

Antecedents to Effective Treatment of Hypertension in Hispanic Populations

Maria L. Soto-Greene, MD

Interim Chief of Staff and VP, UMDNJ
Director, Hispanic Center of Excellence
UMDNJ-New Jersey Medical School
Newark, New Jersey

Debbie Salas-Lopez, MD

Chief, Division of Academic Medicine,
Geriatrics, and Community Programs
Department of Medicine
UMDNJ-New Jersey Medical School
Newark, New Jersey

Jorge Sanchez, MD

Medical Education Specialist
UMDNJ-New Jersey Medical School
Newark, New Jersey

Robert C. Like, MD, MS

Associate Professor and Director
Center for Healthy Families and Cultural Diversity
Department of Family Medicine
UMDNJ-Robert Wood Johnson Medical School
New Brunswick, New Jersey

Hypertension is a common medical disorder affecting >50 million people. It is a primary modifiable risk factor to cardiovascular disease and a leading cause of death in black and Hispanic groups. This article focuses on patient-specific and physician-specific barriers that contribute to underdiagnosis, undertreatment, access issues, and poor adherence to therapy. Two cross-cultural interviewing frameworks, ETHNIC and ADHERE, are discussed as approaches that complement the traditional clinical assessment and treatment of hypertension in Hispanics. (Clinical Cornerstone. 2004;6[3]:30–38) Copyright © 2004 Excerpta Medica.

Hypertension is a major modifiable risk factor for cardiovascular disease (CVD); its effective treatment significantly reduces morbidity and mortality.^{1–3} Worldwide, hypertension causes approximately 7.1 million premature deaths.⁴ It is a major antecedent to CVD, contributing to substantial morbidity due to complications including stroke, atrial fibrillation, chronic and end-stage renal disease, ischemic heart disease, peripheral vascular disease, and retinopathy. Despite effective pharmacologic therapies, <25% of the US population diagnosed with hypertension had adequate control between 1988 and 1991.⁵ In the United States, hypertension afflicts >50 million persons,⁶ disproportionately affecting minorities. Hispanics experience a modestly elevated level of modifiable risk factors for hypertension, despite having a lower prevalence of hypertension than the general population.⁷ Furthermore, as a group, Hispanics are less likely than non-Hispanic whites and non-Hispanic blacks to have their hypertension controlled.^{7–9}

Hypertension in Hispanic Populations

The social composition of the United States is changing rapidly. Growth in the Hispanic population has been unprecedented, outpacing that of the overall population.¹⁰ In 2000, Hispanics became the largest minority group, numbering 32.8 million persons or 12% of the US population,¹¹ yet representing 40% of the uninsured aged <65 years.¹²

Although the prevalence of hypertension in Hispanic Americans has been reported to be lower, it is important to note that prevalence varies significantly between subgroups.⁵ Hispanics disproportionately suffer excess mortality and target-organ damage compared with their non-Hispanic counterparts; for example, they experience 2.5 times more end-stage renal disease than non-Hispanic whites.¹³

Major epidemiological data from the Third National Health and Nutrition Examination Survey (NHANES) documents that hypertension is already on the rise. Specifically, the age-adjusted prevalence

for high blood pressure (BP) in Mexican Americans aged 20 to 74 years was 25.6% in males and 22.5% in females (NHANES II; 1976–1980), increasing to 30.6% in men and 25.0% in females more than a decade later (NHANES IV; 1999–2000).¹⁴ In fact, the NHANES IV Hispanic participants were noted to have an increase in overall prevalence of 3.5%, compared with the 1988–1991 survey.¹⁵ Other studies have also corroborated this increased prevalence.^{16–18}

We must acknowledge that most of this epidemiological data on Hispanics are culled from Mexican Americans, who comprise >58% of all Hispanics.¹⁹ Thus, the medical community must be prudent in their interpretation of these data, recognizing the limited information available for other Hispanic subgroups.

