

# Physicians and Smoking Cessation

## *A Survey of Office Procedures and Practices in the Community Intervention Trial for Smoking Cessation*

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**Objective:** To obtain a baseline measure of tobacco control activities carried out by physicians and of tobacco control policies and practices in physician offices.

**Design:** All primary care physicians in 11 communities were asked through a mail survey about their tobacco control practices. Thirty offices in each community were randomly selected and interviewed by telephone to determine office policies and practices.

**Setting:** Both surveys assessed primary care settings in the 11 intervention communities.

**Results:** The physicians' survey (response rate, 48%) indicated that physicians report intervention with smokers more than 70% of the time, but the interventions rarely include key behavioral elements necessary for smoking modification. Physicians who received formal training in smoking cessation reported that they believed

themselves to be more prepared and that they spent more time counseling patients than physicians who were not trained. The office survey (response rate, 83.2%) indicated that smoke-free policies are in place in most clinics and offices and that many offices provide printed materials on smoking cessation. However, few offices had staff to coordinate smoking cessation activities. These surveys will be repeated following the intervention phase of the Community Intervention Trial for Smoking Cessation to assess changes in counseling practices and office policies.

**Conclusion:** There is a positive relationship between attending training and intervening with more cessation activities. Physicians perceive themselves as prepared to help smokers, but few are providing more than advice to stop smoking.

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**T**HE NATIONAL Cancer Institute's Division of Cancer Prevention and Control, Bethesda, Md, has initiated and supported over 60 intervention trials for smoking cessation in North America since 1980.<sup>1</sup> A major goal of these trials was to test the efficacy of providing tobacco control interventions through diverse sectors or channels within communities, ie, worksites, health care providers, existing clinical programs, schools, and mass media. In 1987, the National Cancer Institute embarked on an extensive effort to help large numbers of smokers stop smoking, the Community Intervention Trial for Smoking Cessation (COMMIT).<sup>2</sup> The COMMIT is a multicenter, randomized controlled trial of a community-based

intervention for smoking cessation. The 4-year intervention follows a standard protocol that includes activities for health care providers in the community. The COMMIT will assess the effectiveness of a combination of these community-based interventions known to help smokers achieve and maintain cessation.

The COMMIT includes 11 matched pairs of communities throughout North America that were randomly assigned either to a comprehensive community-based antitobacco intervention or to a

*See Methods on next page*

## METHODS

### BACKGROUND—HEALTH CARE PROVIDERS AND SMOKING INTERVENTION

A series of studies<sup>7-15</sup> conducted over the past 10 years investigated smoking cessation by patients in randomized controlled trials of physicians who received special training to intervene with smokers during the course of regular medical encounters. Key elements of the intervention included setting a date to stop smoking, prescribing nicotine chewing gum, providing self-help materials, and conducting follow-up contacts. In some studies, physicians also were prompted or cued to intervene by indicators on patients' charts. These studies demonstrated the efficacy of physician training and implementation of office systems for smoking cessation.<sup>9,15</sup>

Despite these and related findings, many physicians do not regularly address smoking cessation with their patients.<sup>16</sup> A recent US national survey of the general population found that 37.2% of smokers who had seen their physician in the past year reported having received advice to quit smoking during the past year.<sup>17</sup> Most physicians are aware of the health benefit of smoking cessation for their patients, and they agree that physicians have a responsibility to help smokers stop. However, generally less than one half of physicians report advising all patients to stop smoking.<sup>18-20</sup> In the past, less than one quarter of physicians reported that they go beyond

providing advice for smoking cessation, and they often underutilize supportive aids such as written self-help material and referral for therapy for smoking cessation.<sup>21,22</sup>

### HEALTH CARE PROVIDER INTERVENTION

The COMMIT can directly impact on approximately 900 physicians and 700 dentists in the 11 intervention communities during the 4 years of intervention. The goals for the health care provider channel are to increase the quality and quantity of health care provider involvement in tobacco control activities, both in their own offices and in the community. The primary mechanism for achieving these goals is training programs for physicians, dentists, and their office staff. An in-depth discussion of the COMMIT physician and dentist training protocols is provided by Ockene and colleagues.<sup>3</sup> The recommended smoking intervention practices promoted through training and materials include setting up the office practice, which includes designating someone as a smoking coordinator; creating a nonsmoking office environment; addressing cessation with all patients who smoke; and intervening with patients who smoke. Interventions should include the following (the 4 "A's"): *asking* key questions; *advising* why and how to stop smoking; *assisting* with self-help materials, a date to stop smoking, and nicotine replacement therapy; and *arranging* follow-up support.<sup>23</sup> The nicotine patch became available during the final year of this study, and assess-

comparison condition in which communities carry out their usual activities. The COMMIT provides a standard protocol that has enough flexibility to accommodate local variations in the communities. There are 58 activities specified in the protocol, and these are divided into four channels for intervention: worksites and other organizations, cessation resources and services, public education, and health care providers.<sup>3-6</sup> Our report focuses on health care providers, presenting information obtained from a baseline survey of physicians in the intervention communities and a random telephone survey of their office staff.

