Workplace Tobacco Policies and Smoking Cessation Practices of Physicians

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Objective: To further our understanding of the workplace smoking policies and smoking cessation practices of physicians in Nigeria.

Design: Cross-sectional survey distributed to 619 physicians practicing in two teaching hospitals in southwestern Nigeria.

Participants: Three-hundred-seventy-three physicians who returned completed surveys.

Main Outcome Measures: Physician's self-reported workplace smoking policies, attitudes toward smoking cessation, and use of recommended smoking cessation guidelines/policies.

Results: Physicians rated quitting as "extremely important." The majority assessed their patients smoking status over the past three months (81%) and thought counseling smokers would help them quit (95%). However, <1% prescribed pharmacotherapy for smoking cessation in the last three months. Significant differences were found in the workplace smoking policies of the two teaching hospitals ($p<0.001$). Differences were also found in the attitudes and smoking cessation practices of physicians in Hospital A and Hospital B.

Conclusions: Physicians are aware of smoking and the importance of quitting but few have guidelines/policies to assist their patients with quitting. Workplace smoking policies appear to impact the smoking cessation attitudes and practices of physicians in Nigeria. Encouraging the adoption of workplace smoking restrictions, as well as training physicians to use recommended smoking cessation interventions, is critical to addressing the tobacco epidemic in Nigeria.

Key words: Nigerian physician ■ smoking ■ policies ■ cessation

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BACKGROUND

Approximately 80% of the world's smokers live in developing countries. While the prevalence of cigarette smoking has declined over the past two decades in developed countries, smoking prevalence continues to rise in the majority of developing countries.[1] Tobacco is fast becoming the single leading cause of death worldwide and is estimated to kill nearly 10 million people per year by 2030.[2] If current trends continue, an estimated one billion people worldwide will die from tobacco use in the 21st century. Approximately 70% of these tobacco-related deaths will occur among smokers in developing countries.[3]

Evidence suggests that much of the projected mortality from smoking can be prevented by quitting, yet former smokers are rare in developing countries.[3] Specifically, over the last several decades, the rate of ex-smokers in developed countries has risen, while the number of ex-smokers living in developing countries remains low. Approximately 30% of males in developed countries are ex-smokers, compared to only 2–10% of male ex-smokers in developing countries.[1]

These data suggest that the global tobacco epidemic is not uniform. Research has focused on monitoring and preventing tobacco use, as well as promoting the use of the Agency for Healthcare Research and Quality's (AHRQ)[4] recommended smoking cessation guidelines in developed countries. The AHRQ guidelines recommend physicians screen all patients for tobacco use, advise tobacco users to quit, set a quit date, and provide pharmacotherapy. Relatively little is known about how developing countries are confronting their growing tobacco epidemic. In particular, a paucity of research exists on the tobacco-related attitudes, beliefs, and smoking cessation practices of physicians in developing countries. Therefore, the current study was conducted to assess: 1) the workplace smoking policies of physicians in Nigeria, 2) their perceptions of smoking, 3) their attitudes about the

importance of quitting, and 4) their use of recommended smoking cessation guidelines.

Physicians were targeted because, in developed countries, physician-initiated interventions have been shown to increase smoking cessation,[4] yet little is known about the smoking cessation practices of physicians in developing countries. Understanding the attitudes about smoking and smoking cessation practices of physicians in Nigeria is an important first step to reducing smoking and lowering tobacco-related health problems in Nigeria.

METHODS

Participants and Study Setting

Participants were physicians at two teaching hospitals, University of Ilorin, Ilorin, Kwara State and University College Hospital, Ibadan, Oyo State, both located in the southwestern region of Nigeria. Hospitals were comprised of a main campus made up of multiple hospital buildings. The physicians participating in this study worked in different buildings throughout the hospital campus. The workplace smoking policy was determined by the hospital; however, enforcement of the policy was the responsibility of the department(s) occupying each building (K.S. Okuyemi, personal communication, January 21, 2004).

Measures

A 14-item self-administered survey was conducted from June to August 2002. The survey assessed demographics, including age, gender, physician smoking status, and physician specialty; smoking policies in the buildings where physicians practiced (completely nonsmoking, smoking in designated areas, or no smoking policy); physician estimates of the percentage of adults and physicians in Nigeria who smoke; physicians' attitudes about smoking cessation, including the importance of their patients quitting (scale of 1 "not at all important" to 10 "extremely important") and whether they thought counseling smokers helps them quit (yes/no); physicians' smoking cessation practices over the past three months (asking patient's smoking status, patient's request for help quitting, and prescription of pharmacotherapy); and the presence of smoking guidelines/policies in their clinical practice (yes/no).

