

ATTITUDES, BELIEFS, AND PRACTICES REGARDING SMOKING AND SMOKING CESSATION AMONG AFRICAN-AMERICAN PHYSICIANS AND DENTISTS

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African-American physicians and dentists in metropolitan Atlanta were surveyed to assess smoking cessation practices and perceptions. Questionnaires were mailed to 373 physicians and 90 dentists. A total of 154 questionnaires were returned, for an overall response rate of 33.3%. More physicians than dentists considered smoking a "very serious" threat to patients' health, and physicians were more likely to document smoking status in charts and to counsel smokers to quit. Physicians also were approached more frequently by patients seeking cessation advice. Both types of practitioners considered the nicotine patch, formal cessation programs, and behavior modification/psychotherapy to be among the most effective cessation methods, and nicotine gum and acupuncture to be among the least effective. These results indicate African-American physicians are much more involved than dentists in promoting smoking cessation among patients. Advice of health professionals generally is viewed as a powerful influence for African-American patients. Further work is needed to utilize fully the power of health care providers, especially dentists, in the fight against tobacco-related morbidity and mortality. (*J Natl Med Assoc.* 1997;89:745-751.)

Key words: smoking cessation ♦ physicians
♦ dentists ♦ African Americans

During the 25 years following the publication of the first Surgeon General's report on the health effects of cigarette smoking, the annual prevalence of smoking among US adults declined by approximately 40%.¹ However, recent data indicate that the proportion of current smokers among Americans aged ≥ 18

years has remained steady at about 25% since 1990.^{1,2}

Smoking prevalence in this country varies dramatically by ethnicity, from a high of 42.2% among American Indian/Alaskan Native groups to a low of 13.9% among Asian/Pacific Islanders. Prevalences for African Americans and whites are intermediate, 27.2% and 26.3%, respectively.² Reasons for smoking among adolescents and patterns of smoking among adults also have been shown to differ across ethnic groups.³⁻⁵ Such diversity in motivations and practices suggests the need for culturally competent, targeted smoking prevention and cessation materials as a means of achieving greater success in the fight against tobacco-related morbidity and mortality.⁵⁻⁸

One tobacco control strategy that has proven effective is smoking-cessation intervention on the

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part of a health-care provider.⁹⁻¹¹ Caregivers are a logical focus for the delivery of smoking-cessation interventions for a variety of reasons, including their dedication to the promotion and maintenance of good health, their high profile and respected position in society, and their significant degree of access to smokers. According to 1992 data from the Centers for Disease Prevention and Control, approximately 70% of current smokers visit a physician at least once a year, and more than 50% visit a dentist.¹²

Physician advice has been reported to figure prominently in the decision to quit smoking.^{13,14} In 1979, the Surgeon General's report indicated that physician advice to quit smoking was associated with quitting or with reducing the number of cigarettes smoked for 10% to 25% of smokers so advised.¹⁵ The following year, the American Medical Association responded with a recommendation that physicians "assess routinely the smoking habits of their patients and encourage them to quit smoking by offering them direct assistance for referring them to community cessation clinics."¹⁶ Similarly, the American Dental Association began as far back as 1964 to encourage its members to discuss the hazards of tobacco use with patients.¹⁷ The continued interest of the profession in participating in antismoking efforts is demonstrated by their involvement in programs such as the National Cancer Institute's Community Intervention Trial for Smoking Cessation (COMMIT) and America Stop Smoking Intervention Study (ASSIST).¹⁸

Although African Americans suffer disproportionately from tobacco-related illness¹⁹ and may be more highly addicted to nicotine than their white counterparts,⁴ there is evidence that they and other minorities are less likely to receive physician advice to quit smoking.^{12,20} In addition, fewer African Americans than whites attend smoking-cessation programs or try other strategies, such as nicotine replacement or hypnosis, for quitting smoking.²¹

This study is part of an overall effort to develop and test a health-care provider-assisted smoking-cessation protocol targeted at African-American populations. As a first step in the development of such a protocol, African-American physicians and dentists were surveyed as to their current attitudes, beliefs, and practices regarding smoking and smoking cessation. This article reports the results of that survey and analyzes potential differences in outlook or practice by type of provider (physician versus

dentist), gender, and time since graduation from medical or dental school.

MATERIALS AND METHODS

A cross-sectional survey of African-American physicians and dentists practicing in the metropolitan Atlanta area was conducted. The survey instrument was designed to assess current smoking cessation-related practices and perceptions among this population of health-care providers. Potential physician participants in the survey were identified using a 1994 mailing list of African-American members of the Atlanta Medical Association, the local affiliate of the National Medical Association. Access to dentists was obtained through the cooperation of the president of the North Atlanta Dental Society, who arranged for distribution of questionnaires among the membership of that organization.