## RESULTS

### PHYSICIAN SURVEY

The response rate for the survey mailed to all eligible physicians was 48.0% (minimum to maximum range, 25.0% to 68.5%). **Table 1** displays the characteristics of the 470 responding physicians. About 70% of the respondents were in family practice and general and internal medicine. Over half of the participants were in the middle of their careers, graduating in the 1960s and 1970s. There were very few smokers among the

respondents (2.4%). In keeping with the results of previously conducted surveys, respondents predicted that between one quarter and one third of their patients smoke. A high proportion of the participating physicians reported that they ask patients about smoking most of the time (92.5% of 468 respondents asked new patients, and 71.7% of 466 respondents asked established patients) (**Table 2**). However, less than half reported having an office system in place to help them remember to do this. They reported spending a mean of 8.9 minutes per visit discussing smoking cessation when they do address it. A high percentage (86.7%) reported that they usually spend 3 or more minutes per visit addressing smoking cessation with patients.

When physicians address smoking cessation with patients, most reported advising patients to stop and explaining the dangers of smoking. Approximately one quarter reported setting dates to stop smoking, making referrals, and recommending use of nicotine-chewing gum "most of the time." One third assisted patients with smoking cessation plans and provided self-help materials. Very few (11.6% of 464 respondents) arranged follow-up contacts as a regular practice.

To quantify actual smoking cessation practices in

ment of the prescribing practices for the patch will be included in the follow-up survey of physicians.

## EVALUATION OF THE INTERVENTIONS

The primary COMMIT outcome measure is smoking cessation among heavy smokers in the intervention and comparison communities, assessed through cross-sectional and cohort surveys.<sup>1</sup> However, there are many important intermediate changes that occur through the program activities prior to the ultimate changes in behavior at the individual level. Important elements of the COMMIT evaluation design are measures of the impact, the process, and the cost of the COMMIT interventions.<sup>2,24</sup> For example, training of health care providers is intended to bring about increases in the quantity and quality of their interventions with smokers. To determine the general demographics and the smoking intervention practices used by physicians, a 14-item survey was mailed to the physicians and dentists in February 1990. Eligible providers included all physicians who practice family or internal medicine, cardiology, pulmonology, obstetrics and gynecology, and osteopathy and all dentists who practice family or general dentistry. Telephone surveys of staff in a sample of offices were also conducted. The telephone survey is a 15-item interview that assesses office set-up and practices aimed at identifying and intervening with smokers. To avoid any possible effects of intervention in the comparison communities, this initial set of surveys was conducted only in the intervention communities, which are as follows: Bellingham, Wash; Brantford, Ontario; Cedar Rapids, Iowa;

Fitchburg-Leominster, Mass; Medford-Ashlan, Ore; Paterson, NJ; Raleigh, NC; Santa Fe, NM; Utica, NY; Vallejo, Calif; and Yonkers, NY. Similar surveys, which will include some additional items to assess training, will be conducted in both the intervention and comparison communities at the end of the trial in 1993 to determine changes that occur in the smoking intervention practices and office set-ups.

All eligible physicians in the intervention communities received a mailed questionnaire that included a mean of 100 physicians per community. They were prompted to respond through a postcard reminder 2 weeks following the first mailing, and, after 4 weeks, nonrespondents were mailed another copy of the questionnaire. They also were prompted by a postcard reminder. For the office surveys, community research analysts completed telephone interviews of ancillary staff in 30 physician offices within each intervention community to assess office smoking policies and cessation resources for patients. Participating offices were randomly selected from lists compiled from the telephone book and other sources.

## DATA ANALYSIS

Data were analyzed on the IBM mainframe computer at the National Institutes of Health, Bethesda. The SAS software (SAS Institute, Cary, NC) was used to produce the frequency distributions, cross-tabulations, summary statistics, trend tests, and contingency tables.

terms of recommended practices in COMMIT training, a counseling score was derived for physicians. This score was computed by allotting points for each of seven practices; the score was weighted for the reported number of patients with whom the activity was conducted (Table 2). The maximum score is 7.0; the mean physician score was 3.61 (minimum to maximum range, 3.41 to 3.94).