Statistical Analyses

Statistical analyses were performed using SAS software (SAS, 1990). Categorical variables were summarized with percentages and continuous variables were summarized by means. Chi-square tests were used to make comparisons of categorical variables while t-tests were used to make comparisons of the means of continuous variables. Two-sided p values <0.05 were considered statistically significant.

Given that the setting and patient population of medical specialties differ with regard to the appropriateness of tobacco-related counseling, physicians practicing in specialties where there is not regular patient contact (e.g., pathology, microbiology, hematology) or there is limited opportunity to intervene with smokers (e.g. anesthesia, radiology, pediatrics) were excluded from analyses regarding physician's smoking cessation practices over the past three months (asking patient's smoking status, patient's request for help quitting, and prescription of pharmacotherapy).

RESULTS

Of the 619 physicians surveyed, 373 completed the survey (60% response rate). Of the final sample, 187 physicians were from Hospital A, and 186 were from Hospital B. Characteristics of the sample are presented in Table 1.

In the past three months, 81% of physicians (243/299) reported assessing patient smoking status, and 9% (28/299) were asked by patients for assistance quitting. While 95% of physicians in all specialties (353/373) thought counseling smokers would help them quit, only 17% (62/373) reported having any guidelines/policies to help smokers quit. Physicians estimated that 31% of adult males, 7% of adult females, 17% of male physicians, and 2% of female physicians in Nigeria smoke. Actual data indicate the prevalence of smoking among adult males in Nigeria to be 15%, among adult females to be 2%, and among physicians to be 24% (data currently do not distinguish between male and female physicians).[5,6] Physicians rated the importance of quitting among their patients as "extremely important" (mean = 9.4 out of a possible 10, SD = 1.7). Finally, only three (3/299) physicians prescribed

Table 1. Demographic Characteristics of Participants

Demographic Characteristics (N=373)	Percent or Mean (SD)
Gender, % male	84%
Age in years, mean (SD)	33 (5.9)
Years in practice, mean (SD)	6.5 (5.9)
Smoking status	
% smokers	3%
Specialty	
General practice and psychiatry	30%
Surgery or surgical specialties	25%
Medicine	17%
Pediatrics	11%
OBGYN	8%
Other	10%

pharmacotherapy for smoking cessation in the last three months. Of the pharmacotherapy prescribed, one prescribed the nicotine patch, one the lozenge, and one selected "other."

With regard to workplace smoking policies, 52% (190/363) of physicians reported practicing in a completely nonsmoking building, 44% (161/363) had no established smoking policy, and 3% (12/363) reported that smoking was allowed only in designated areas. A comparison of workplace smoking policy between hospitals indicated a significant difference between Hospital A and Hospital B. Specifically, 64% (116/181) of physicians in Hospital B reported the policy within the building where they practiced was completely nonsmoking policy, compared to 41% (74/182) of physicians in Hospital A ($p<0.001$). Additionally, physicians in Hospital A were more likely to report having no established smoking policy in the building where they practice, compared to physicians in Hospital B [55% (100/182) versus 34% (61/181), $p<0.001$].

Given these differences, additional analyses were performed to examine the impact of workplace smoking policies on physicians' smoking cessation attitudes and practices. Differences were found in regard to patient's requests for help in quitting smoking in the last three months, the existence of guidelines/policies within practices to help smokers quit, and estimates