Treatment is also an area that requires our attention. Based on compelling epidemiological data, the current US guidelines, published in the Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure (JNC VII), recommend maintaining BP at <140/90 mm Hg for most patients.⁶ Despite the demonstrated benefit of treating hypertension^{2,20} and the existence of national guidelines, multiple sources of data have shown persistent inadequate hypertension control in Hispanic subpopulations.^{8,9,21}

KEY POINT

Despite the demonstrated benefit of treating hypertension and the existence of national guidelines, multiple sources of data have shown persistent inadequate hypertension control in Hispanic subpopulations.

Effects of Acculturation on Hypertension

What are the important factors that determine positive clinical outcomes in the treatment of high BP in Hispanic populations? Evidence suggests that hypertension is a multifactorial disease. It is well documented that factors such as poor adherence, socioeconomic status, lack of awareness of the consequences of uncontrolled hypertension,²² and lack

of insight into available resources all contribute to the barriers that affect Hispanics' access to health care.^{23–25} These barriers may explain the disparity between the low prevalence and adverse outcomes of hypertension in Hispanics, but we must also account for other exacerbating factors such as language, acculturation, and related psychosocial and environmental stressors.

Whereas low levels of acculturation have been associated with poor adherence and poor outcomes in Mexican Americans,²⁶ high levels of acculturation in Puerto Ricans have been associated with adherence to prescribed therapy.²⁷ Furthermore, acculturation is not a stagnant process. The cultural exchange and engagement with the dominant culture can be time dependent, and during which a social, economic, and informational marginalization takes place.^{28,29} Additionally, learning to speak English is a well-known hallmark of acculturation. Thus, it is important to recognize the impact that a low level of acculturation and limited English proficiency have on adherence to therapy and follow-up in the Hispanic population.²³

Ethnopharmacology and Diet

Presently, hypertensive treatments consist of either or both lifestyle modifications and pharmacologic therapy. Pharmacologic responses may be influenced by ethnicity, environmental factors, or the interaction of both. Ethnicity can predispose some members of a group to disease. Data suggest that certain Hispanic subgroups exhibit genetic variants that, when expressed, increase the risk of atherogenic changes that are precursors to hypertension.⁷ Additionally, variability in metabolic and hemodynamic profiles affects how these subgroups respond to pharmacologic therapy.^{30,31} For example, some Mexican Americans metabolize drugs regulated by the cytochrome P2D6 gene faster than non-Hispanics, which affects therapy with, and the side-effect profiles of, many cardiovascular drugs.³² Such Hispanic intergroup differences in pharmacologic response can adversely affect clinical outcomes when “therapeutically equivalent” drugs are imposed on the clinician by managed care plans designed to limit costs.²⁸

Lifestyle modifications in the Hispanic population require a culturally appropriate approach. Studies have shown that dietary control of high sodi-

um, low calcium, and low potassium can help prevent the development of or reduce hypertension in patients already on BP-lowering therapy.^{33–35} Cubans and Puerto Ricans have been found to have a higher prevalence of hypertension possibly due to higher sodium, low calcium, and low potassium diets.^{36,37} Adoption of low sodium diets such as the Dietary Approach to Stop Hypertension (DASH) can help stem BP elevation in people with and without hypertension.³⁸ Despite the proven benefit of such a diet, in a study measuring awareness of cardiovascular risk factors, only 26% of Hispanic respondents believed that lowering salt intake would help prevent high BP.³⁹ Efforts by culturally knowledgeable physicians to increase awareness of the benefits of salt and fat reduction can complement pharmacologic therapy for hypertension.

Providing Patient-Centered, Culturally Responsive Care

In addition to tailored pharmacotherapy and lifestyle modifications, effective cross-cultural communication is essential in the management of hypertension. Perceptions of health and illness, and illness prevention beliefs, are influenced by culture, as is the manner in which patients accept or reject medical advice or treatment.⁴⁰

Various patient-centered medical interviewing techniques and communication skills models have been proposed that emphasize mutuality, respect, negotiation, and collaboration in the doctor–patient relationship. In particular, several tools have been designed to aid health care providers in navigating the complicated terrain of a cross-cultural encounter.

