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## Staff Involvement and Special Follow-up Time Increase Physicians' Counseling About Smoking Cessation: A Controlled Trial

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### Introduction

Only a minority of smokers recall being counseled to quit by physicians<sup>1,2</sup> and internists who do counsel smokers seldom use effective strategies such as setting quit dates and making follow-up appointments.<sup>3,4</sup> We have found that even after intensive training in counseling, physicians discussed smoking with only half of their smoking patients and infrequently made follow-up appointments about smoking cessation.<sup>5,6</sup> To determine whether greater involvement of administrative and office staff, and provision of

specified follow-up time, would increase physician counseling, we conducted a controlled trial.

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## ABSTRACT

We compared the counseling behaviors of two groups of health maintenance organization physicians: one group received training about smoking cessation counseling; the other group received the same training plus staff support and appointment time specially designated for follow-up of smokers. We interviewed patients after their office visits to measure smoking counseling. The group receiving staff support and designated follow-up time counseled more and made more follow-up appointments about smoking. (*Am J Public Health*. 1991;81:899-901)

TABLE 1—Baseline Characteristics of Patients in Sample Groups

Characteristics	Training-Plus		Training-Only
	Before	After	
Number of patients:	102	105	139
Female (%)	28	36	43
Mean age (years)	45	46	48
College graduates (%)	34	34	27
Mean cigarettes/day	18	16	17
Occasional smoker (%)	11	18	9
Want to quit smoking (mean, 10-pt. scale)	7.0	7.2	7.1
Confidence in quitting (mean, 10-pt scale)	5.0	5.9	5.2
First visit to this doctor (%)	4	28	27
Type of visit (%)			
Routine follow-up	44	53	50
Urgent problem	33	19	17
Check-up/physical	21	27	29
Other	2	1	4

## Methods

We studied two physically separate medical stations at a Kaiser-Permanente Medical Center in the San Francisco Bay Area where internists had not been previously trained in smoking cessation and each saw a minimum of 20 patients per week. Four internists at one medical station agreed to receive training with nursing and administrative support (training-plus), while five internists at another station agreed to receive the training (training-only). One training-plus physician subspecialized in pulmonology; one training-only physician subspecialized in endocrinology, and another in infectious disease. One physician in the training-plus group currently smoked. Two physicians in each group were female, and the mean ages of the two groups were similar (36 years for training-plus; 34 years for training-only).

Research staff met with administrators, then with nurses and their supervisors, then with training-plus physicians and nurses to plan the system of administrative supports. Nurses agreed to ask patients if they smoked, to mark the charts of smokers, and to ask smokers to fill out smoking history forms. Physicians decided to use pre-stamped Nicorette prescription pads. The Department of Medicine designated two appointment slots per week per provider for follow-up of smokers. The group adopted a follow-up protocol using a two-part written Quit-date prescription: one copy was given to the patient and one copy was filed by quit date for nurses to use to telephone patients on quit dates.

All providers concurrently attended two one-hour seminars designed to demonstrate and practice counseling about smoking cessation. These seminars have

been described in detail.<sup>5</sup> Training for the training-plus group differed in that nurses and their supervisors attended the sessions. Physicians in the control station were encouraged to ask their office staffs to use reminder stickers to identify smokers.

We defined a smoker as anyone who had smoked a tobacco cigarette during the past seven days. Research staff surveyed patients in the waiting areas, and asked all smokers to participate. This continued until a minimum of 15 smokers were enrolled per physician. Participants answered a questionnaire about their smoking habit, desire to quit and confidence in ability to quit. As soon as possible after the visit, an interviewer telephoned each smoker to determine if the physician or staff had discussed smoking with them and, if so, what steps the physician had recommended. These data were first collected before any meetings with the training-plus group. The week after training was completed data collection began simultaneously from both training-only and training-plus groups' patients.

To monitor use of designated follow-up appointments for smoking we tallied computerized visit records for "smoking" appointments. We also verified with physicians which of their appointments had actually been used for counseling smokers.

Since outcomes were measured by patient report, patients were the unit of analysis. Statistical significance was tested using t-test for continuous and chi-square for categorical data. We also used logistic regression to adjust for differences in outcomes between the groups, for baseline differences in demographic characteristics in patients, their confidence in quitting, occasional smoking status and type of visit. Because these adjustments did not affect results, we present unadjusted differences in the tables.