Table 2. Summary of Findings for the Sample and by Hospital

Survey Item	Total	Hospital A	Hospital B	p-Value*
What is the cigarette smoking policy in the building where you practice?				
Completely nonsmoking	52%	41%	64%	<0.001
Smoking only allowed in designated areas	3%	4%	2%	0.23
No established smoking policy	44%	55%	34%	<0.001
In the past three months, have you asked your patients if they smoke?				
No	19%	20%	22%	
Yes	81%	80%	78%	0.80
On a scale of 1–10 with 1 being not at all important and 10 being extremely important, how important is quitting smoking to you? (mean, SD)	9.4 (1.7)	9.5 (1.5)	9.3 (1.9)	0.25
In past three months, have you had patients specifically ask for your help in quitting smoking?				
No	91%	95%	87%	
Yes	9%	9%	13%	<0.05
Do you think counseling patients who smoke will help them quit?				
No	5%	5%	3%	
Yes	95%	95%	97%	0.29
In your practice, are there guidelines/policies to help cigarette smokers quit?				
No	83%	87%	78%	
Yes	17%	13%	22%	<0.05
In the past three months, have you prescribed bupropion (Zyban), nicotine gum, the nicotine patch, inhaler, nasal spray, or lozenges for cigarette smokers who want to quit?				
No	99%	97%	95%	
Yes	<1%	3%	5%	0.44
What do you think the percentage of adult cigarette smokers are in Nigeria?				
Male (mean, SD)	31% (16.4)	31% (16.4)	31% (16.6)	0.91
Female (mean, SD)	7% (8.4)	8% (8.6)	7% (8.2)	0.49
What do you think the percentage of physician cigarette smokers are in Nigeria?				
Male (mean, SD)	17% (16.2)	22% (17.8)	12% (13.2)	<0.001
Female (mean, SD)	2% (3.9)	3% (4.9)	1% (2.1)	<0.01
Do you currently smoke cigarettes?				
No	97%	97%	97%	
Yes	3%	3%	3%	0.77

* Note: p-values denote significant differences between Hospitals A and B

regarding the prevalence of smoking among male and female physicians in Nigeria. Specifically, 13% (23/184) of physicians in Hospital B had been asked by their patients for help quitting over the past three months, compared to only 5% (10/185) of physicians in Hospital A ($p<0.05$). Physicians in Hospital B were also more likely to have guidelines/policies in their practices to help smokers quit than physicians in Hospital A [22% (39/174) versus 13% (23/179), $p<0.05$]. Finally, physicians in Hospital B provided lower estimates of the prevalence of smoking among male and female physicians in Nigeria. Specifically, physicians in Hospital B estimated the prevalence of smoking among male physicians to be 12% compared to the 22% estimated by physicians in Hospital A ($p<0.001$). Physicians in Hospital B estimated that 1% of female physicians smoke, compared to the 3% estimated by physicians in Hospital A ($p<0.01$). A summary of these findings can be found in Table 2.

DISCUSSION

The findings are encouraging in that physicians in Nigeria demonstrated an awareness of smoking among their patients, routinely assessed smoking status, and believed that counseling patients about smoking would help them quit. Physician estimates of smoking among adults in Nigeria (31% for males, 7% for females) were somewhat higher than published prevalence data (15% for adult males, 2% for adult females),[5,6] indicating that they either have inflated perceptions of smoking or smokers are disproportionately represented in their patient population. Also encouraging is that the majority of physicians made an effort to identify patients who are smokers and believed it was important for these patients to quit. Additionally, physicians in Nigeria thought that counseling smokers would help them quit, suggesting their belief in the importance of physician-assisted smoking cessation interventions.

The findings also indicate a number of areas where improvement is needed. Most apparent is the lack of smoking cessation guidelines/policies and infrequent use of pharmacotherapy within physician practices. While the majority of physicians assessed smoking status, this is negated by a general failure to offer interventions that would increase the likelihood of quitting. This may be due in part to the lack of cessation guidelines and limited availability of pharmacotherapy. Progress could be made by promoting physician practices that adhere to AHRQ guidelines as a model for other practices. Our findings suggest the need for programs that increase the use of recommended smoking cessation guidelines across all specialties. Physicians could benefit from systems-level interventions that enhance their screening of patients for tobacco use and assessment of their motivation to quit. Physicians could further facilitate quitting by offering advice on how to quit, establishing a quit date, and prescribing recommended pharmacotherapy.

