

# Making Time for Tobacco Cessation Counseling

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**BACKGROUND.** The objective of this study was to examine the incidence, targeting, and time demands of tobacco cessation advice by community family physicians.

**METHODS.** Research nurses directly observed 2 days of outpatient visits to 138 family physicians in northeast Ohio. Smoking status was identified by patient questionnaire. Visit characteristics were determined from direct observation and billing data. Visits by smokers with and without smoking cessation advice were compared.

**RESULTS.** The incidence of tobacco cessation advice was highest during wellness visits (55% vs 22% for illness visits;  $P < .001$ ). Smokers seen for a tobacco-related chronic illness were more likely to receive advice than those seen for a chronic problem not related to tobacco (32% vs 17%;  $P=.05$ ). The average duration of advice was less than 1½ minutes. There were no significant differences in the duration of advice across different types of visits.

**CONCLUSIONS.** Physicians are providing brief, targeted interventions for smoking cessation in family practices. The findings support the feasibility of implementing a brief intervention with all smokers seen during office visits.

**KEY WORDS.** Physician's practice patterns; smoking cessation; tobacco smoke pollution; physicians, family; primary health care. (*J Fam Pract* 1998; 46:425-428)

Tobacco use is a leading cause of death in the world today. Cigarette smoking accounts for more than 40% of preventable deaths in the United States.<sup>1,2</sup> Patient visits to primary care clinicians, particularly family physicians, provide multiple opportunities for smoking cessation advice. It is estimated that more than 50% of ambulatory medical visits are to primary care physicians, and that the majority of these visits are to family physicians.<sup>3,4</sup> In addition, most primary care physicians report high confidence in their abilities to help patients change smoking behavior.<sup>5</sup>

Smoking cessation advice is the most important preventive service that clinicians can offer patients who smoke. Smoking cessation benefits all age groups and extends to individuals already afflicted with smoking-related diagnoses.<sup>6</sup> A recently published clinical practice guideline found strong scientific evidence for the effectiveness of brief clinician advice; "brief" defined as taking 3 minutes or less.<sup>7</sup>

Despite the demonstrated effectiveness of smoking cessation advice, few physicians are advising even those patients they identify as smokers during a particular visit. In national surveys, physicians report knowing the smoking status of their patients for 69% to 90% of ambulatory visits.<sup>4,8</sup> In studies based on the 1992 National Ambulatory Medical Care Survey (NAMCS), only 20% of the identified smokers were reported by their doctors to have received

smoking cessation advice.<sup>8,9</sup> These studies also demonstrate that the rates of such advice varied with characteristics of the visit and diagnoses of the patients. Smoking cessation advice was more likely to be reported during wellness visits, and for patients who had smoking-related and other diseases that increased their cardiovascular risk profile.<sup>8,9</sup>

Provision of smoking cessation advice during patient visits for illness and well care is critically important.<sup>7,10</sup> While most smokers visit a primary care clinician in a given year, only a small percentage of them visit for well care.<sup>11</sup> Thus, the use of illness visits for smoking cessation counseling is necessary if primary care clinicians are to maximize their impact on the population of smokers. Since primary care clinicians face many competing demands for their time with patients,<sup>12</sup> widespread provision of smoking cessation advice will require brief counseling approaches. It is important to determine how much time smoking cessation advice takes when it occurs during primary care visits. This knowledge lays the foundation for designing interventions that can be implemented in practices.

This study was undertaken to (1) compare the provision of smoking cessation advice by physicians, as recorded by direct observation, for acute illness, chronic illness, and well care; and (2) compare the duration of patient visits for nonsmokers, current smokers not receiv-

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ing counseling, and current smokers receiving tobacco counseling.

## METHODS

Our study was part of a larger study called the Direct Observation of Primary Care (DOPC), an in-depth examination of the content of primary care practice. The methods of the DOPC cross-sectional study of 138 practicing family physicians in Ohio have been described in detail elsewhere.<sup>13,14</sup> Briefly, teams of two trained research nurses visited the practices of physicians and collected data on consecutive patients' visits during 2 separate days of direct patient care between October 1994 and August 1995. The observations were held in nonconsecutive blocks, separated by at least 4 months, to ensure sampling of different seasonal reasons for visits at each site. Physician participants were not aware of the focus on tobacco counseling during data collection. Data sources included the Davis Observation Code (DOC), a direct observation checklist, and a patient exit questionnaire. The DOC is a 20-item validated direct observation scale for physician-patient interactions.<sup>15</sup>

A research nurse used the DOC to record key behaviors every 15 seconds during all patient encounters of the physician's ambulatory practice workday. Each 15-second observation interval was followed by a 5-second recording interval, each recorded interval thus representing 20 seconds of encounter time. More than one DOC category can be coded within a given 15-second interval. Categories include items such as discussion of smoking behavior, history-taking, planning treatment, physical examination, and evaluation feedback. The smoking behavior category was defined as "any question about or discussion of smoking or other use of tobacco." The duration of smoking counseling was calculated by converting the observed number of DOC smoking behavior intervals to minutes. This method is likely to overestimate the time spent on smoking cessation and represents the maximal duration of cessation advice, since doctors received credit for the entire observation period of 15 seconds even if they offered such advice for only a portion of each 15-second interval.

