CIGARETTE SMOKING AND ATTITUDES TOWARD QUITTING AMONG BLACK PATIENTS

Arthur Hoffman, MD, Richard Cooper, MD, Loretta Lacey, DrPH, RN, and Ross Mullner, PhD Chicago, Illinois

A sample of 1,388 black patients attending the medical clinic of a general public hospital were interviewed regarding smoking habits and attitudes toward guitting. Current smokers constituted 30% of respondents of both sexes, and approximately half of the sample were ex-smokers. Rates of current smoking were lower, and cessation rates higher, among older individuals and men. Two thirds of current smokers expressed a desire to guit, and of those an equal proportion wanted to participate in a formal cessation program. A majority of smokers reported attempting to guit on their own, and most had made more than one attempt. Given the large burden from cigaretterelated disease in the black population, and the current absence of effective primary prevention efforts, smoking intervention in the clinical setting will remain an important obligation of health providers caring for black patients. This article demonstrates moderately high smoking prevalence rates of black individuals already under care for chronic illness, and a concomi-

tant high level of desire to quit. The absence of effective programs appears to be the obstacle preventing significant progress in this important area of health promotion.

The problem of cigarette smoking among blacks has received inadequate attention. The health burden from diseases related to smoking, including primarily coronary artery disease (CAD) and cancer, is particularly severe in the US black population.^{1,2} Smoking prevalence rates are now higher among both black men and women, and there are substantially fewer former smokers in the black population.³ Although knowledge and attitude surveys indicate less awareness of etiologic factors in cancer and more pessimism about treatment and prevention, black smokers express more interest in quitting than white smokers.⁴ Smoking advertisements appear to be disproportionately directed to black and working class populations and, in the absence of antismoking efforts, this may in part explain the high smoking and low cessation rates observed in these groups.¹ The presence of many light smokers and the frequent desire to quit suggest that cessation efforts would be particularly successful among blacks.⁴ Until effective public health campaigns are initiated in this population, intervention against smoking will remain an important health care obligation for providers serving the minority population. To our knowledge, no studies have been published on smoking habits and attitudes toward quitting among blacks as observed in the clinical setting. This article presents data from a large public clinic serving an inner city black population.

From the Department of Medicine, Cook County Hospital, Chicago; the Department of Community Health Sciences, University of Illinois School of Public Health, Chicago; and Center for Health Service Research, University of Illinois School of Public Health, Chicago. This work was supported in part by NIH Contract N01 CN 65029. Requests for reprints should be addressed to Dr. Arthur Hoffman, Section of Preventive Medicine, Cook County Hospital, 1835 W. Harrison Street, Chicago, IL 60612.

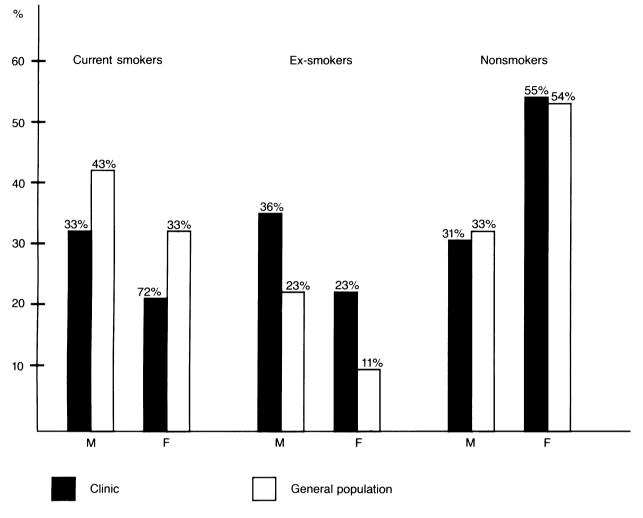


Figure 1. Smoking prevalence by sex among black clinic patients (N=1,250) and a population sample (National Health Interview Survey.

TABLE 1. SOCIOECONOMIC CHARACTERISTICS OF THE COMMUNITY AREAS SERVED BY FANTUS HEALTH CENTER, COOK COUNTY HOSPITAL*

Population Characteristic	Response
Percent black residents	78%
Percent below poverty level	32%
Percent unemployed	28%
Median family incomet	\$12,800
Years of school completed†	11.4

* Based on 1980 census

† Census data for blacks only

1983, age-adjusted, 20 years and over) of black Americans.

METHODS

The General Medicine Clinic of Cook County Hospital, as part of the Fantus Health Center, provides outpatient care for approximately 15,000 persons and serves primarily the poor and working class black population of Chicago. Patients attend an average of 4.6 times per year and the General Medicine Clinic recorded a total of 69,700 patient visits from July 1985 to July 1986. Table 1 presents the unweighted socioeconomic descriptors of the community areas where 63% of the patients reside. Based on the 1980 census, the patients lived in highly segregated neighborhoods with mean family incomes and educational levels below those of black families nationally.