Findings from developed countries provide support for the improvements recommended in each of these areas. Specifically, meta-analyses conducted within developed countries examining the implementation and efficacy of AHRQ standard practice guidelines support the utility of screening for tobacco use, offering brief advice to quit, and prescribing pharmacotherapy for smoking cessation (see Fiore et al., 2000 for a review). Results from nine randomized clinical trials suggest that clinical practices with screening systems in place to identify and record smoking status have markedly higher rates at which clinicians intervene with their patients than those practices with no screening system in place.[4] Furthermore, the results suggest that higher rates of screening by clinicians result in higher rates of smoking cessation among the patient population.[4] Physician advice to quit has also been found to be an important component of smoking cessation treatment within developed countries. Specifically, results of a meta-analysis comparing advice with no advice indicate that brief physician advice to quit significantly increases smoking abstinence.[4] Abstinence rates continue to increase with longer and more frequent clinician–patient contact. Finally, the efficacy of pharmacotherapy for smoking cessation has been supported through a multitude of studies comparing pharmacotherapy to placebo controls.[4] Although the efficacy of each of the first-line pharmacotherapies (bupropion SR, nicotine gum, nicotine inhaler, nicotine nasal spray, nicotine patch) varies, all have been shown to markedly increase long-term abstinence compared to placebo controls. Taken together, these findings from developed countries suggest that the most effective treatment of tobacco dependence requires the use of multiple modalities, including systems-wide approaches to increase tobacco screening, physician advice to quit, and the prescription of recommended pharmacotherapy.

Another area in need of improvement is workplace smoking restrictions. Almost half of physicians reported having no established smoking policy in the building where they work and significant differences were found between the two teaching hospitals in regard to workplace smoking policies. In addition, analyses examining the impact of workplace smoking policies on physicians' smoking cessation attitudes and practices indicate that those practicing in a completely nonsmoking building perceived a lower prevalence of smoking among male and female physicians, were more likely to have been asked by their patients for help in quitting, and were more likely to have guidelines/policies in their practices to

help smokers quit. The lack of smoking restrictions within approximately half of the hospitals surveyed suggests a norm of acceptance toward smoking. Similarly, the relationship between workplace smoking restrictions, smoking cessation attitudes, practices, and smoking guidelines/policies highlights the impact of smoking policies in the workplace. In developed countries, workplace tobacco control policies have been found to not only shift social norms but also positively impact adult smoking behaviors, including reducing daily cigarette consumption, increasing motivation to quit, and boosting success at quitting.[7] The implementation of smoking bans within healthcare organizations may represent one component of a multipronged approach for reducing smoking uptake and increasing quitting in Nigeria over the upcoming decades.

A number of limitations warrant mentioning. The study was a convenience sample of physician's self-reported use of cessation guidelines over the last three months and is, therefore, subject to response and recall bias. Although this study examined physicians' smoking cessation practices, it did not directly assess whether physicians had advised their patients to quit smoking over the last three months. Future studies could benefit from a more direct assessment of physician's advice to quit, as well as from chart review and exit interviews with patients to validate physician self-report. Additionally, physicians were from two teaching hospitals in southwestern Nigeria; therefore, caution should be used in generalizing our findings to physicians practicing outside of this setting. Only a small percentage of the physicians in our sample (3%) reported currently smoking, which is considerably lower than the actual smoking prevalence among physicians in Nigeria (24%).[5,6] While our data indicate that physician smokers were underrepresented in the present study, it is important to note that estimates regarding the smoking prevalence among physicians in Nigerian are dated (circa 1983).[6] Future studies are needed to provide a more accurate and current estimate of the smoking prevalence among male and female physicians in Nigeria. Additionally, the mean age of physicians in our sample was 33 years, therefore, limiting the generalizability of our findings to older, more experienced physicians. Despite the limitations of our sample, the data do, however, provide an initial estimate of physician practices in teaching hospitals, which serve as an important training center for physicians in Nigeria. Targeting these hospitals is an important first step in improving the smoking cessation guidelines/practices within Nigeria, as physicians take the knowledge and standards of care learned at these training centers to their future practices.

In summary, little attention has been given to workplace smoking policies and physician-initiated smoking cessation practices in Nigeria. Results of the current study indicate three areas for future intervention and study: 1) a systematic adoption and enforcement of workplace tobacco control policies among Nigerian hospitals; 2) the provision and education of physicians regarding use of the AHRQ standard practice guidelines; 3) the facilitation of system wide changes to promote screening for smoking status among all patients, as well as the counseling and prescription of recommended pharmacotherapy for those interested in quitting. It is also recommended that tailored health communication materials be developed to target the specific needs of physicians in Nigeria and the general public as they begin to address the tobacco epidemic within their country. If current estimates are correct, Nigeria and other developing countries will be disproportionately impacted by tobacco-related disease and mortality in the upcoming decades. Helping physicians in Nigeria to institute guidelines and intervene with patients who smoke is critical to reducing the tobacco-related health problems that will increasingly burden the healthcare system in the future.

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