## Results

We enrolled 335 patients; 26 per physician both before and after training in the training-plus group, and 28 per physician in the training-only group. Telephone interviews were completed for 96 percent of patients within 72 hours of their visits. Patients in the three study groups had similar characteristics, but those enrolled during the pre-training period were less confident of being able to quit, were less often making first visits and more often had urgent problems than those enrolled during the post-training period (Table 1). Compared

TABLE 2—Comparison of Physician Counseling About Smoking Between Trained Groups

	Training-only	Training-plus	Difference	(95% C.I.)
(%)				
Smoking discussed	48.9	68.7	19.8	(6.5,33.2)
Physician initiated discussion of smoking	27.1	62.6	35.5	(22.5,48.6)
Physician asked for quit date	15.8	28.3	12.5	(0.8,24.2)
Smoker agreed to date	7.5	18.2	10.7	(1.0,20.4)
Smoker received written reminder of date	2.3	15.2	12.9	(4.5,21.3)
Nicotine gum prescribed	6.8	15.3	8.5	(-0.7,17.7)
Referred to program	10.5	25.5	15.0	(4.0,26.0)
Received self-help booklet	9.8	34.3	24.6	(13.1,36.1)
Given follow-up appointment about smoking	9.0	18.8	9.8	(-0.4,19.8)

\*Smallest sample sizes: 131 for training-only and 96 for training-plus due to missing data.

with smokers in the training-plus group, more patients in the training-only group were regular smokers.

Training-plus physicians discussed smoking with their smoking patients more often than training-only physicians, initiated the discussion more often, asked for more quit dates, gave more written reminders and booklets, referred more patients to groups, programs or professional help, prescribed nicotine gum more often, and made more follow-up appointments than training-only physicians (Table 2). Individual physicians in the training-plus group counseled from 52 to 93 percent of patients, while those in the training-only group counseled from 32 to 63 percent of patients. Office staffs of training-plus physicians discussed smoking with 5.2 percent of patient smokers while office staffs of training-only physicians discussed smoking with none.

Comparing their performance from before the program started to after they received training and office support, physicians in the training-plus group counseled more patients (from 38 to 69 percent), initiated the discussion more often (25 to 63 percent), suggested quit dates more often (3 to 28 percent), prescribed nicotine gum more often (4 to 15 percent), referred more patients to programs (11 to 26 percent), gave more booklets (12 to 34 percent), and made more follow-up appointments (10 to 19 percent). All differences were statistically significant ( $P < .05$  for all comparisons).

Forty (60 percent) of 68 available smoking appointments were filled, and 23 (34 percent) of designated appointments were actually used for smokers. Only five (22 percent) of these 23 smokers failed to keep their appointments.

## Discussion

In this pilot study we found that involvement of staff and administrators in

planning and support of smoking cessation counseling enhanced the effect of physician training. Solberg and Kottke have suggested that it is important to enlist office staff in support of smoking cessation efforts in medical practices<sup>7</sup> and the National Cancer Institute has emphasized involvement of staff and administration in smoking cessation in its most recent booklet for health professionals. We found this approach to be quite acceptable to these volunteers, but it is rarely used in practice. For example, we have found that 60 percent of health maintenance organization physicians never have other staff counsel and 68 percent never make follow-up appointments about quitting.<sup>3</sup>

As expected, the official designation of time for follow-up visits substantially increased follow-up of smokers. Not all appointments were used for smokers, but the total number (23) may have been appropriate since physicians were advised to make appointments with smokers who agreed to quit dates, and 19 smokers had so agreed. There is concern that smokers may frequently fail to keep follow-up appointments about cessation, but the proportion of missed appointments by smokers was within the 15–33 percent range reported for all patients in adult medical practices.<sup>8–10</sup>

This was a pilot study. Our small number of physician subjects were volunteers who were not randomized, and telephone interviews were not done blindly. The end point was physician counseling, not smoking cessation. Larger and longer-term randomized trials are needed to determine whether organizational involvement and follow-up appointments increase rates of smoking cessation among patients as well as to identify which components are most effective.

We conclude that systematic staff support and designated follow-up visits for smokers increase smoking cessation efforts of physicians beyond those that re-

sult from training alone. Whether these interventions increase cessation rates deserves further study. □

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