

NONDRUG TREATMENT OF HYPERTENSION: A SURVEY OF BLACK PHYSICIANS IN NEW YORK STATE

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A survey of 64 black physicians in New York State was completed in April 1988 concerning physicians' approach to the nondrug treatment of hypertension. The physicians clearly support the use of nonpharmacologic treatment of mild hypertension, particularly for patients with diastolic blood pressure of 90 to 94 mmHg. However, very little time appears to be spent counseling patients with respect to diet and weight reduction. There was considerable variability in the degree of confidence felt by physicians in recommending nondrug approaches to hypertension control. An overwhelming majority of physicians felt that their training did not adequately prepare them for counseling patients about diet specifically or for practicing preventive medicine generally. The findings of this survey suggest a need for significantly increased attention to training physicians during both medical school and residency in prevention, patient counseling, and health promotion.

The contribution of cardiovascular disease to overall mortality in the United States is well recognized. In 1983, approximately 1 million deaths were attributed to cardiovascular disease, and a substantial proportion of these were related to hypertension.¹ The Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure noted in its 1988 report that the

prevalence of hypertension in blacks in the United States is considerably higher than in the white population and that hypertension-related deaths are disproportionately higher among black individuals.² Age-adjusted death rates by race and sex for 1983 demonstrated that black men are at highest risk of dying from cardiovascular disease (390.5 per 100 000), followed by white men (308.7 per 100 000), black women (258.1 per 100 000), and white women (164.7 per 100 000).¹

It is estimated that 70% of the 60 million Americans with hypertension have "mild hypertension" (diastolic blood pressure of 90 to 104 mmHg).³ Although the efficacy of treating mild hypertension is generally recognized,⁴⁻⁶ the evidence is not convincing that the benefits of drug therapy outweigh the risks for mild hypertensives, particularly those with diastolic blood pressure of less than 95 mmHg.⁷ The World Health Organization in its 1986 guidelines recommended drug therapy only for persisting diastolic pressures of 95 mmHg or greater.⁸ The Joint National Committee in its 1984 report,⁹ and even more emphatically in the 1988 recommendations,² advised that "nonpharmacologic approaches be used both as definitive intervention and as an adjunct to pharmacologic therapy and be considered for all antihypertensive therapy."²

The 1988 Joint National Committee report stressed that a variety of nonpharmacologic therapies may be effective in hypertension control.² These therapies include: (1) salt restriction, (2) weight reduction, (3) alcohol reduction, (4) increased exercise, and (5) stress management. Each of these nonpharmacologic therapies has been shown to have some efficacy in the management of hypertension. With respect to salt restriction, several studies have shown a decline in blood pressure in patients who restrict salt intake.¹⁰⁻¹¹ Weight reduction has been shown to lower blood

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TABLE 1. BACKGROUND CHARACTERISTICS OF PHYSICIANS (N=64)

Specialty	
Internal medicine	66%
Family practice	5%
General practice	12%
Medical subspecialty	16%
Obstetrics-gynecology	2%
Medical School	
US medical graduate	89%
Foreign medical graduate	11%
Sex	
Male	70%
Female	30%
Year of Graduation from Medical School	
Mean	1970
Range	1930-1984
Board Certification Status	
Certified	36%
Not certified	64%
Mean Number of Practice Hours Per Week	41
Mean Number of Patients Per Week	70
Patient Type	
Medicare	40%
Medicaid	18%
Black	78%
Hispanic	12%
White	9%
Practice Type	
Solo, fee-for-service	53%
Group, fee-for-service	10%
Health maintenance organization	3%
Clinic	14%
Hospital-based	19%
Other	2%

pressure in overweight hypertensives¹²⁻¹⁴ and to decrease left ventricular mass.¹⁵⁻¹⁷ Excessive alcohol intake has been associated with increased blood pressure,¹⁸⁻¹⁹ and the Joint National Committee report recommended that those who drink do so in moderation, ie, no more than one ounce of ethanol per day.² With respect to exercise, it has been shown that a program of aerobic exercise in previously overweight untrained hypertensive patients is likely to be beneficial in reducing blood pressure.²⁰⁻²¹ Finally, several studies have suggested that reduction of stress may contribute to improved blood pressure control.²²⁻²⁴ The Joint National Committee report noted that relaxation techniques may be useful as an adjunct to pharmacologic

therapy and may be modestly effective when used alone in selected groups.²

When one considers the potential risks of long-term drug therapy,⁷ the expense of medication for a population that, in the case of black Americans, is already economically depressed, and the difficulty of achieving compliance with drug therapy, the appeal of nonpharmacologic treatment appears to be great. Given the demonstrated benefit of nondrug therapy in some studies, we sought to determine to what extent this form of treatment was being offered to a large black hypertensive population in New York State. Black physicians were chosen for the survey in part because previous research demonstrated that their practices are likely to consist primarily of black patients and, therefore, are likely to include large numbers of hypertensives, given the prevalence of this disease within the black community.