In a study involving first year medical students conducted by one of the authors, the impact of teaching cultural competency was demonstrated.⁴¹ Furthermore, the authors were able to demonstrate that the incorporation of the ETHNIC interviewing framework facilitated a patient-centered encounter (**Table I**).⁴² The ETHNIC mnemonic allows the provider to effectively elicit the patient’s beliefs about health and illness, learn about any self-treatment, traditional remedies, or alternative healers being used, and negotiate a

KEY POINT

Understanding an Hispanic patient’s explanatory model (beliefs) about hypertension enhances the management of hypertension.

TABLE I. ETHNIC: A FRAMEWORK FOR CULTURALLY APPROPRIATE HEALTH CARE

E: Explanation

- What do you think may be the reason you have these symptoms?
- What do friends, family, and others say about these symptoms?
- Do you know anyone else who has had or who has this kind of problem?
- Have you heard about/read/seen it on TV/radio/newspaper?
- (If the patient cannot offer an explanation, ask what most concerns them about their problems.)

T: Treatment

What kinds of medicines, home remedies, or other treatments have you tried for this illness? Is there anything you eat, drink or do (or avoid) on a regular basis to stay healthy? Tell me about it. What kind of treatment are you seeking from me?

H: Healers

Have you sought any advice from alternative/folk healers, friends, or other people (non-doctors) for help with your problems?

N: Negotiate

Negotiate options that will be mutually acceptable to you and your patient and that do not contradict, but rather incorporate, your patient’s beliefs.

I: Intervention

Determine an intervention with your patient. May include incorporation of alternative treatments, spirituality, and healers as well as other cultural practices (eg, food eaten or avoided in general and when sick).

C: Collaboration

Collaborate with the patient, family members, other health care team members, healers, and community resources.

Reprinted with permission.⁴²

mutually agreeable therapeutic plan with the patient, family, and other important individuals involved in the care process.

In fact, the framework has been successfully employed in a community-based clinic caring for a large Hispanic population. It is logical, easy to use, and can be integrated into routine history taking and treatment planning. In addition, it assists in identifying risk factors for nonadherence with therapy and care. Most importantly, it reduces the dangers of stereotyping and overgeneralization during encounters by asking patients to serve as “teachers,” and physicians as “learners” about cultural diversity issues in health care.

Integrating Culturally Appropriate Strategies into the Treatment of Hypertension

Due to the change in national demographics and the exponential growth in Hispanic populations, today’s physicians will most likely encounter strong elements of folk medicine.^{43,44} Such cultural beliefs and practices among Hispanic patients can be considered a subgroup of complementary alternative medicine (CAM). These health beliefs are usually a lay person’s use of household and traditional remedies. In a study conducted by Huertin-Roberts and Reisen,⁴⁰ patients who believed that the etiology of hypertension was a folk illness, rather than the standard biomedical etiology, were 2.4 times more likely to have poor adherence with standard medical treatment, thus reinforcing the idea that culture affects adherence, which directly affects BP control.

Using another framework, known as ADHERE, providers can consciously review if the barriers to nonadherence have been addressed (**Table II**).⁴⁵ In particular, it is important to elicit and acknowledge the patient’s perspective about the proposed therapeutic plan, determine mutual goals and desired outcomes, discuss treatment strategies and the consequences of nontreatment, address any questions or concerns regarding treatment, evaluate patient health literacy and understanding of the reasons for treatment as well as barriers and facilitators to adherence, recommend and review the therapeutic regimen, and empower by eliciting the patient’s commitment and willingness to follow through.

Tools such as ETHNIC and ADHERE assist in identifying barriers and the risk factors that will adversely affect adherence. Once the barriers are identified, physicians can appropriately modify current therapeutic guidelines by balancing the patient’s explanatory model of illness with pharmacotherapy and other health promotion/disease prevention modalities.