The research nurse who completed the DOC also completed an observational checklist of preventive services that were offered during the visit, including passive tobacco exposure assessment, tobacco history, and tobacco cessation counseling.

Additional data on the patient's past medical history and content of the observed visit were gathered from a patient exit questionnaire. The questionnaire dealt with the patient's past and present smoking status and identified current smokers.

All visits were classified into three categories: acute problem, chronic problem, and wellness visit according to the research nurses' observation of the reason for visit. In addition, both acute and chronic visits were further classi-

fied into tobacco-related and nontobacco-related visits on the basis of diagnosis clusters. Acute visits with presenting symptoms related to the respiratory system were clustered using ICD-9-CM codes from billing data.<sup>16</sup> Clusters included upper respiratory infection, otitis media, acute lower respiratory tract infection, and sinusitis. For chronic illness visits, nine clusters were selected to represent tobacco-related conditions and diseases that worsen with cigarette use (hypertension, ischemic heart disease, diabetes mellitus, asthma, chronic obstructive pulmonary disease, cerebral vascular disease, congestive heart failure, thrombophlebitis, and general arteriosclerosis).

There were 3663 patients 14 years or older in the DOPC study (82% of the total 4454 patients). Of these, 2790 (76%) returned a patient questionnaire. However, 15 patients had missing DOC data and 120 did not report their smoking status on the patient questionnaire, leaving a final sample size of 2655 patients.

The proportion of smokers receiving counseling during tobacco-related and nontobacco-related visits was compared using chi-square tests. The mean duration of encounters for nonsmokers, current smokers not receiving tobacco counseling, and current smokers receiving tobacco counseling were compared using one-way analysis of variance. We used Tukey's *b* post hoc analyses to identify which pair of groups most influenced the group comparisons.

## RESULTS

The characteristics of the practice, physician, and patient samples have been previously described.<sup>13,14</sup> The physician sample is generally representative of family physicians nationally, but includes somewhat more residency-trained and female physicians. The patient sample is similar to patients seen by family physicians nationally. Patients returning questionnaires were more likely to be older, female, established patients, and nonsmokers. However, the magnitude of these differences was small.<sup>13</sup>

There were 485 current smokers identified (18% of the 2655 patients); 122 (25%) of whom received smoking cessation advice as measured by the observational checklist. Only 56 of the total DOPC sample of 4454 visits (1%) received information on how to protect nonsmokers from environmental tobacco smoke (passive smoking).

The reason for visit influenced the incidence of cessation advice. Incidence of advice was highest (55%) during wellness visits. Smokers seen for chronic illness visits with tobacco-related problems were more likely to receive advice than those seen for chronic illness visits not related to tobacco (32% vs 17%;  $P = .05$ ). The incidence of smoking cessation advice was the same for acute visits whether they were tobacco-related or not. Advice ranged from 20 seconds to 8.7 minutes, with the average duration 90 seconds for all visits. There were no significant differences in the duration of the advice

TABLE 1

## Incidence and Duration of Cessation Advice Given to Smokers (n=485) During Visits to Family Physicians Measured by Direct Observation

Reason for Visit (No. of Visits)	Incidence of Smoking Cessation Advice, % (No. of Patients)	Duration of Visit, Minutes	Mean Duration of Advice When Given, Minutes (No. of Patients)	Range of Duration of Advice When Given, Minutes (SD)
Acute illness				
Tobacco-related (81)	25.3 (75)	8.4	1.0 (19)	0.3 - 2.0 (0.6)
Nontobacco-related (212)	20.7 (208)	9.6	1.4 (43)	0.3 - 5.7 (1.2)
	NS	.03	NS	
Chronic illness				
Tobacco-related (57)	32.1 (56)	11.1	1.5 (18)	0.3 - 4.3 (1.1)
Nontobacco-related (60)	16.7 (60)	11.1	1.4 (10)	0.7 - 3.3 (0.8)
	.05	NS	NS	
Wellness (41)	55.0 (40)	17.4	1.8 (22)	0.3 - 6.0 (1.4)
Other (46)	21.7 (46)	11.8	2.5 (10)	0.3 - 8.7 (2.7)
Total Visits (497)	25.2 (485)	10.7	1.5 (122)	0.3 - 8.7 (1.4)

Note: Chi square tests were used to test difference in incidence within acute visits and within chronic visits; t tests were used to test difference between length of visit in both categories of acute visits, length of visit in both categories of chronic visits, and length of advice in all categories of acute and

across different types of visits (Table 1).

