

Smokers Ages 50+: Who Gets Physician Advice to Quit?

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Background. Smoking-related morbidity and mortality, and benefits associated with quitting, extend across the life span. Health care provider interventions enhance quitting. The present study examined perceived influence of physician advice to quit and characteristics of subjects receiving this advice.

Methods. Subjects were 1,454 smokers ages 50+ with at least one physician visit in the past year. Subjects were surveyed at baseline for receipt of and reactions to physician advice to quit and for smoking, health, and demographic characteristics.

Results. Over half of subjects welcomed physician advice to quit, about half said the advice influenced their quitting decision “extremely” or “quite a lot,” and about one-third indicated that it increased their confidence in quitting. Physicians were more likely to advise sicker patients, indicated by poorer health status, at least one past year hospitalization, and presence of cardiovascular, cerebrovascular, or respiratory diseases.

Conclusions. Midlife and older smokers reacted generally favorably to physician advice to quit. Physicians were more likely to advise patients with commonly recognized smoking-related diseases. Discrepancies were noted in advice given to sicker vs healthier patients. Additional physician training in less commonly recognized smoking-related illnesses, intervening with healthier patients to prevent disease, and enhancing patients’ confidence in quitting may improve outcomes.

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INTRODUCTION

Approximately 20% of adults ages 50 and older smoke cigarettes, representing 23 million smokers [1]. As the baby boomers age, the numbers of older smokers are likely to continue to increase into the next century. For example, although smoking prevalence among persons ages 65+ decreased from 17.9% in 1965 to 12% in 1994, the actual number of smokers ages 65+ increased by 20% [2].

Estimates are that 70% of the 419,000 smoking-attributable deaths in 1990 occurred among persons ages 65 and older. These included 86% of smoking-attributable deaths from chronic obstructive pulmonary disease, 64% from lung cancer, and 65% from ischemic heart disease [2]. Smokers also have a higher prevalence of other diseases that disproportionately affect older adults, such as osteoporosis, cataracts, macular degeneration, and dental disease [3]. Finally, smoking interferes with a number of pharmacotherapies prescribed for older adults, including propranolol, antidepressants, theophylline, and insulin [4,5]. Half of all continuing smokers will die of a smoking-related disease. Since most tobacco-related mortality occurs among older adults, the impact of smoking in this population and the potential benefits of cessation are large.

Smoking cessation reduces overall risk of death and disability across the life span [6]. Relative to continuing smokers, older former smokers have lower overall mortality, as well as decreased risk of cardiovascular disease and myocardial infarction [7,8], better pulmonary function [9], improved cerebral perfusion [10], and improved functional status and quality of life [11].

Clearly, older smokers represent an important population for intervention [12]. Increasing attention has been given among the general population to the role of health care providers in screening and counseling for smoking cessation, with the AHCPH Guideline [13] providing intervention standards. The effectiveness of



health care provider interventions for smoking cessation has been demonstrated for midlife and older adults [14,15], and interventions can be incorporated into routine medical care [16]. Health care providers are logical intervention contacts for older smokers. Older smokers are likely to be already experiencing health consequences of smoking, which provides an opportunity for providers to personalize risks of smoking and benefits of cessation. In addition, older smokers are likely to see health care providers more frequently than do younger groups. According to the 1992 National Health Interview Survey, 83.6% of smokers ages 65+ reported seeing their physician at least once in the past 12 months. However, only 42–59.7% reported being advised by their physician to stop smoking during this period [3,17].

The present study examined physician advice for smokers enrolled in a large trial of self-help interventions for midlife and older smokers. Analyses focused on identifying the perceived influence of physician advice and relationships between characteristics of subjects and reported receipt of advice to quit. Little is known about reactions to physician advice by midlife and older smokers or of factors that influence physician intervention in this group. Development of such an evidence base may enhance the ability to encourage and train physicians and other health care providers in delivery of effective smoking cessation interventions for this growing, at-risk population.

METHOD

Subjects

Subjects were drawn from a sample of 1,975 smokers ages 50 and older who were participating in a 15-county trial of mailed and telephone interventions. Other enrollment criteria for this larger trial were smoked at least 10 cigarettes/day for at least the past 10 years, planned to quit smoking on their own (i.e., without using a face-to-face program such as a clinic) within the next 3 months, planned to maintain their primary residence in the 15-county target area for the next 18 months, lived in a home or apartment with a private telephone, and available by telephone for at least 11 months of the year. The protocols were approved by the Research Subjects Review Board at the University of Rochester, and all participants signed an approved consent form.