The primary goal in the treatment of hypertension is to reduce the incidence of cardiovascular events in hypertensive patients. Studies performed to assess the impact of treating hypertension have revealed very disappointing control in the Hispanic population.^{8,15,27} Many physicians would agree that one factor is poor patient adherence with their antihypertensive treatment. Other factors such as cost, convenience, polypharmacy, and adverse effects are all critically important issues in the selection of hypertensive agents. In addition, the level of patient involvement in

TABLE II. ADHERE: A MNEMONIC FOR IMPROVING PATIENT ADHERENCE WITH THERAPEUTIC REGIMENS.

- A: Acknowledge** the need for treatment with the patient, and ask about previous treatments utilized. Together determine mutual goals and desired outcomes.
- D: Discuss** potential treatment strategies and options, as well as consequences of nontreatment with the patient (consider issues such as treatment effectiveness, prognosis, use of complementary/alternative medicine, brand name versus generic off-label uses, prescription plans, formularies, etc).
- H: Handle** any questions or concerns the patient may have about treatment (eg, fears or worries, side effects, costs, dosage, frequency, timing, sequence, duration of treatment, drug or food interactions, proper storage techniques).
- E: Evaluate** the patient’s functional health literacy and understanding of the purpose and rationale for treatment, and assess barriers and facilitators to adherence (eg, environmental, economic, occupational, and sociocultural factors; family situation; and supports).
- R: Recommend** treatment, and review the therapeutic regimen with the patient.
- E: Empower** by eliciting the patient’s commitment and willingness to follow through with the therapeutic regimen.

their treatment appears to be essential in obtaining goal BP; therefore, it is absolutely necessary to develop strong physician–patient communication. This communication depends on patient-specific factors that can be explored through the patient’s model of illness.

What are the physician-specific factors that must be taken into consideration? Despite the presence of effective antihypertensive therapies and the clinical guidelines from large clinical trials demonstrating the benefits of the control of hypertension, <18% of hypertensive Hispanics have controlled hypertension.¹⁵ Physician prescribing patterns may contribute to poor control of hypertension. In one study of primary care physicians, ~33% did not recommend treatment in patients with diastolic BP of 90 to 100 mm Hg.⁴⁶ Furthermore, they would not treat or increase therapy for hypertensive patients with systolic BP of 140 to 160 mm Hg despite national guidelines to do so. In an NHANES III survey of 16,095 adults with known hypertension (defined as BP \geq 140/90 mm Hg or the use of pharmacologic therapy), it was found that 41% of Mexican Americans had hypertension but were not aware they did, 19% had been told of the diagnosis but were not treated, 25% with uncontrolled hypertension (BP >140/90 mm Hg) were inadequately treated, and only 15% of Mexican American patients treated had controlled hypertension.⁸ In another corroborating study in a large Midwestern health system comprising 12% Hispanics, it was found that pharmacologic therapy was initiated or changed in only 38% of visits in patients with documented hypertension in the previous 6 months. In this study, 76% of physicians agreed with JNC VI guidelines while citing satisfaction with the BP value at the time of visit.⁴⁷ Both studies reveal that physicians may play a contributory role in the poor control of hypertension in Hispanics.

Although an important strategy, antihypertensive monotherapy does not fully address the multifactorial causes of poor control among hypertensive Hispanic populations. Factors such as low adherence, low health literacy, and less access to optimal medications because of cost-containment strategies contribute to the disparity in BP control in these populations. Once risk factors to nonadherence are identified, physicians should be amenable to new approaches to the management of hypertension, such as earlier control of BP, more aggressive use of low-dose combination therapy as first-line treatment, or earlier use of

stepped-care approaches recommended by national guidelines.⁶ Low-dose combination therapy is associated with lower costs, simpler drug regimens, lower rates of side effects, and improved adherence due to better tolerance.^{48–50} As observed in the general population, reducing the number of daily doses is an effective way of increasing adherence to prescribed regimens.⁵¹ The use of low-dose combination therapy, either as first-line treatment or much earlier in the course of treating hypertensive patients, may provide the solution to many of these management challenges.

KEY POINT

Effective treatment is a balance between simplicity of regimen (to ensure adherence) and pharmacologic efficacy (low-dose combination therapy) to assure positive clinical outcomes.