	Current Smokers	Ex-smokers	Nonsmokers
Males (n=190)	40% (76)	34% (64)	26% (50)
<30 (12)	33% (4)	0% (0)	67% (8)
30-39 (16)	63% (10)	13% (2)	26% (4)
40-49 (33)	62% (21)	15% (5)	21% (7)
50-59 (45)	38% (17)	40% (18)	22% (10)
60-69 (44)	25% (11)	43% (19)	32% (14)
>70 (40)	33% (13)	50% (20)	18% (7)
Females (n=413)	24% (99)	21% (87)	55% (227)
<30 (18)	17% (3)	17% (3)	67% (12)
30-39 (22)	32% (6)	16% (3)	45% (13)
40-49 (63)	36% (22)	14% (9)	51% (32)
50-59 (127)	30% (38)	24% (31)	46% (58)
60-69 (101)	24% (25)	21% (22)	54% (54)
>70 (83)	6% (5)	23% (19)	70% (58)
Total (N=603)	29% (175)	25% (151)	46% (277)

TABLE 2. PREVALENCE OF SMOKING AMONG AMBULATORY PATIENTS AT COOK COUNTY HOSPITAL, BY AGE AND SEX, 1987

Smoking surveys were carried out in three phases in the registration area of the General Medicine Clinic. The first phase (N=603), carried out in 1984, was performed as a needs survey and examined the sex and age characteristics of smokers and ex-smokers. Every hour the interviewer sampled patients from each section of the waiting room. There were no refusals. Phase 2, conducted with a second sample following completion of phase 1, focused on attitudes and practices related to smoking cessation (N=120). The same sampling method was used as for phase 1 and a similar screening question identified smokers. Phase 3 re-examined smoking rates three years later (N=647). For this phase, patients were interviewed as they registered in the clinic. Interviews were carried out by black staff members who were experienced in interacting with patients. No targeted cessation programs were in effect at the clinic at this time. A total of 1,370 persons were thus interviewed in the three surveys and form the basis of this report.

Additional comparative data were obtained on smoking practices from the Health Interview Survey³ and on cancer prevalence in the Chicago area from the Illinois Cancer Council.⁵ Chi-square was used to test differences.

RESULTS

The patterns of cigarette use remained highly stable over the three years between the prevalence estimates obtained in this study (Figure 1). Current smokers were slightly fewer than one third of all patients interviewed;

TABLE 3. ATTITUDES AND PRACTICES TOWARD SMOKING CESSATION AMONG BLACK PATIENTS

	Want to Stop	Want a Program	Have Tried to Quit
Males (n=51)	32 (63%)	33 (64%)	33 (64%)
Females (n=69)	46 (66%)	48 (70%)	37 (53%)
Total (N=120)	78 (65%)	81 (68%)	70 (58%)

lifetime frequency of cigarette use was 54%. These estimates are substantially different from those obtained in the general black population (Figure 1) where both more smokers and fewer ex-smokers are described. The agesex patterns (Table 2, Figure 2) demonstrate, as expected, smoking rates 50% higher among men with cessation rates increasing with age. The lifetime smoking burden, as estimated in "pack years," was 30 for male smokers and ex-smokers, 19 for female smokers, and 29 for female ex-smokers.

As assessed in the phase 2 survey, two thirds of both men and women expressed a desire to stop smoking, and attempts to quit were frequent (Tables 4 and 5). Psychological readiness to quit was further assessed with the model developed by Prochaska et al⁶: 69.9% of current smokers were in the "contemplation" stage of the cessa-

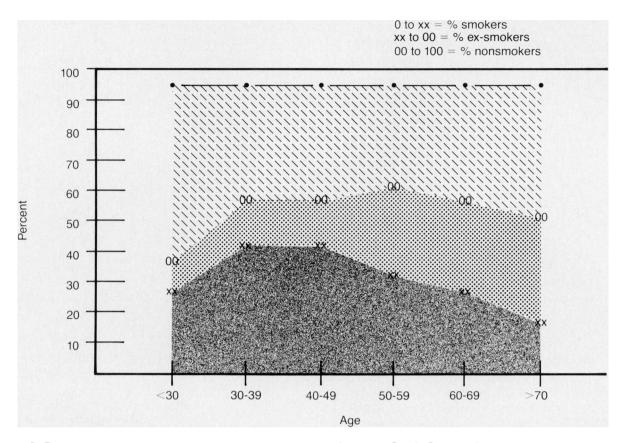


Figure 2. Prevalence of smoking among ambulatory patients at Cook County Hospital.

