tobacco users reported here are normal primary care patients, since the Nokomis Clinic discourages and has had very few people who come there just for the smoking program.

At first glance, the low use of extra assistance (5% having used nicotine gum and 15% having had nurse counseling visits) is puzzling in light of the program's success; it appears to confirm that most quitters can quit without these aids if sufficient motivation and reinforcement are provided. The key element in the program, then, is the smokers' realization that their physician really believes they should quit, since the topic is brought up at nearly every visit and reinforced by the telephone calls received after quit attempts (65% of users). The availability of alternative forms of assistance reinforces this impression and facilitates the brevity of physician discussions, whether such assistance is used or not.

For those interested in developing similar approaches, some additional information may be helpful. Other descriptions are available,^{23,25,26} and the Stop Smoking Kit* of the American Academy of Family Physicians incorporates some of the concepts and provides some of the materials (Smoke Cards, chart labels).

As with any new system, initiating and successfully maintaining this smoking cessation program will require special attention. Clinic managers must decide to establish the system as a policy, and a staff coordinator must be identified to be responsible for it. The physician coordinator must also be an active supporter. Orientation programs and special attention to evaluation and feedback are important. Establishment of an overall smoke-free clinic policy is a critical adjunct.

Many barriers exist to preventive medical practice, and consideration of all of them is part of establishing such a significant innovation as this smoking-cessation system.²⁷ Expensive physician and staff time in both encounters and telephone calls should be minimized. At the same time, reasonable charges to patients for all counseling is needed, even when third-party payers do not reimburse such services (as most of them do not). Nokomis Clinic found that many patients are willing to pay for individualized help with stopping this expensive habit. Operation of the Smoke Card and follow-up system (requiring staff time of about 2 hours per week per full-time physician) can be covered financially from the income from 1½ to 2 counseling sessions per week.

The US Preventive Services Task Force has given its strongest recommendation to medical efforts to provide "repeated smoking cessation messages from multiple sources over an extended time" because of the demon-

strated efficacy of such an approach.²⁸ This description of a clinic smoking intervention program suggests that such an activity is both feasible and effective if it is approached as a systems problem. There is a need to replicate and test this system in a variety of care settings.

Acknowledgments

This project was supported by Doctors Helping Smokers, grant No. R01 CA 38361 from the National Cancer Institute. The authors wish to thank Brenda Rooney for computer data analysis and the entire staff at Nokomis Clinic for their invaluable role in this program.

References

1. The Health Consequences of Smoking: Chronic Obstructive Lung Disease, Public Health Service, DHHS publication No. (PHS) 84-50205. Government Printing Office, 1984, p xiii
2. Warner KE: Health and economic implications of a tobacco-free society. *JAMA* 1987; 258:2080-2086
3. Louis Harris and Associates: Health Maintenance. Newport Beach, Calif, Pacific Mutual Life Insurance Co, 1978
4. Mason JO, Lindsey GB: A positive approach to smoking prevention and cessation. *West J Med* 1983; 139:721-722
5. Jacobs D, Pechacek T, Luepker R, et al: Smokers quit on their own. *Cardio-Vasc Epidemiol Newslett* 1982; 31(Jan):48
6. Kottke TE, Brekke ML, Solberg LI, Hughes JR: A randomized trial to increase smoking interventions by physicians: Doctors Helping Smokers, Round I. *JAMA* 1989; 261:2101-2106
7. Smoking and Health: A National Status Report. DHHS publication No. (CDC) 87-8396:19. Atlanta, Centers for Disease Control, 1987
8. Anda RF, Remington PL, Sienko DG, et al: Are physicians advising smokers to quit? The patient's perspective. *JAMA* 1987; 257:1916-1919
9. Wallace PG, Brennan PJ, Haines AP: Are general practitioners doing enough to promote healthy life style? *Br Med J* 1987; 294: 940-942
10. Wyshak G, Lamb GA, Lawrence RS, et al: A profile of the health-promoting behaviors of physicians and lawyers. *N Engl J Med* 1980; 303:104-107
11. Sobal J, Valente CM, Muncie HL Jr, et al: Physicians' beliefs about the importance of 25 health-promoting behaviors. *Am J Public Health* 1985; 75:1427-1428
12. Rosen MA, Logsdon DN, Demak MM: Prevention and health promotion in primary care. *Prev Med* 1984; 13:535-548
13. Wechsler H, Levine S, Idelson RK, et al: The physician's role in health promotion—A survey of primary care practitioners. *N Engl J Med* 1983; 308:97-100
14. Orleans CT, George LK, Houtp JL, Brodie KH: Health promotion in primary care: A survey of US family practitioners. *Prev Med* 1985; 14:636-647
15. Ockene JK: Physician-delivered interventions for smoking cessation: Strategies for increasing effectiveness. *Prev Med* 1987; 16:723-737
16. Richmond RL, Webster IW: A smoking cessation programme for use in general practice. *Med J Aust* 1985; 142:190-194
17. Russell MAH, Wilson C, Taylor C, Baker CD: Effect of general practitioner's advice against smoking. *Br Med J* 1979; 2:231-235
18. Fagerstrom KO: Effects of nicotine chewing gum and follow-up appointments in physician-based smoking cessation. *Prev Med* 1984; 13:517-527
19. Wilson D, Wood G, Johnston N, Sicuvella J: Randomized clinical trial

*Stop Smoking Kit, available from the American Academy of Family Physicians, 8880 Ward Parkway, Kansas City, MO 64114.

- of supportive follow-up for cigarette smokers in a family practice. *Can Med Assoc J* 1982; 126:127-129
20. Glynn TJ: Physicians and a smoke-free society. *Arch Intern Med* 1988; 148:1013-1016
 21. Pechacek TF, Danaher BG: How and why people quit smoking. In Kendall PC, Hollon SD (eds): *Cognitive-Behavioral Interventions*. New York, Academic Press, 1979, pp 389-423
 22. Kottke TE, Battista RN, DeFriesse GH, Brekke ML: Attributes of successful smoking cessation interventions in medical practice: A meta-analysis of 39 controlled trials. *JAMA* 1988; 259:2882-2889
 23. Solberg LI: Implementing a tobacco cessation program in clinical practice. *Med Times* 1988; 116:119-124
 24. Cohen SJ, Christen AG, Katz PG, et al: Counseling medical and dental patients about cigarette smoking. *Am J Public Health* 1987; 77:313-316
 25. Kottke TE, Solberg LI, Maxwell PL: Smoking cessation strategies and evaluation. *J Am Coll Cardiol* 1988; 12:1105-1110
 26. Solberg LI, Maxwell PL: A practical office-based smoking cessation program. *Patient Educ Proc* 1987; 9:35-38
 27. Kottke TE, Blackburn H, Brekke ML, Solberg LI: The systematic practice of preventive cardiology. *Am J Cardiol* 1987; 59:690-694
 28. US Preventive Services Task Force: Recommendations for smoking cessation counseling. *JAMA* 1988; 259:2882