CONCLUSION

Hispanics should be afforded the same standard of care as the general population. Treatment of hypertension in Hispanics should address patient-specific issues such as level of acculturation, health literacy, English proficiency, socioeconomic status, and illness explanatory models. Patient-specific issues should be considered together with physician-specific issues such as the undertreatment of hypertension, and cultural and language barriers. These specific issues must be balanced with pharmacotherapy and lifestyle modifications to achieve positive clinical outcomes in hypertension treatment. As physicians and health care providers, we should avail ourselves of cross-cultural tools that can improve the quality of care delivered to Hispanics and other ethnic and racial populations.

Every encounter is a cross-cultural encounter. It is crucial that we seek the knowledge, attitudes, skills, and behaviors required to care for our increasingly diverse society.

ACKNOWLEDGMENT

The authors would like to acknowledge the Hispanic Center of Excellence, UMDNJ-New Jersey Medical

School and the Division of Health Careers Diversity & Development, Bureau of Health Professions, Health Resources and Services Administration, Grant no. 5 D34HP02045.

REFERENCES

1. Neal B, MacMahon S, Chapman N, et al, for the Blood Pressure Lowering Treatment Trialists' Collaboration. Effects of ACE inhibitors, calcium antagonists, and other blood-pressure-lowering drugs. Results of prospectively designed overviews of randomized trials. *Lancet*. 2000;356:1955–1964.
2. Hansson L, Zanchetti I, Carruthers SG, et al. Effects of intensive blood pressure lowering and low-dose aspirin in patients with hypertension: Principal results of the Hypertension Optimal Treatment (HOT) randomized trial. *Lancet*. 1998;351:1755–1762.
3. Stamler J, Stamler R, Neaton JD. Blood pressure, systolic and diastolic, and cardiovascular risks. US population data. *Arch Intern Med*. 1993;153:598–615.
4. WHO World Health Organization Report, 2002. World Health Organization. The world health report 2002—reducing risks, promoting healthy life. Available at: <http://www.who.int/whr/2002/en/>. Accessed October 11, 2004.
5. Burt VL, Whelton P, Roccella EJ, et al. Prevalence of hypertension in the US adult population. Results from the Third National Health and Nutrition Examination Survey, 1988–1991. *Hypertension*. 1995;25:305–313.
6. Chobanian AV, Bakris GL, Black HR, et al, for the Joint National Committee. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension*. 2003;42:1206–1252.
7. Laffer CL, Elijovich F. Suboptimal outcome of management of metabolic cardiovascular risk factors in Hispanic patients with essential hypertension. *Hypertension*. 1995;26:1079–1084.
8. Hyman DJ, Pavlik VN. Characteristics of patients with uncontrolled hypertension in the United States. *N Engl J Med*. 2001;345:479–486.
9. Crespo CJ, Loria CM, Burt VL. Hypertension and other cardiovascular disease risk factors among Mexican Americans, Cuban Americans, and Puerto Ricans from the Hispanic Health and Nutrition Examination Survey. *Pub Health Rep*. 1996;111 (Suppl 2):7–10.