According to these data, most physicians were not performing several of the recommended smoking intervention steps with patients. It is of note that 84.0% (395/470) of the respondents believed themselves to be adequately or well prepared to counsel patients to stop smoking, a higher rate than has been reported in previous investigations.<sup>18-20</sup>

Some training activities for physicians had occurred by the time the baseline surveys were conducted. For example many physicians attended brief (basic training) sessions in which they learned about the recommended approach to smoking cessation, and approximately 15% (71/470) of physicians in COMMIT communities had received more in-depth comprehensive training. About one third of the physicians in the survey reported that they had attended a smoking cessation training event in the previous year. However, we did not

**Table 1. Health Care Provider Survey: Characteristics of Physicians (N=470)**

Provider Characteristics	% of Respondents	95% Confidence Intervals
Response rate	48.0	...
Professional specialty		
Family practice and general medicine	43.4	39.0-47.9
Internal medicine	27.0	23.2-31.2
Obstetrics/gynecology	19.1	15.8-23.0
Other	10.4	8.0-13.5
Year graduated from medical school*		
1959 or earlier	19.1	15.8-23.0
1960-1969	20.0	16.6-23.9
1970-1979	39.8	35.5-44.3
1980-1989	18.9	15.7-22.7

\*Nonresponses are not displayed.

ask whether this training was sponsored by the COMMIT.

**Table 3** demonstrates a significant relationship between participation in training events and perceptions of preparedness by physicians ( $P<.01$ ). Physicians who attended special training programs believed

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themselves to be better prepared to counsel smokers than those who did not attend the programs. There was a small but significant association ( $P < .01$ ) between the perceived level of preparedness and time spent counseling patients. Physicians who believed themselves to be more prepared devoted more of their time to counseling patients to stop smoking. With the exception of routinely asking new patients about their smoking status, the more prepared physicians believed themselves to be, the more they performed recommended smoking cessation practices (**Table 4**).

#### PHYSICIAN OFFICE PRACTICE SURVEY

The overall response rate for the office practice survey, a telephone interview, was 83.2%. There was a wide range of types of office environments, as indicated in **Table 5**. There was considerable variation across the 11 communities in the number of office nurses. The diversity is of note because of the implications for feasibility of intervention activities in the study communities. Offices without necessary staff support will have more difficulty implementing reminder systems

**Table 2. Reported Practices of Physicians**

Tobacco Control Activities	No. of Respondents	% Responding Yes	95% Confidence Intervals
Routinely asks new patients about smoking	468	92.5	89.8-94.6
Routinely asks old patients about smoking	466	71.7	67.4-75.6
Has system for identifying patients who smoke	466	42.9	38.5-47.5
Counseling activities for most or all patients			
Explains dangers of smoking	470	87.2	83.9-90.0
Advises to stop smoking	470	94.5	92.0-96.2
Sets date to stop smoking	461	23.9	20.2-28.0
Develops cessation plan	464	36.9	32.6-41.3
Provides self-help materials	464	36.2	32.0-40.7
Makes referrals	466	22.7	19.2-26.8
Recommends nicotine chewing gum	467	24.8	21.1-29.0
Arranges follow-up visit	464	11.6	9.0-14.9
Records results of encounter in medical record	462	47.8	43.3-52.4
Average time spent counseling patients			
Do not try	27	6.0	4.2-8.6
1-2 min	33	7.3	5.3-10.1
≥3 min	390	86.7	83.2-89.5
Attended training in smoking cessation in 1989	469	34.5	30.4-39.0
Participation in tobacco control activity outside the office	467	23.8	20.1-27.8
	<b>No. of Respondents</b>	<b>Mean (SE) No. of Points</b>	
Average counseling score*	470	3.61 (0.06)	

\*Counseling scores ranged from 0 to 7. For each of the counseling activities listed above, except making referrals and recommending nicotine chewing gum, 0 points indicated that the physician counsels no patients; 0.33 points, some patients; 0.66, most patients; and 1.0, all patients.