Table 2 compares the duration of the encounter for nonsmokers, smokers who did not receive cessation advice, and smokers who received smoking cessation advice. All acute visits and acute tobacco-related visits showed differences in length of visit when cessation advice was given. Results of Tukey's b post hoc analyses indicated that the duration of acute visits for smokers who received smoking cessation advice (mean=10.7 minutes) was significantly longer ( $P < .05$ ) than acute visits for smokers who did not receive cessation advice (8.9 minutes). When the reason for the visit was a chronic illness visit or a wellness visit, providing smoking cessation advice to smokers did not increase the length of the visit in a statistically significant way.

TABLE 2

## Duration of Visits to 138 Family Physicians, by Current Smoking Status, Type of Visit, and Occurrence of Tobacco Counseling, by Direct Observation

Type of Visit	Duration of Visit, in Mean Minutes (No. of Patients)			P Value*
	Nonsmokers	Smokers Without Cessation Advice	Smokers with Cessation Advice	
All acute visits	9.50 (1182)	8.93 (221)	10.66 (62)	.040
Acute visits for a tobacco-related respiratory problem	7.80 (323)	7.99 (56)	9.68 (19)	NS
All chronic illness visits	10.41 (616)	10.93 (88)	11.75 (28)	NS
Chronic illness visits with tobacco-related diagnoses	10.47 (348)	10.61 (38)	12.17 (18)	NS
All visits for wellness	15.57 (233)	14.7 (18)	19.62 (22)	NS

\*Comparisons of three groups using one-way analysis of variance.

## DISCUSSION

This study's multimethod approach, emphasizing direct observation, represents an improvement in the quality of information available on tobacco counseling in actual primary care practices. It shows that family physicians counsel patients about passive tobacco exposure at low rates. Physicians are, however, using one quarter of visits by smokers as an opportunity for cessation counseling. Since the average patient in the study visits the physician 4 times per year,<sup>14</sup> this rate of advice can have a significant impact over time. Moreover, this study and other recent work<sup>8,17</sup> show that physicians target their provision of advice according to patient characteristics. These findings, and the brief time

devoted to tobacco counseling, are consistent with the observation that family physicians prioritize delivery of illness and preventive services from among a large potential agenda.<sup>12,18</sup> Despite these encouraging findings, there is room for family physicians to have additional impact.

There are many potential reasons physicians who know the smoking status of their patients do not deliver smoking cessation advice on every visit. One explanation is the perception that smoking cessation counseling takes too much time among the other competing demands of primary care practice.<sup>12,19</sup> Other potential explanations include inadequate clinic or institutional support for routine assessment and treatment of tobacco use.<sup>7</sup> In addition, physicians and patients may have a threshold beyond which cessation advice is perceived as unwelcome nagging. Several clinical guidelines suggest that clinicians use a team approach for smoking cessation.<sup>7,20</sup> If physicians involve other nonphysicians in their offices, the required time for intervention could be reduced below 90 seconds, and the effectiveness of the intervention is likely to increase.<sup>21,22</sup>

The feasibility of the recent evidence-based clinical guideline to provide smoking cessation advice has not been previously assessed. The Agency for Health Care Policy and Research Smoking Cessation Clinical Practice Guideline showed that advice of 3 minutes or less is effective in promoting smoking cessation.<sup>7</sup> Our data suggest that physicians are providing brief interventions (lasting on average less than 1 1/2 minutes) in primary care settings. Similarly, Russell and Roter<sup>23</sup> reported a mean duration of 1 minute 46 seconds in a sample of 47 audiotaped clinical encounters in primary care. If a clinician sees 30 patients a day and 25% of them are smokers, performing this intervention would add approximately 11 minutes a day to their total time of direct patient contact. Since 70% of all smokers see their physician at least once every year, and brief advice alone results in about a 10% quit rate, this intervention could have a major public health impact.

This study shows that family physicians are already providing targeted smoking cessation advice. However, increased emphasis on consistent identification of a patient's smoking status and the provision of smoking cessation counseling could further increase the impact that family practices can have on the primary cause of premature death.

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