TOWARD CESSATION BY "STAGE IN CESSATION CYCLE"*		
	Want a Program†	Prior Attempts to Quit‡
Contemplators Precontemplators (n=34)	67 (86%) 9 (26%)	55 (70%) 11 (32%)
Total (N=112)	76 (66%)	66 (56%)

TABLE 4. ATTITUDES AND PRACTICES

* 8 subjects were uncertain about desire to quit. + P < 0.01

± P < 0.01

tion cycle (ie, they were seriously considering quitting), whereas 30.4% were "precontemplators." Only one smoker of those interested in quitting (1.5%) had any exposure to a formal cessation program although 86% of those who wanted to quit expressed a desire for a formal program.

DISCUSSION

This article describes smoking practices among blacks seeking care for chronic illnesses. High lifetime smoking rates are to be expected among patients attending a health facility for treatment of chronic illnenss, and a high proportion of those patients quit once they became sick. The individuals surveyed in this study do not represent a sample of the general population and do not provide a basis for inference about community-based public health efforts at smoking cessation. These data do, however, provide information about the need for cessation efforts and the likely receptivity of the target population. Approximately one third of these individuals continued to smoke, and of this group two thirds expressed a desire to quit; the great majority of these individuals had engaged in previously unsuccessful attempts. These attempts were all without the help of formal programs despite the large interest expressed in such cessation programs.

These data are comparable to the general black popu-

		TES, ALL CANCER SITES FOR RACE-SEX GROUPS*	
	Chicago 1968-1982)	Illinois (1970-1979)	United States (1970-1979)
White males White	230.3	211.0	204.0
females Nonwhite	148.7	138.0	132.0
males Nonwhite	287.0	262.0	232.0
females	163.8	150.0	133.0

TABLE 5. AGE-ADJUSTED CANCER

* Mallin K, Haenszel W: A Review of Cancer Mortality in Chicago and Chicago Community Areas, 1968-1982. Chicago, Illinois Cancer Council, 1985.

lation for serious interest in quitting (65% v 68%) yet far below the general black population for average number of cessation attempts in the last year (1 v 3.8).⁷ Organized professional smoking cessation programs are virtually unavailable to this population.² Given this large burden of tobacco-related risk, and a high degree of expressed readiness to quit, clinically based intervention programs are urgently needed.

The toll on the health of the black population exacted by cigarette smoking has been well described.^{1,8} Ageadjusted rates of CAD are equally high in black and white men, although the disease has an earlier onset among blacks and is associated with poor survival.^{9,10} Black women suffer particularly high rates of CAD, compared with their white counterparts, and also have an extremely poor prognosis once symptoms appear.¹¹ Mortality from all the major cigarette-related cancers is higher in blacks.² Lung cancer rates of middle-aged black men are twice those of whites, and the rate of increase has not leveled off.12 Illinois, and Chicago in particular, is a high prevalence area for both CAD and cancer among blacks. Illinois ranks second and third, respectively, for CAD rates for black men and women in the US.¹³ Overall mortality rates from cancer, by race and sex, in Illinois are presented in Table 5 accompanied by black:white ratios for major cancer sites by sex (Table 6). Clearly, preventive measures are of the utmost importance in this population.

Relatively little information about the success of smoking intervention among blacks has been published. The Multiple Risk Factor Intervention Trial demonstrated comparable cessation rates among black and

TABLE 6. RATIO OF NONWHITE TO WHITE
CANCER MORTALITY RATES (AGE-
ADJUSTED) IN CHICAGO, 1968-82,
SELECTED SITES*

OLLEOTED SITES		
Cancer Site	Male Ratio	Female Ratio
All sites	1.246	1.102
Lung	1.287	1.118
Larynx	1.390	2.000
Esophagus	2.750	3.125
Pancreas	1.230	1.253
Bladder	0.744	1.545
Stomach	1.496	1.328

* Mallin K, Haenszel W: A Review of Cancer Mortality in Chicago and Chicago Community Areas, 1968-1982. Chicago, Illinois Cancer Council, 1985.

white participants, although the blacks appeared to have an advantage because of the lower prevalence of heavy smokers at baseline.¹⁴ Thus, when stratified by the amount smoked, whites did somewhat better at each level, but the higher cessation rate among light smokers yielded a similar net outcome.¹⁴ Limited data from other intervention studies involving modification of lifestyle suggest better or equal success rates among blacks and other persons of lower socioeconomic standing.¹⁴⁻¹⁶ The widespread assumption that less educated individuals are more resistant to preventive interventions in general, and smoking cessation in particular, is not supported by epidemiologic findings.