**Table 3. Relationship Between Attendance at Smoking Cessation Training Programs and Perceptions of Preparedness as Well as Time Spent Counseling**

	Physicians Attending Formal Smoking Cessation Training	
	Yes (N=162)	No (N=301)
Mean time spent counseling patients, min (SE)	8.7 (0.54)	8.2 (0.42)*
How prepared to counsel smokers physicians believed themselves to be, No. (%)		
Very well	62 (38.3)	51 (16.9)†
Adequately	92 (56.8)	184 (61.1)
Not well	7 (4.3)	65 (21.6)
Definitely not	1 (0.6)	1 (0.3)

\*P<.01 by nonparametric analysis of variance for ordered groups (one-sided test)(trend analysis).

†P<.01 by contingency table  $\chi^2$ ; 3 df.

in charts, keeping self-help materials available, or designating a person to coordinate counseling activities.

**Table 6** shows the tobacco control activities reported in the survey. Of the medical offices, 81.7% (250/306) completely ban smoking. Most of the remainder (11.4% of the sample) allow smoking by staff but not by patients. Considerable variation exists between communities in the availability and promotion

of nonsmoking messages and information. For example, the percentage of offices with an antismoking poster in the waiting room varied among communities from 18% to 55%, and the percent of offices providing pamphlets on smoking cessation in the waiting room ranged from 34% to 78%.

An overall mean tobacco control score was computed for the medical offices. This composite score was developed by COMMIT researchers and is derived by giving one point for completely banning smoking, one point for having a staff person available to counsel patients to stop smoking, and 0.25 points each for display or the availability of no-smoking signs, antitobacco posters, guides, and lists of smoking cessation resources. Of a possible three points, the mean tobacco control score for medical offices was 1.5 (minimum to maximum range, 1.2 to 1.9).

**COMMENT**

Physicians have important roles to play in community-wide antitobacco initiatives. They are in a unique position to advocate the health of patients as well as to encourage patients to reduce their risk for diseases and to promote positive health practices.<sup>25,26</sup> The COMMIT health care provider interventions recognize the access that physicians have to at least 70% of the smokers in their communities, and a key objective of the activities

**Table 4. Physician Practices Associated With Their Perception of Preparedness to Intervene With Patients Who Smoke**

Smoking Cessation Procedures	Physician Responses, %			No. of Respondents	P Value
	Not Well Prepared	Adequately Prepared	Very Well Prepared		
Routinely asks new patients					
Yes	15.6	59.4	25.0	428	.189
No	20.0	62.9	17.1	35	
Routinely asks old patients					
Yes	13.5	57.4	29.1	333	<.001*
No	22.1	66.1	11.8	127	
Routinely identifies smoking status in chart					
Yes	7.0	61.8	31.2	199	<.001*
No	22.6	57.9	19.5	261	
Routinely sets date with patient to stop smoking					
None	43.1	47.3	9.7	93	<.001†
Some	10.7	65.9	23.4	252	
Most	5.9	54.4	39.7	68	
All	2.4	59.5	38.1	42	

\*Significant by contingency table  $\chi^2$ ; 2 df.

†Significant by contingency table  $\chi^2$ ; 6 df.

**Table 5. Office Practice Surveys: Characteristics of Physician Offices Surveyed by Site**

Office Characteristics	All Offices	Intervention Community No.*										
		1	2	3	4	5	6	7	8	9	10	11
No. of offices	306	11	31	30	24	31	31	28	29	32	32	27
% With 1 physician in the office	56.9	54.5	87.1	53.3	41.7	51.6	61.3	71.4	44.8	62.5	43.8	48.1
Average No. of nonphysician staff	6.4	11.7	2.7	7.7	5.5	8.1	3.1	5.6	6.6	6.5	8.3	8.0
% With 0 nurses in the office	34.3	54.5	64.5	16.7	25.0	54.8	64.5	17.9	34.5	18.8	12.5	22.2
% With 1 nurse in the office	31.7	18.2	25.8	20.0	37.5	38.7	35.5	42.9	41.4	34.4	25.0	22.2
Average No. of patients per week	160.4	90.6	157.8	276.3	179.6	160.8	75.8	135.5	148.4	124.3	216.3	163.3

\*For a list of the communities, see the "Evaluation of Interventions" subsection of the "Methods" section of the text.

directed at health care providers is to help them, through training, become more effective in their interventions with patients who smoke.<sup>3</sup> Our data suggest that there is a need for this training. While most physicians advise patients to quit smoking, few use appropriate counseling skills and techniques. The need for training may be even greater in the general population of community physicians, since our sample of 48% of the physicians in the community may not be representative of the entire physician population. It is important to note that a high proportion (approximately 60%) of the participants in this survey are in the middle of their careers and that 69% practice family and internal medicine. For US physicians overall, approximately 48% are between the ages of 35 and 54 years and only 24% practice family or internal medicine.<sup>27</sup> Respondents to our questionnaire may have had a special interest in smoking, which could be reflected in attending more training programs and ad-

ressing smoking cessation more consistently than those who did not respond to the questionnaire.