METHODS

A written questionnaire was developed concerning physicians' approach to the management of hypertension and included questions on physicians' clinical practices, patient characteristics, and physicians' personal health practices. The questionnaires were mailed to 200 physicians throughout New York State who were on the NMA mailing list. The questionnaires were accompanied by a cover letter explaining the purpose of the study and signed by the President of the New York State affiliate of the NMA. Of the 200 physicians initially contacted, 123 were found to be eligible. Eligibility required that physicians spend at least 20 hours per week in clinical medicine and be involved in the treatment of hypertensive patients. A second mailing was sent to initial nonrespondents. Questionnaires were completed and returned by 64 of the 123 eligible physicians for a response rate of 52%. The survey was conducted from December 1987 to April 1988. The data were entered in an IBM personal computer and analyzed in aggregate.

BACKGROUND CHARACTERISTICS OF PHYSICIANS

The background and practice characteristics of the 64 physicians surveyed are summarized in Table 1. The respondents consisted of 45 men and 19 women. The mean age was 47 years, and the mean year of graduation from medical school was 1970. A majority of the physicians (66%) were general internists, 12% were general practitioners, 16% were medical subspecialists (cardiologists and pulmonologists), and

TABLE 2. ATTITUDES TOWARD NONPHARMACOLOGIC MANAGEMENT OF MILD HYPERTENSION (N=64)

Statement	Yes (%)	No (%)	Undecided (%)
The initial management of mild hypertension (diastolic blood pressure of 90-94) in asymptomatic patients with no known risk factors should be with nondrug therapies.	86	14	0
The initial management of mild hypertension (diastolic blood pressure of 95-104) in asymptomatic patients with no known risk factors should be with nondrug therapies.	42	55	3

TABLE 3. USE OF NONPHARMACOLOGIC APPROACH TO HYPERTENSION CONTROL

	Percent Recommended	Percent Confident that Patients Will Follow Physician's Advice	Mean Time Spent Counseling
Sodium restriction	95	83	1-5 minutes
Weight reduction	100	33	1-5 minutes
Alcohol reduction	78*	56	NA
Increased exercise	89	38	NA

* Percentage of physicians who felt it was more important for hypertensive patients than for nonhypertensive patients to reduce their alcohol intake.

5% were family practitioners. The overwhelming majority were graduates of American medical schools (89%). Thirty-six percent were board certified. Fifty-three percent were involved in solo, fee-for-service practices and only 3% were in a prepaid group, ie, health maintenance organization. The black physicians practiced a mean of 41 hours per week. The mean number of patients seen per week per physician was 70. Of the patients cared for by these physicians, a mean of 78% were black and 47% were hypertensive. Also of interest, 67% of the physicians stated that the communities in which they practiced were predominantly black, supporting a previous finding that black physicians are likely to practice in black communities.²⁷ Of the patients seen by these physicians, 40% received Medicare, 18% received Medicaid, 30% had private insurance, and 13% were uninsured.

NONDRUG APPROACH TO HYPERTENSION

The Joint National Committee acknowledges that the benefits of drug therapy appear to outweigh known risks to patients with diastolic blood pressures (DBP)

greater than 94 mmHg. However, the indication for drug therapy in those individuals with DBPs of 90 to 94 mmHg is less compelling.^{2,28,29} Given this recommendation, our physicians were asked whether they agreed or disagreed that the initial management of mild hypertension (DBP 90 to 94 mmHg) should be with nondrug therapy. The physicians were asked to assume that the patients in question were asymptomatic with no known risk factors. As shown in Table 2, 86% of the respondents agreed that the initial management of DBP of 90 to 94 mmHg should be with nondrug therapy. This percentage generally held true regardless of physician age or board certification status. We also asked the physicians whether they agreed that the initial management of DBP of 95 to 104 mmHg should be nonpharmacologic. Only 42% of the respondents were in agreement with this statement, 55% disagreed, and 3% were not sure. Fifty percent of the younger physicians (under 45 years of age) agreed compared with 32% of the physicians 45 and over ($P \leq 0.10$). Forty-six percent of the board certified physicians agreed compared with 40% of the nonboard certified physicians ($P \leq 0.10$). A summary of physicians' specific recommendations for the nonpharmacologic management of hypertension may be found in Table 3.