10. US Bureau of the Census. Difference in Population by Race and Hispanic or Latino Origin, for the United States: 1990 to 2000. Available at: <http://www.census.gov/population/cen2000/phc-t1/tab04.pdf>. Internet release date: April 2, 2001. Accessed October 12, 2004.
11. Therrien M, Ramirez RR. The Hispanic population in the United States: March 2000. Current population reports. P20-535, US Census Bureau, Washington DC. Available at: <http://www.census.gov/population/www/socdemo/hispanic/p20-535>. Accessed October 12, 2004.
12. Quinn K, Abt Associates, Inc. Working without benefits: The health insurance crisis confronting Hispanic Americans. Available at: http://www.cmfwf.org/publications/publications_show.htm?doc_id=221382. Accessed September 23, 2004.
13. Pugh JA, Stern MP, Haffner SM, et al. Excess incidence of treatment of end-stage renal disease in Mexican Americans. *Am J Epidemiol*. 1988;127:135–144.
14. American Heart Association. Hispanics/Latinos and cardiovascular diseases—statistics. Available at: www.americanheart.org/presenter.jhtml?identifier=3000934. Accessed September 10, 2004.
15. Hajjar I, Kotchen TA. Trends in prevalence, awareness, treatment, and control of hypertension in the United States, 1988–2000. *JAMA*. 2003;290:199–206.
16. Samet JM, Coultas DB, Howard CA, et al. Diabetes, gallbladder diseases, obesity, and hypertension among Hispanics in New Mexico. *Am J Epidemiol*. 1988;128:1302–1311.
17. Lorenzo C, Serrano-Rios M, Martinez-Larrad MT, et al. Prevalence of hypertension in Hispanics and non-Hispanic white populations. *Hypertension*. 2002;39:203–208.
18. Pappas G, Gergen PJ, Carroll M. Hypertension prevalence and the status of awareness, treatment, and control in the Hispanic Health and Nutrition Examination Survey (HHANES), 1982–1984. *Am J Public Health*. 1990;80:1431–1436.
19. Perry MJ, Mackun PJ. Population change and distribution 1990 to 2000: Census 2000 brief. Available at: <http://www.census.gov/prod/2001pubs/c2kbr01-3.pdf>. Accessed September 23, 2004.
20. SHEP Cooperative Research Group. Prevention of stroke by antihypertensive drug treatment in older persons with isolated systolic hypertension. Final results of the Systolic Hypertension in the Elderly Program (SHEP). *JAMA*. 1991;265:3255–3264.
21. Satish S, Stroup-Benham CA, Espino DV, et al. Undertreatment of hypertension in older Mexican Americans. *J Am Geriatric Soc*. 1998;46:405–410.
22. Aranda JM Jr, Vazquez R. Awareness of hypertension and diabetes in the Hispanic community. *Clin Cornerstone*. 2004;6(3):7–15.
23. Betancourt JR, Carrillo JE, Green AR. Hypertension in multicultural and minority populations: Linking communication to compliance. *Curr Hypertens Rep*. 1999;1:482–488.
24. Aguirre-Molina M, Molina C, Zambrana RE, eds. *Health Issues in the Latino Community*. San Francisco, Ca: Jossey-Bass; 2001:55–73.
25. Betancourt JR, Carrillo JE, Green AR, Maina A. Barriers to health promotion and disease prevention in the Latino population. *Clin Cornerstone*. 2004;6(3):16–29.
26. Cuellar I, Harris LC, Jasso R. An acculturation scale for Mexican American normal and clinical populations. *Hispanic J Behav Sci*. 1980;2:199–217.
27. Pachter LM, Weller SC. Acculturation and compliance with medical therapy. *J Dev Behav Pediatr*. 1993;14:163–168.