Cigarette use is rapidly becoming a disease of the working class and minority populations.^{1,17} There is further disturbing evidence that the consequences of this differential in health behavior can be observed in mortality trends. A wide range of studies now demonstrate that the decline in CAD observed in the US since 1968 is taking place much faster in the affluent segments of the population, in particular white men.¹⁸⁻²¹ The most recent vital statistics data show a rise in all causes of mortality for some age-sex groups among blacks. While lung cancer mortality rates have finally begun to plateau for whites, the steep rise for black men continues unabated.¹² If a further widening of the black-white health differentials is to be avoided, public health campaigns against cigarettes must be implemented in the minority population. Although smoking cessation will not benefit persons diagnosed with cancer, substantial evidence suggests improved survival with CAD and chronic lung disease.

Intervention in clinical settings is thus justified, and, based on the findings reported here, should be a major focus of secondary prevention efforts of all health providers.

Literature Cited

1. Cooper R, Simmons BE: Cigarette smoking and ill health among black Americans. NY State J Med 1985; 85:344-349.

2. Report of the Secretary's Task Force on Black and Minority Health, Department of Health and Human Services, Vol. I, 1985.

3. Fiore MC, Novotny TE, Pierce JP, et al: Trends in cigarette smoking in the United States. The changing influence of gender and race. *JAMA* 1989; 261:49-55.

4. Evaxx Inc: Black Americans attitudes toward cancer and cancer tests: Highlights of a study. CA 1981; 31(4):212-218.

5. Mallin K, Haenszel WA: *Review of Cancer Mortality in Chicago and Chicago Community Areas*, 1968-1982. Chicago, Illinois Cancer Council, 1985.

6. Prochaska J, DiClemente C: *The Transtheoretical Approach.* Homewood, III, Dow Jones-Irwin, 1984, pp 84-85.

7. Orleans CT, Schoenbach VJ, Salmon MA, et al: Black Americans' smoking and quitting patterns: Clinical and public health implications. Presented at Intervention Unit Meeting for Primary Prevention of Cancer in Black Populations, June 1987.

8. Kumanyika SK, Savage DD: Cigarette smoking among black Americans, in *Report of the Secretary's Task Force on Black and Minority Health*. UIS, Department of Health and Human Services, Vol. IV, Part 2. 1986, pp 232-247.

9. Roig E, Castaner A, Simmons B, et al: In-hospital mortality rates from acute myocardial infarction by race in US hospitals: Findings from the National Hospital Discharge Survey. *Circulation* 1987; 76:280-288.

10. Castaner A, Simmons BE, Mar M, et al: Poor prognosis after hospital discharge for myocardial infarction among black patients. *Ann Int Med* 1988; 109:33-35.

11. Tofler GH, Stone PH, Muller JE, et al: Effects of gender and

race on prognosis after myocardial infarction: Adverse prognosis for women, particularly black women. *J Am Coll Cardiol* 1987; 9:473-482.

12. Miller WJ, Cooper R: Rising lung cancer death rates among black men: The importance of occupation and social class. *J Natl Med Assoc* 1982; 74:253-258.

13. Leaverton PE, Feinleib M, Thom T: Coronary heart disease mortality rates in United States blacks, 1968-1978: Interstate variation. *Am Heart J* 1984; 108:732-737.

14. Connett JE, Stamler J: Responses of black and white males to the special intervention program of the Multiple Risk Factor Intervention Trial. *Am Heart J* 1984; 108:839-848.

15. Mojonnier ML, Hall Y, Berkson DM, et al: Experience in changing food habits of hyperlipidemic men and women. *J Am Diet Assoc* 1980; 77:140-148.

16. Smith EO'B, Curb JD, Hardy RJ, et al: Clinical attendance in the Hypertension Detection and Follow-up Program. *Hypertension* 1982; 2:710.

17. Schoenborn CA, Cohen BH: *Trends in smoking, alcohol consumption, and other health practices among US adults, 1977 and 1983.* Advance Data from Vital and Health Statistics, No. 118. Department of Health and Human Services publication No. (PHS) 86-1250.

18. Pell S, Fayerweather WE: Trends in the incidence of myocardial infarction and in associated mortality and morbidity in a large employed population. 1957-1983. *N Engl J Med* 1985; 312:1005-1007.

19. Sempos C, Cooper R, Kovar MG, et al: Divergence of the recent trends in coronary mortality for the four major race-sex groups in the United States. *Am J Public Health* 1988; 78:1422-1427.

20. Wing S, Casper M, Hayes CG, et al: Changing association between community occupational structure and ischemic heart disease mortality in the United States. *Lancet* 1987; II:1067-1070.

21. Engstrom JE: Trends in mortality among California physicians after giving up smoking: 1950-79. *Br Med J* 1983; 286:1101-1105.