After human subjects approval was received, questionnaires were mailed to 373 physicians and 90 dentists. Included with the questionnaire was a letter describing the purpose of the survey, along with a stamped, addressed return envelope. The letter was signed by the presidents of the respective medical and dental societies and by the principal investigators of the project. Three weeks after the initial mailing to physicians, a follow-up mailing was done to boost the response rate. Follow-up mailings to dentists were not feasible because there was no direct access to the North Atlanta Dental Society mailing list.

The two-page questionnaire included 20 items; a short, simple format was maintained in the interest of reducing respondent burden. Confidentiality of responses was assured in the letter that accompanied the questionnaire. No names or other personal identifiers were requested. The only items included that were descriptive of the respondent were gender and year of graduation from medical or dental school. The forms received by physicians and dentists were identical except that they were color-coded so as to distinguish the two groups. The questionnaire covered the following content areas:

- characteristics of the practice and the patient population,
- current practices related to smoking cessation,
- awareness and use of available smoking-cessation resources, and
- opinions and attitudes regarding the degree to which smoking is a health threat, the effectiveness of various cessation methods, and the need for further training in smoking-cessation techniques.

Table. Smoking-Cessation Activities Among African-American Physicians and Dentists

	No. (%) Physicians (n=121)	No. (%) Dentists (n=33)	P (χ^2) Value*
Gender			
Female	54 (45.4)	10 (30.3)	
Male	65 (54.6)	23 (69.7)	.12
Unknown	2		
Year of graduation			
1941 to 1969	24 (20.3)	4 (12.1)	
1970 to 1979	45 (38.1)	11 (33.3)	.35
1980 to 1992	49 (41.5)	18 (54.6)	
Unknown	3		
Practice type			
Solo	44 (36.4)	23 (69.7)	
Group	40 (33.1)	9 (27.3)	.002
Health maintenance organization	8 (6.6)	0 (0)	
Other	29 (24.0)	1 (3.0)	
Patients seen per week			
0 to 59	44 (38.3)	9 (28.1)	
60 to 100	48 (41.7)	15 (46.9)	.56
>100	23 (20.0)	8 (25.0)	
Unknown	6	1	
% African-American patients			
0 to 49	23 (19.3)	2 (6.1)	
50 to 89	47 (39.5)	9 (27.3)	.025
90+	49 (41.2)	22 (66.7)	
Unknown	2		
Smoke-free office?			
Yes	97 (82.9)	29 (87.9)	
No	20 (17.1)	4 (12.1)	.49
Unknown	4		
Current smoker?			
Yes	5 (4.2)	3 (9.1)	
No	114 (95.8)	30 (90.9)	.37†
Unknown	2		
How serious a health threat is smoking?			
Very	88 (75.2)	15 (46.9)	
Somewhat	22 (18.8)	13 (40.6)	.009
Not very	7 (6.0)	4 (12.5)	
Unknown	4	1	
Record smoking status in chart			
Always/sometimes	101 (87.8)	18 (56.2)	
Rarely/never	14 (12.2)	14 (43.8)	.0002†
Unknown	6	1	
Counsel patients to quit			
Always/sometimes	99 (89.2)	20 (62.5)	
Rarely/never	12 (10.8)	12 (37.5)	.001†
Unknown	10	1	
Patients request cessation help			
Always/sometimes	53 (47.3)	4 (12.5)	
Rarely/never	59 (52.7)	28 (87.5)	.0004†
Unknown	9	1	

Table. Smoking-Cessation Activities Among African-American Physicians and Dentists (continued)

	No. (%) Physicians (n=121)	No. (%) Dentists (n=33)	P (χ^2) Value*
Aware of formal programs in community			
Yes	72 (60.0)	8 (25.0)	
No	48 (40.0)	24 (75.0)	.001
Unknown	1	1	
If aware, make referrals?			
Always/sometimes	44 (64.7)	3 (37.5)	
Rarely/never	24 (35.3)	5 (62.5)	.25†
Unknown	4		
Aware of programs for African Americans?			
Yes	12 (10.3)	3 (9.1)	
No	104 (89.7)	30 (90.9)	.83
Unknown	5		
Aware of recent continuing medical education (CME) courses?			
Yes	21 (18.0)	3 (9.4)	
No	96 (82.0)	29 (90.6)	.29†
Unknown	4	1	
Would participate in CME course			
Yes	45 (38.8)	15 (46.9)	
No	28 (24.1)	2 (6.2)	
Unsure	40 (34.5)	14 (43.8)	.17
Already have	3 (2.6)	1 (3.1)	
Unknown	5	1	

*All P values are calculated with the "unknown" group omitted.
†Fisher's exact test.