28. Burroughs VJ, Maxey RW, Levy RA. Racial and ethnic differences in response to medicines: Towards individualized pharmaceutical treatment. *J Natl Med Assoc.* 2002;94(Suppl 10):1–26.
29. Choi H. Cultural marginality: A concept analysis with implications for immigrant adolescents. *Issues Compr Pediatr Nurs.* 2001;24:193–206.
30. Haffner SM, Miettinen H, Gaskill SP, Stern MP. Metabolic precursors of hypertension. The San Antonio Heart Study. *Arch Intern Med.* 1996;156:1994–2001.
31. Brown DW, Giles WH, Greenlund KJ, et al. Associations of hyperinsulinemia and hypertension independent of body mass among white, black, and Mexican-American adults without diabetes. *Ethn Dis.* 2002;12:213–220.
32. Mendoza R, Wan YJ, Poland RE, et al. CYP2D6 polymorphism in a Mexican American population. *Clin Pharmacol Ther.* 2001;70:552–560.
33. Law MR, Frost CD, Wald NJ. By how much does dietary salt reduction lower blood pressure? III—Analysis of data from trials of salt reduction. *BMJ.* 1991;819–824.
34. Graudal NA, Galloe AM, Garred P. Effects of sodium restriction on blood pressure, renin, aldosterone, catecholamines, cholesterol, and triglyceride: A meta-analysis. *JAMA.* 1998;279:1383–1391.
35. Weir MR, Chrysant SG, McCarron DA, et al. Influence of race and dietary salt on the antihypertensive efficacy of an angiotensin-converting enzyme inhibitor or a calcium channel antagonist in salt-sensitive hypertensives. *Hypertension.* 1998;31:1088–1096.
36. Bauer UE, Mayne ST. Do ethnic differences in dietary cation intake explain ethnic differences in hypertension prevalence? Results from a cross-sectional analysis. *Ann Epidemiol.* 1997;7:479–485.
37. Looker AC, Loria CM, Carroll MD, et al. Calcium intakes of Mexican Americans, Cubans, Puerto Ricans, non-Hispanic whites, and non-Hispanic blacks in the United States. *J Am Diet Assoc.* 1993;93:1274–1279.
38. Sacks FM, Svetkey LP, Vollmer WM, et al, for the DASH-Sodium Collaborative Research Group. Effects on blood pressure of reduced dietary sodium and the Dietary Approaches to Stop Hypertension (DASH) diet. *N Engl J Med.* 2001;344:3–10.
39. Kumanyika S, Savage DD, Ramirez AG, et al. Beliefs about high blood pressure prevention in a survey of blacks and Hispanics. *Am J Prev Med.* 1989;5:21–26.
40. Huertin-Roberts S, Reisin E. The relation of culturally influenced lay models of hypertension to compliance with treatment. *Am J Hypertens.* 1992;5:787–782.
41. Crosson JC, Deng W, Brazeau C, et al. Evaluating the effect of cultural competency training on medical student attitudes. *Fam Med.* 2004;36:199–203.
42. Levin SJ, Like RC, Gottlieb JE. ETHNIC: A framework for culturally competent clinical practice. In: Appendix: Useful clinical interviewing mnemonics. *Patient Care.* 2000;34:188–189.
43. Eisenberg DM, Kessler RC, Foster C, et al. Unconventional medicine in the United States: Prevalence, costs, and patterns of use. *N Engl J Med.* 1993;328:246–252.
44. American Medical Association. Report 13 of the Council on Scientific Affairs (A-97): Folk Remedies Among Ethnic Subgroups, 1997.
45. Like RC. *The providers guide to quality and culture.* Available at: <http://erc.msh.org>. Accessed October 22, 2004.
46. Hyman DJ, Pavlik VN. Self-reported hypertension treatment practices among primary care physicians: Blood pressure thresholds, drug choices, and the role of guidelines and evidence-based medicine. *Arch Intern Med.* 2000;160:2281–2286.
47. Oliveria SA, Lapuerta P, McCarthy BD, et al. Physician-related barriers to the effective management of uncontrolled hypertension. *Arch Intern Med.* 2002;162:413–420.
48. Chalmers J. The place of combination therapy in the treatment of hypertension in 1993. *Clin Exp Hypertens.* 1993;15:1299–1313.
49. Prisant LM, Weir MR, Papademetriou V, et al. Low-dose drug combination therapy: An alternative first-line approach to hypertension treatment. *Am Heart J.* 1995;130:359–366.
50. Gavras I, Rosenthal T. Combination therapy as first-line treatment for hypertension. *Curr Hypertens Rep.* 2004;6:267–272.
51. Schroeder K, Fahey T, Ebrahim S. How can we improve adherence to blood pressure-lowering medication in ambulatory care? Systematic review of randomized controlled trials. *Arch Intern Med.* 2004;164:722–732.