TABLE 4. ATTITUDES TOWARD PHYSICIAN COUNSELING PATIENTS WITH RESPECT TO DIET (N=64)

Statement	Yes (%)	No (%)	Undecided (%)
Do you feel that your medical school education adequately prepared you to counsel patients with respect to diet?	20	78	2
Do you feel that your residency training adequately prepared you to counsel patients with respect to diet?	20	75	5
In general, should physicians spend more time counseling patients with respect to diet?	83	10	8
Reasons why physicians may not spend more time counseling patients with respect to diet.			
Too time consuming	80	20	0
Inadequate training	70	30	0
Lack of physician interest	41	59	0
Inadequate reimbursement	34	66	0
Lack of effectiveness	28	72	0
Lack of patient interest	11	89	0

Sodium Restriction

The Joint National Committee report suggested sodium intake of 70 to 100 mEq (ie, 1.5 to 2.5 g) per day for patients with mild or moderate blood pressure elevation.² We sought to determine to what extent black physicians were counseling their patients with respect to sodium restriction. Ninety-five percent stated that they routinely advised “low sodium” diets for their hypertensive patients. Fifty-three percent provided written instructions for a low sodium diet. Seventy-eight percent advised their patients to read labels for sodium content and to avoid “salty” foods, and 86% advised their patients to avoid adding table salt to food. Also, 83% of the physicians stated that they were confident that patients would follow their advice with respect to sodium restriction. Although physicians overwhelmingly recognized the importance of sodium restriction in the management of hypertension, relatively little time might actually be spent in counseling patients with regard to their sodium intake: The majority of respondents (58.7%) estimated that they usually spent 1 to 5 minutes on such counseling.

Weight Reduction

Recognizing the relationship between obesity and blood pressure, the Joint National Committee recommended that “health professionals vigorously promote weight control, particularly for those at increased risk of becoming hypertensive because of

family history.” In our survey, although virtually all physicians stated that they routinely advised their overweight hypertensive patients to lose weight, 58% of the physicians estimated that they spent less than 5 minutes counseling patients on weight reduction. Sixty-seven percent stated that they were not confident that patients would follow advice concerning weight reduction.

Alcohol Restriction

In response to the question, “Do you feel it is more important for hypertensive patients to reduce their alcohol intake than it is for nonhypertensives,” 78% said yes, 17% said no, and 5% were not sure. An overwhelming majority of physicians (79.4%) recommended a reduction of alcohol intake for hypertensive patients consuming as little as one ounce or less per day. A majority of physicians (56.3%) were confident that their hypertensive patients would follow their advice with regard to alcohol reduction.

Exercise

Ninety-one percent of physicians stated that they routinely asked their hypertensive patients if they exercised. Eighty-nine percent stated that they recommended exercise for those patients who did not do so regularly. However, only 38% of the physicians were confident that their patients would follow their advice regarding exercise.

Stress Management

We asked the physicians which person in their practice, if anyone, most often counsels hypertensive patients with respect to stress management. Seventy-six percent stated that they themselves provided the counseling. Only 31% of those providing such counseling believed that their advice was effective in favorably modifying the patient's blood pressure. Sixteen percent stated that no one provided stress management counseling. The remaining 8% stated that counseling was provided by social workers, registered nurses, psychologists, or psychiatrists.

ATTITUDES TOWARD PREVENTION

The majority of physicians supported greater emphasis on prevention and diet counseling in their practices, as shown in Table 4. More than four out of five physicians (83%) felt "physicians should spend more time counseling patients with respect to diet." When asked why physicians do not spend more time on diet counseling, 80% cited lack of time and 70% cited inadequate training. Only 20% of physicians felt that medical school adequately prepared them to counsel patients with respect to diet, and 91% felt medical schools should put more emphasis on preventive medicine in their curricula.