The distributions of responses to the various survey items were calculated by type of practitioner (physician versus dentist), by year of graduation (1941-1979 and 1980-1992), and by gender. The statistical significance of differences between groups was assessed by computing chi-square statistics, Fisher's exact tests, or *t*-tests where appropriate, and corresponding *P* values.

RESULTS

Of the 463 questionnaires distributed, 154 questionnaires were completed and returned to the investigators, corresponding to an overall response rate of 33.3%. A slightly lower proportion of physicians (32.4%) compared with dentists (36.7%) responded, despite the fact that physicians received two mailings and dentists only one.

Type of Practitioner

The distribution of responses to selected items by

type of practitioner (physician versus dentist) is shown in the Table. With regard to demographic data, both groups included a higher proportion of men than women, with a wider gender gap for dentists (30.3% women) than for physicians (45.4% women). The dentists tended to be more recent graduates than their physician counterparts, although the difference was not statistically significant.

Information on practice characteristics indicated that the majority of dentists were in solo practice compared with just over one third of physicians. None of the dentists and only 6.6% of the physicians were employed by a health maintenance organization (HMO). (The "other" types of practices listed included academic/university settings, public health clinics and health departments, and miscellaneous other settings such as drug dependency clinics and correctional institutions.) The volume of patients seen by the two groups was similar; however, the dental practices tended to include a

somewhat higher proportion of African-American patients. The great majority of both dental and medical offices were reported to be smoke-free, and cigarette smoking was rare among the practitioners themselves, with only five physicians and three dentists indicating that they were current smokers.

The largest apparent differences between physicians and dentists were related to their assessment of the health risks associated with smoking and to the smoking cessation-related activities in which they engaged. Fewer than half of the dentists compared with more than 75% of physicians evaluated cigarette smoking as a "very serious" threat to the health of their patient population. Consistent with this, a much higher proportion of physicians than dentists reported that they "always or sometimes" (versus "rarely or never") recorded a patient's smoking status in the medical chart and counseled patients who smoke to quit smoking.

Physicians also were significantly more likely to be approached by patients for smoking-cessation assistance/counseling than were dentists. When asked about formal smoking-cessation programs available in their communities, 60% of physicians indicated that they were aware of such programs compared with only 25% of dentists ($P=.001$). Among those who were aware of programs, physicians were more likely than dentists to make referrals, although due to small numbers, the difference was not statistically significant. Very few practitioners of either type were familiar with smoking-cessation programs or materials targeted specifically at African Americans. Physicians were more likely to know of recent continuing medical education (CME) courses dealing with smoking-cessation issues but somewhat less likely to indicate a willingness to participate in such courses.

When asked to assess the success rate of patients they had counseled or referred, only 64 physicians (52.9%) and 11 dentists (33.3%) provided estimates. Physicians tended to report higher perceived success rates than dentists, although none of the differences was statistically significant (data not shown). Respondents also were asked to rate the effectiveness of the following eight methods for helping smokers quit: nicotine patch, nicotine chewing gum, formal cessation programs, hypnosis, psychotherapy/behavior modification, acupuncture, self-help methods, and physician advice. Each method was rated on a scale of 1 (very effective) to 5 (not effective). Results of *t*-tests indicated no significant differences in mean scores assigned by

physicians compared with dentists for any of the methods listed. Both groups considered the nicotine patch, formal cessation programs, and behavior modification/psychotherapy to be among the most effective methods, and nicotine gum and acupuncture to be among the least effective.

Year of Graduation and Gender

Responses to the survey items did not differ dramatically by either year of graduation or gender. Providers who graduated in 1980 or later were somewhat more likely to be in HMOs rather than in solo practice, but the difference was not statistically significant. The only significant difference by year of graduation was in the perception of the degree to which smoking threatens health, with nearly 80% of the more recent graduates describing it as a "very" serious threat compared with only 61% of those who graduated prior to 1980 ($P=.034$). Gender was strongly related to practice type, with a higher proportion of men in solo practice; women were more likely to participate in HMOs or to be in other practice settings ($P=.002$). For all of the remaining variables, there were no significant differences by gender.

DISCUSSION

Results of this survey of African-American health-care professionals indicate that physicians are involved to a much greater extent than dentists in activities related to promoting smoking cessation among their patients. Gerbert et al²² reported similar findings from their survey of a predominantly white sample of dentists and internists in the San Francisco Bay area. In their study, physicians were more likely to discuss quitting or cutting down with patients who smoke, refer patients to cessation programs, record smoking status in the chart, establish a mutually agreed on quit date, and provide pamphlets or educational materials on smoking. Dentists more frequently endorsed the statement that advice to quit smoking represents too much "meddling" in the lives of patients and that cessation counseling is not very important relative to other aspects of their practice.