Subjects were excluded from the present set of analyses if they reported not having made a physician visit within the past year ($n = 225$), or if they were not eligible for analysis because of enrolling in the study before the item on physician visits was included in the questionnaire ($n = 207$) or having a quitting partner, such as a spouse, also enrolled in the study (only one member of the pair was included in the analyses; $n =$

77), or if they were disqualified from the study for other reasons (e.g., did not fully meet enrollment criteria; $n = 12$). This yielded a final sample of 1,454 subjects (86.60% of eligible sample) who reported having made a physician visit in the past year.

Procedures

Subjects were recruited through a variety of channels, including paid advertisements, television and radio interviews and public service announcements, newspaper articles, physician offices (through brochures and/or direct referrals), and others [18]. As part of enrollment, subjects completed a baseline questionnaire that served as the basis for the current set of analyses. This questionnaire included items on smoking history, medical conditions, health care provider visits, health status, hospitalizations, and demographics.

Univariate analyses were conducted to examine descriptive data. Percentages were calculated for subjects who reported receiving physician advice to quit in the past year and their reactions to this advice. Multivariate analysis (logistic regression) was performed to characterize individuals who received advice to quit relative to those who did not. Bivariate analyses (χ^2) were conducted to examine the relation between individual health conditions and physician advice.

RESULTS

Subject Characteristics

Subject characteristics are presented in Table 1. Subjects ranged in age from 50 to 84 years ($M = 58.15$, $SD = 7.15$). Nearly two-thirds were female (62.10%), about half were married (48.83%), most had at least a high school education (88.35%), and about half were employed (49.56%). Most were white (92.48%), reflecting the ethnic distribution in the target area. Subjects smoked an average of 1 pack of cigarettes/day

TABLE 1
Subject Characteristics

Characteristic	Frequency
Demographics	
Age (mean (SD))	58.15 (7.15)
% Female	62.10
% Married	48.83
% \geq High school education	88.35
% White	92.48
% Employed	49.56
Smoking history	
No. cigarettes/day (median (range))	20.00 (10–80)
No. years smoked (mean (SD))	39.39 (8.96)
% Currently using NRT/bupropion	5.98
% Other household smokers	32.55

(range 1–80 cigarettes/day) for the past 39.39 years (SD = 8.96). Fewer than 6% were using nicotine replacement or bupropion, and about one-third lived with another household smoker.

Physician Advice

Overall, 81.43% of subjects reported receiving physician advice to quit smoking during an office visit over the past year. Over half (57.26%) responded “yes” to the question “Did you welcome this advice [at the time of the visit]?” and nearly one-third (31.68%) reported that the advice increased their confidence in their ability to quit (at the time of the visit). When queried regarding how much the doctor’s advice to quit influenced their reasons for quitting at this time, half (50.90%) indicated “extremely” or “quite a lot,” while about one-third (31.01%) indicated “a little” or “not at all” (see Table 2).

Factors Related to Receiving Advice

To examine characteristics of subjects reporting having received physician advice, a logistic regression was run, entering the following variables (assessed at the time of the baseline questionnaire) simultaneously: smoking characteristics—smoking rate (smoke \geq 25 cigarettes/day vs not; note that, in a separate run, categorizing smoking rate as 10–14, 15–19, 20–24, or 25+ did not alter findings), age (<65 vs 65+; note that in a separate run, categorizing age as 50–59, 60–69, and 70+, or entering as a continuous variable, did not alter findings), prior quit attempts (first attempt vs not), longest prior abstinence (1–7, 8–91, 92–365, or >365 days vs 0 days), live with other smoker, using nicotine replacement or bupropion, confidence in ability to stop smoking (1–10 point confidence rating), stage of change

(preparation vs contemplation); health characteristics—health status (measured from MOS-SF12 [19], “In general, would you say your health is . . .” very good, good, fair, or poor vs excellent), number of hospital stays in the past year (any vs none), belong to HMO/managed care; demographics—education (high school, 13–16 years, or postbaccalaureate vs less than high school), race (white vs nonwhite), marital status (married vs not), gender, employment (employed vs not), and urban vs rural area. Results of this run are presented in Table 3.