Physicians were also asked the reasons they did not spend more time practicing preventive medicine. The most commonly cited reason was "inadequate training" (72%), followed by "too time consuming" (67%), and "inadequate financial reimbursement" (61%).

MAIN FINDINGS

The results of this survey of 64 black physicians in New York State demonstrate at least four main findings:

1. The physicians clearly support the use of nonpharmacologic treatment of mild hypertension, especially for subgroups with DBP of 90 to 94 mmHg. It was not directly ascertained what percentage of physicians were familiar with the recommendations of the Joint National Committee. However, whether based on knowledge of the literature or "clinical instincts," physicians tended to opt for nondrug therapy for mild diastolic elevations.
2. Whereas physicians endorse the initial use of nonpharmacologic therapy, their commitment to the concept is questionable, if length of time in consultation with the patient is any indication. The majority (59%) admitted to spending between 1 and 5 minutes during a visit discussing salt restriction,

and an equal number (58%) said they spend between 1 and 5 minutes advising weight reduction.

3. There is significant variability in the degree of confidence the physicians felt in recommending the various nonpharmacologic approaches. Although a considerable majority (83%) were confident that patients would follow salt restriction advice and 56% were confident regarding alcohol reduction advice, only 38% were confident concerning exercise, 33% concerning weight reduction, and 31% concerning stress management advice.
4. A majority of physicians felt their training did not adequately prepare them for counseling about diet specifically and practicing preventive medicine generally. Approximately nine out of 10 felt medical school and residency programs should put more emphasis on preventive medicine.

DISCUSSION

Although the prevalence of hypertension is recognized among all races and nationalities, a disproportionate number of affected Americans are of African descent. This survey indicates that the black physician is more likely to practice within the black community, where hypertension is most prevalent. If morbidity and mortality from complications of hypertension are to be significantly reduced in the black community, the role of the black physician becomes especially critical. Although the black physicians surveyed here appear to acknowledge the value of nonpharmacologic therapies in the control of hypertension, their relative lack of confidence in this approach and the relatively short time they spend in providing patients with counseling about diet and lifestyle suggest that there may be room for improvement in their practices with patients.

The 1988 Joint National Committee report calls for extensive use of nonpharmacologic therapy of asymptomatic patients with mild hypertension.² It is encouraging that most of the physicians surveyed recognize the value of offering nondrug options in this significant subset of hypertensive patients. However, it is of some concern that physicians may be less than committed to the use of these options based upon the amount of time they spend advising patients. The reason more time is not spent in counseling patients is no doubt multifactorial but appears to include inadequate training, the belief that counseling is too time consuming, lack of confidence in the efficacy of such counseling, and lack of financial reimbursement. The variability in the degree of confidence the

physicians felt in recommending a nonpharmacologic approach to hypertension control may reflect a lack of confidence in the effectiveness of these approaches, or it may reflect a lack of education and training in the techniques needed to communicate them to patients. The latter is supported by the finding that an overwhelming majority of physicians cited a lack of training with respect to preventive medicine as a leading cause of a failure to practice more prevention. Another reason for failure to do more counseling appears to relate to the amount of time counseling requires. Priorities in practice are frequently determined by economic incentive, and third party payers tend to reimburse for curative procedures to a significantly greater extent than for time spent in preventive or cognitive services.

The results of this survey may be of particular interest because they include a group (black physicians) previously underrepresented in physician survey research and whose patient populations may be expected to have a higher than average prevalence of hypertension. Although the physicians surveyed clearly support and utilize a nonpharmacologic approach to the management of mild hypertension, their lack of training in prevention and patient counseling speaks to a need for greater attention to curricula of medical schools and residency training in these areas. In view of the importance of the nonpharmacologic approach to hypertension management and the physicians' self-described inadequate training in these areas, data from this survey suggest a need for significantly increased attention to training of physicians in prevention, patient counseling, and health promotion, both in medical school and residency.

Acknowledgments

The authors acknowledge the support of the New York State Department of Health, which provided funding for this study. We are grateful to Hannah Frisch, Phyllis Starner, and Jack Elinson, PhD, Division of Sociomedical Sciences, Columbia University School of Public Health; Edgar Manderville, MD, Empire State Medical Society; Charlotte Ellis, PhD, Harlem Hospital Center; Gerald Thomson, MD, Columbia Presbyterian Medical Center; and Birdie Paul, RN, for providing technical assistance and advice at various stages of this study.

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