Obstacles to cessation counseling identified in this and other studies of dentists include lack of insurance coverage, inadequate time, lack of self-help materials for patients, and concern that patients will leave the practice if they are urged to quit smoking.^{23,24} In contrast, a survey of dentists in Maryland¹⁸ found a positive attitude toward smok-

ing-cessation intervention efforts, except among dentists who were current smokers. A recent study from the United Kingdom²⁵ also reported an effect of the smoking status of the dentist, with former smokers being the most likely to advise their patients to quit smoking and current smokers the least likely to give such advice. The present study could not assess the impact of smoking status on the behavior of dentists, because so few of the dentists surveyed reported being current smokers.

Studies of differences in smoking-cessation attitudes and activities by the health-care provider's year of graduation have shown mixed results. Goldstein et al²⁶ reported greater self-efficacy among recently trained family practice physicians with regard to their ability to offer effective smoking-cessation counseling to patients. While certain studies emphasize the changes in medical training that are occurring and the increased interest among recent graduates in behavioral medicine and patient education,²⁷ others indicate that older graduates are just as willing to adopt new behaviors and attitudes as their younger counterparts.²⁸ In addition, a study among dentists showed the older graduates favoring smoking-cessation counseling as a way to build their practices.¹⁸ Still, the general consensus remains that clinicians at any age are not trained properly or extensively enough to perform adequate smoking cessation counseling.^{9,27,29,30}

This study also was designed to assess whether smoking-cessation practices and beliefs vary by gender of the clinician. However, it must be acknowledged that gender and year of graduation are strongly related in these data, with only 27% of women graduating prior to 1980 compared with nearly 73% of men. Although the few previous studies available show that women providers may be more likely to place emphasis on educating and counseling patients about health problems,^{31,32} no such gender-related differences in behavior were demonstrated in our survey.

CONCLUSION

This study is one of only a few to focus on the smoking-cessation attitudes and practices of African-American health-care providers. It is limited, however, by a relatively poor response rate and resulting small sample size. The low response rate also creates a potential for selection bias, ie, the sample of respondents may not be representative of all African-American physicians and dentists in the

Atlanta area. It is likely, however, that those health-care practitioners who chose to respond to the survey were the ones most interested in smoking-related issues and may have been the most active with respect to smoking-cessation activities in their practices. If so, our results paint a more optimistic picture than is truly the case, implying that even more work needs to be done to fully utilize the power of physicians and dentists in the fight against tobacco-related morbidity and mortality.

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Early Radionuclide Scans for Risk Assessment in Suspected Acute Myocardial Infarction

Sharon L. Norris, MD, L. Julian Haywood, MD, Eugene Sobel, PhD, Guo-Long Hung, MD, Maria deGuzman, MD, and Michael Siegel, MD

First-day thallium-201 myocardial perfusion scans and technetium-99m RBC gated scintiangiography were performed in the initial clinical and prognostic evaluation of 69 suspected acute myocardial infarction patients. Patients were followed for clinical course, diagnosis confirmation, and use of specialty services during hospitalization. Myocardial infarction, confirmed in 20 patients, was associated with significantly more left ventricular dilatation, lower ejection fractions, lower peak LV filling rates, wall motion abnormalities, and thallium-201 perfusion defects. Among all patients, left ventricular dilatation carried a relative risk of myocardial infarction of 5.8; low ejection fraction and right ventricular dilatation were strongly associated with myocardial infarction. A logistic model for congestive heart failure included: left ventricular dilation, lower mean left ventricular filling rates and time to peak filling rates, and abnormal thallium-201 lung:heart uptakes. Thus, early detection of myocardial perfusion defects and cardiac dysfunction by radionuclide scans enhances initial evaluation of suspected acute myocardial infarction patients. Further studies are indicated.

An Integrated Model for Inner-City Health-Care Delivery: The Deaconess Center of Buffalo

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Under the auspices of the Buffalo General Hospital and the faculty of medicine of the State University of New York at Buffalo, a comprehensive delivery system for primary care has been established in a local inner-city neighborhood. At this location, several divisions have been integrated to provide comprehensive patient-oriented primary care. These divisions include a primary care clinic, an urgent care clinic, a substance abuse clinic, and a community pediatrics clinic. Professional services are provided by attending physicians and residents. The horizontal integration of these four divisions is in turn vertically integrated with the tertiary care teaching hospital inpatient and obstetrical services, providing a continuum of patient care. The horizontal integration serves as an entry point for patients to enter into the hospital's health-care system, while the vertical integration capability serves to capture any specialized referrals or inpatient needs. This article discusses the structure of the center, with special reference to service integration, service delivery, and patient capture; medical education; and the place of integrated units in the strategic plan of a tertiary care hospital.