The Hosmer–Lemeshow χ^2 was not significant, demonstrating an adequate fit for the model. Four variables were significantly associated with receiving physician advice. Poorer health status was associated with greater receipt of advice, with subjects reporting “fair” or “poor” health receiving significantly more advice relative to those reporting “excellent” health (86.91% vs 66.67% for fair vs excellent, OR = 2.30, 95% CI 1.18, 4.44; 93.18% vs 66.67% for poor vs excellent, OR = 6.91, 95% CI 2.08, 31.71). Similarly, subjects with any hospital stay in the past 12 months were more likely to receive advice relative to those with no hospitalizations

TABLE 2

Physician Advice and Smokers’ Reactions

Item	%
Has your doctor advised you to stop smoking in the past year?	
Yes	81.43
[If yes] Did you welcome this advice?	
Yes	57.26
Did this advice make you feel more confident you could quit?	
Yes	31.68
How much does each of the following describe your reasons for quitting at this time . . . The doctor said to quit?	
Not at all	16.30
A little bit	14.71
Moderately	18.09
Quite a bit	16.99
Extremely	33.91

TABLE 3

Variables Associated with Receiving Physician Advice to Quit Smoking

	OR	95% CI
Smoke \geq 25 cigarettes/day	1.24	0.90, 1.71
Age (65+ vs <65)	0.82	0.55, 1.23
Prior quit attempts (first attempt vs all others)	1.29	0.36, 4.12
Longest prior abstinence (vs none)		
1–7 days	1.86	0.54, 5.66
8–91 days	1.95	0.58, 5.69
92–365 days	1.37	0.40, 4.03
>365 days	1.61	0.47, 4.83
Live with other smoker	1.11	0.79, 1.57
Using nicotine replacement or bupropion	1.38	0.72, 2.89
Confidence in ability to quit (1–10)	1.03	0.97, 1.10
Stage of change (precontemplation vs contemplation)	1.25	0.90, 1.76
Health status (vs excellent)		
Very good	1.26	0.67, 2.33
Good	1.80	0.97, 3.25
Fair	2.30	1.18, 4.44
Poor	6.91	2.08, 31.71
No. hospital stays in past year	1.71	1.09, 2.79
Belong to HMO/Managed care	0.97	0.71, 1.32
Education (vs less than high school)		
High school	0.87	0.46, 1.55
13–16 years	0.90	0.48, 1.60
Post baccalaureate	0.55	0.28, 1.05
Race (white vs non-white)	1.22	0.67, 2.33
Marital status (married vs all other)	1.50	1.09, 2.09
Gender	1.02	0.74, 1.41
Employment (employed vs not)	0.71	0.51, 1.00
Urban vs rural area	0.74	0.52, 1.05

(89.43% vs 79.52%, OR = 1.71, 95% CI 1.09, 2.79). Finally, subjects who were married were more likely to receive advice relative to those who were not (84.10% vs 78.82%, OR = 1.50, 95% CI 1.09, 2.09).

A series of χ^2 analyses was run to examine differences in physician advice by specific smoking-related conditions. These variables were run separately from the logistic regression analyses because of the relatively large number of conditions examined (10) and the interest in examining physician response to each individual condition, irrespective of the presence of any others. Results are presented in Table 4. Relative to the absence of these diseases (assessed as "ever had"), physicians were more likely to advise patients to stop smoking if they had a history of heart attack, hypertension, stroke, emphysema, asthma, or chronic bronchitis ($P < 0.05$ or better for all). Physicians were not more likely to advise in the presence of diabetes, depression, osteoporosis, or cataracts. Physicians appeared more likely to advise patients with lung cancer and macular degeneration relative to absence of these conditions (94.74% vs 81.59% and 91.43% vs 81.52%, respectively). However, sample sizes were too small ($N = 19$ and 35, respectively) to allow for reasonable statistical power for these analyses.

DISCUSSION

Results of the present set of analyses with a large sample of 1,454 midlife and older smokers indicate both encouraging results and potential areas for further intervention with physicians to enhance impact. It was encouraging that over half of subjects reported welcoming physician advice to quit. In addition, about half reported that the advice influenced their decision to quit "extremely" or "quite a lot," and only about a third

said that the advice influenced them only "a little" or "not at all." Physicians were more likely to advise sicker patients, as indicated by poorer self-reported health status and one or more reported hospitalizations in the past year. Finally, even within this population that reported a high incidence of advice (81.43% reported receiving advice in the past year), differences were seen in delivery of advice by disease/medical condition. Relative to the absence of these conditions, physicians were more likely to advise patients to stop smoking if they had cardiovascular, cerebrovascular, or respiratory diseases (a similar pattern was seen for lung cancer and macular degeneration, though the numbers were quite small). These results may include some false positives, given the relatively large number of analyses. However, if the overall *pattern* of results is accurate, this suggests that physicians are knowledgeable regarding the most commonly identified smoking-related health conditions and are advising accordingly.