Address correspondence to: Maria L. Soto-Greene, MD, 65 Bergen Street, Suite 1535, PO Box 1709, Newark, NJ 07101-1709.

Dialogue Box

EDITORIAL BOARD

Please clarify the appropriate use of the terms Hispanic and Latino.

SOTO-GREENE

According to federal guidelines, the terms Latino and Hispanic are becoming more interchangeable encompassing Mexican Americans/Chicanos, Caribbean Latinos including mainland Puerto Ricans, as well as persons from Central and South America and Spain. Hispanic is viewed by some as a more inclusive term and including persons from Spain.

SANCHEZ

Historically speaking, the word Latino referred to persons from Latin America. Since Spaniards don't consider themselves part of Latin America, some do not identify as Latin Americans and, therefore, prefer the term Hispanic.

LIKE

The short answer is the term Hispanic, as I understand it, is more of a federal label that designates someone of Hispanic or Iberian or Spanish-speaking origin. Many Latino and Latina communities, however, have some difficulties with the term Hispanic. Many physicians from certain parts of the country outside the Northeast seem to have moved more to using the terms Latino and Latina.

EDITORIAL BOARD

Which of the Hispanic subgroups have genetic variants that, when expressed, appear to increase the risk for atherogenic changes that are precursors in hypertension?

SANCHEZ

The major research on Hispanics and Latinos in the United States, as far as cardiovascular disease, is the NHANES Study which started in 1981 and remains ongoing. Since this study focused pre-

dominantly on Mexican Americans, it is important to note that the data from that study may not be fully generalizable to other subgroups. It's now being discovered that there exists genetic predispositions among certain subgroups of the Hispanic/Latino population that places them at risk for cardiovascular risk factors. It has been said that culture determines your environment and your ethnicity determines your genetics. For example, Caribbean Puerto Ricans are known to have a high-salt diet (ie, a diet associated with increased prevalence of hypertension). The Mexican American population has been found to have a higher predisposition for elevated cholesterol levels on both a genetic as well as environmental basis, the latter stemming from their diet. However, I think to say that one culture or one subgroup is at higher risk than another is not really fair since you're basically saying they are at risk for the antecedent to hypertension. Whatever happens from there is really dependent on their environment and their unique situation.

LIKE

All we can really say is there may be some genetic associations. We need to avoid attributing causality since to do so otherwise runs the risk of inappropriately promoting stereotypes. Such associations are best viewed as markers for both potential genetic links as well as environmental links. What then causes an increased hypertension risk is likely multifactorial.

EDITORIAL BOARD

Please expand on how the cross-cultural frameworks, ETHNIC and ADHERE, have been utilized at your institution.

SOTO-GREENE

In addition to using ETHNIC as a teaching tool for medical students during their first-year history and physical examination course, we've used it in

Dialogue Box

training house staff and, on a limited basis, with faculty. It seems to work particularly well for physicians at our Latino-focused academic practice site who have been able to engender a tremendous sense of satisfaction both as professionals as well as by the patients. It is an easy tool to use incorporating it into their active routines.

LIKE

I've made use of these clinical interviewing mnemonics in undergraduate medical education, residency training, faculty development, and continuing medical education courses. These practical tools can help physicians to develop a therapeutic alliance with patients and to provide more culturally responsive and effective care.

EDITORIAL BOARD

What are your feelings about the use of family members as interpreters when working with Hispanic patients?

SOTO-GREENE

The body of literature and experience will tell you that one really should use a trained interpreter. The issue often arises, however, who's going to pay for it? Presently, if a practice receives federal monies, such as Medicare dollars, the onus is on the physician being responsible for providing

the interpreter services. Relying on a family member may lead to medical errors; however, it is still a practice in place until the nation can come to the better solution on these issues.

LIKE

Suffice it to say that there have been some multi-million dollar lawsuits that have arisen from the inappropriate use of family members (especially children or minors) as interpreters. According to the Office for Civil Rights, a person with Limited English Proficiency (LEP) should be informed that she or he has the option of being provided with an interpreter without charge, or of using his or her own interpreter. The use of family members and/or friends as interpreters can become a difficult balancing act that can raise comfort, trust, privacy, and quality-of-care issues. Extra caution is needed if a person with LEP chooses to use a minor as interpreter due to concerns about competency, confidentiality, and conflict of interest. Readers are strongly encouraged to review the August 8, 2003, Office for Civil Rights' Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons for additional important information (available at: <http://www.hhs.gov/oct/lep/guide.html>; accessed November 4, 2004).