The vast majority of our respondents indicated that they routinely ask their patients about smoking, explain the dangers of smoking to their patients, and advise them to stop smoking. However, relatively few physicians actually counsel patients using state-of-the-art techniques. Recent studies<sup>7-13</sup> of office-based smoking cessation methods used by physicians document the importance of including the following steps: setting a date to stop smoking, developing a cessation plan, providing self-help materials, making referrals, recommending nicotine replacement therapy, and arranging follow-up contacts and office systems to cue intervention and to assist with monitoring patient progress. Fewer than half of the physicians surveyed in the intervention communities indicated that they included any of these practices in their usual approach to smoking cessation. These findings indicate much

**Table 6. Office Practice Survey: Tobacco Control Activities in Physician Offices (N=306)**

Tobacco Control Activities	% Responding Yes	95% Confidence Intervals
Smoking policy		
Smoking banned	81.7	77.0-85.6
Smoking allowed by staff only	11.4	8.3-15.5
Other	6.9	4.5-10.3
Have a staff person assigned to counsel patients who smoke	12.6	9.3-16.8
Have no-smoking signs in waiting room	75.6	70.4-80.1
Have antitobacco posters in waiting room	43.7	38.2-49.3
Have stop-smoking pamphlets in waiting room	64.0	58.4-69.2
Have smoking cessation resource guide	49.8	44.1-55.6
<b>Mean (SE) No. of Points</b>		
Tobacco control score*	1.5 (0.04)	

\*Tobacco control scores range from 0 to 3. The following six elements contribute to the score: smoking is banned in the office (1.0 points); a person is assigned to counsel patients who smoke (1.0 points); no-smoking signs are posted (0.25 points); antitobacco posters are displayed (0.25 points); self-help guides are available (0.25 points); and a list of smoking cessation resources is available (0.25 points).

room for improvement. Because of these findings, it was disconcerting to find that a high percentage of participating physicians believed themselves to be adequately prepared to offer assistance to patients who smoke. It was encouraging to find that physicians who had previously taken part in formal training programs for smoking counseling believed themselves to be more prepared to counsel patients and spent more time doing so than their counterparts who had not received formal training. Correspondingly, there was a

### **vast majority of physicians warn their patients**

positive relationship between believing oneself to be prepared and incorporating appropriate counseling practices such as encouraging patients to set dates to stop smoking. This finding suggests that special training programs for physicians will enhance their perceived preparedness and increase the likelihood that they will engage in appropriate strategies with patients such as setting a date to stop smoking and offering follow-up.

The COMMIT protocol includes considerable emphasis on training physicians and other health care practitioners in a systematic approach to smoking interventions,<sup>3</sup> an approach that should have a beneficial effect on patient rates of smoking cessation.<sup>7,8,10</sup> Our results suggest that the emphasis on training is

well placed. It is encouraging to note that smoke-free office environments, with signs that state the policy, appear to predominate across all COMMIT sites. This finding is consistent with the goals of the COMMIT and suggests that the health care community is playing a leadership role in the area of smoke-free policies. However, offices can do more in setting up a system of chart cueing and providing materials to help patients quit smoking. The mobilization of these offices demonstrated by changes from baseline measures of policies and practices will be an important part of the COMMIT evaluation.

The COMMIT physician training program promotes the involvement of ancillary staff to support smoking cessation activities in the office environment. At baseline, only 12.6% of offices had one person in the office designated as coordinator of smoking control activities. However, since about one half of physicians who responded in our communities are in "solo practice," with very few support staff, we may find that the appointment of a smoking control coordinator is a strategy that, although very helpful in mobilizing offices, may not be feasible in some practices.

Cigarette smoking is a serious threat to public health, and there is a growing consensus that physicians have an important and essential role to play in the antismoking arena. The COMMIT survey data show that the vast majority of physicians warn their patients about the hazards of smoking and advise them to quit. This finding represents a very positive foundation on which to build more effective office-based smoking cessation efforts. There is reason to believe that formal training in smoking cessation will be effective, particularly in light of the fact that physicians who had the training in the past believed themselves to be more prepared to counsel patients, spent more time doing so, and included more of the necessary behavioral recommendations for effective counseling. These findings provide a sound rationale for the COMMIT protocol, which is directed at the training of physicians to become more effective smoking cessation counselors.

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