There are also several results that suggest possible opportunities for enhancing interventions. The finding that physicians were more likely to advise sicker patients, whether indicated by health status scores, hospitalizations, or smoking-related conditions, suggests that opportunities for primary prevention may be missed. In some instances, differences in receipt of advice were substantial. For example, whereas 93.18% of subjects reporting "poor" health status received physician advice to stop smoking, only two-thirds of patients reporting "excellent" health received such advice (66.67%). Physicians should be encouraged to extend their smoking cessation advice to relatively healthy midlife and older patients to prevent smoking-related disease and physical decline.

Variability was also noted in the types of smoking-related illnesses that elicited increased physician advice. Relative to absence of these conditions, physicians were no more likely to deliver smoking cessation advice to patients with diabetes, osteoporosis, cataracts, or depression, despite the fact that smoking complicates and/or is a risk factor for the first three. The lack of difference for depression may indicate a lack of recognition of this condition and/or concerns regarding the relatively greater difficulties encountered by depressed patients when they attempt to stop smoking. Notably, even where no differences were observed, over 80% of all patients in each category reported receiving advice. Nevertheless, it may be possible to further improve rates of advising by educating health care providers about these additional smoking-related risks (e.g., over 90% of patients with cardio- or cerebrovascular conditions received advice).

About one-third of patients reported that their doctor's advice enhanced their confidence in quitting. Self-efficacy, often measured as confidence in ability to quit

TABLE 4

Physician Advice by Medical History

Condition	% Advised with condition	% Advised without condition	χ^2
Heart attack	91.75	81.02	6.97**
Hypertension	85.50	79.91	6.46*
Stroke	93.55	81.22	6.04*
Emphysema	92.67	80.03	17.65****
Adult asthma	89.94	80.64	8.62***
Chronic bronchitis	90.08	78.94	21.95****
Diabetes	82.88	81.67	0.10
Depression	82.29	81.45	0.15
Osteoporosis	88.78	81.24	3.47
Cataracts	84.72	81.43	0.94

* $P < 0.05$.

** $P < 0.01$.

*** $P < 0.005$.

**** $P < 0.001$.

[20], has been shown to predict abstinence [21]. Identifying effective physician strategies to enhance patient self-efficacy may further encourage effective quit attempts.

Subjects who were married were more likely than those who were not to receive physician advice. While it is possible to speculate why this could be so, if subjects who are not married are consistently *less* likely to receive advice, this may serve as important feedback to physicians to enhance their intervention activities.

There are several caveats in viewing the present set of findings. The population studied reported a high rate of receiving advice (81.43%). While encouraging for the present sample, this is considerably higher than the 42–59.7% reported previously [3,17]. The present sample was motivated to make a quit attempt and may have been more likely to recall physician advice, and up to 15% were referred to the project either directly by a physician or by a brochure in the physician's office [18]. Conversely, it is possible that, within this sample, some subjects may have not recalled receiving physician advice, so that the reported figures could underestimate actual rates. Biased recall could have occurred, such that subjects with poorer health could have been more likely to recall physician advice. Finally, time elapsed since the physician visit was not assessed and, no doubt, varied across subjects, which may have influenced recall. Nevertheless, the present set of results shows some consistency with prior studies of broader aged populations, which have also shown increased reporting of physician advice for patients with poorer health status [22] and who have had a myocardial infarction, hypertension, or stroke [23,24].

The present results indicate a generally favorable response by midlife and older smokers to physician advice to quit smoking. Within the context of a group already receiving a high level of physician advice, physicians appeared even more likely to advise patients with the most commonly recognized smoking-related health conditions (relative to the absence of these conditions). Physicians also appeared to be missing opportunities for prevention of smoking-related illnesses. Additional physician training in less commonly recognized smoking-related health risks, in intervening with relatively healthy midlife and older smokers, and in strategies to enhance patients' confidence in quitting may improve outcomes.

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