

5-2002

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Repository Citation

Ferguson, Warren J. and Candib, Lucy M., "Culture, language, and the doctor-patient relationship" (2002). *Family Medicine and Community Health Publications and Presentations*. 61.

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Culture, Language, and the Doctor-Patient Relationship

Warren J. Ferguson, MD; Lucy M. Candib, MD

Background: *This review's goal was to determine how differences between physicians and patients in race, ethnicity, and language influence the quality of the physician-patient relationship.* **Methods:** *We performed a literature review to assess existing evidence for ethnic and racial disparities in the quality of doctor-patient communication and the doctor-patient relationship.* **Results:** *We found consistent evidence that race, ethnicity, and language have substantial influence on the quality of the doctor-patient relationship. Minority patients, especially those not proficient in English, are less likely to engender empathic response from physicians, establish rapport with physicians, receive sufficient information, and be encouraged to participate in medical decision making.* **Conclusions:** *The literature calls for a more diverse physician workforce since minority patients are more likely to choose minority physicians, to be more satisfied by language-concordant relationships, and to feel more connected and involved in decision making with racially concordant physicians. The literature upholds the recommendation for professional interpreters to bridge the gaps in access experienced by non-English speaking physicians. Further evidence supports the admonition that "majority" physicians need to be more effective in developing relationships and in their communication with ethnic and racial minority patients.*

(Fam Med 2002;34(5):353-61.)

Over the course of the last decade, disparities in health outcomes among ethnic minority and racial groups have become increasingly clear.^{1,2} Differences include access to care, screening, diagnostic and treatment interventions, and morbidity and mortality. Accordingly, the US government set goals for narrowing these differences, first for the year 2000 and now for the year 2010.³ While the reasons for these disparities remain poorly understood,¹ calls for cultural competency training in medical school and residency,⁴⁻⁶ as well as efforts to recruit a more diverse medical workforce,^{7,8} suggest that aspects of the doctor-patient relationship may be important causative factors.

Research on doctor-patient communication has generated considerable evidence that effective communication can improve outcome measures such as patient satisfaction, adherence to treatment, and disease outcomes.^{9,10} Provision of adequate information, elicitation of patient worries, and a participatory decision-making style have all correlated with improved effectiveness. However, apart from an occasional reference

to socioeconomic status, the literature on the doctor-patient relationship has not addressed the influence of cultural difference between physicians and patients on communication effectiveness. Additionally, appropriate care of ethnically and racially diverse populations requires the ability to communicate with individuals who have limited English proficiency. Only 25% of the important investigations on doctor-patient relationships have considered non-English-speaking patients.¹¹

We examined the literature on doctor-patient communication and culture, looking for recommended strategies for improving the doctor-patient relationship. In this literature, several themes stand out: approaches to language barriers; the recognition of physician bias, including racism; and relationship building. The latter includes the ability to use empathy and foster trust. It also includes effective communication skills to facilitate participatory decision making with patients and the provision of culturally competent care.¹²

The goal of this review is answer three questions: (1) Is there evidence that differences in language, ethnicity, and race between physicians and patients affect the quality of their relationship and communication, and if so, are there outcome measures to substantiate such an effect? (2) Is there evidence that improv-

ing such communication makes a difference in health care outcomes? (3) Is there evidence that acting on recommendations to diversify the physician workforce and train the existing workforce to be culturally and linguistically effective will make a difference in outcomes of care?

Methods

Using MEDLINE, we performed a literature review using the key words "culture," "racism," "minority populations," "ethnic groups," "language," "interpreters," "physician-patient relationship," "physician-patient communication," "patient satisfaction," "compliance," "negotiation," and "empathy." Key words were "exploded" to cover a large number of MeSH headings. Searches were limited to articles published in English from 1966 to 2000. Additionally, we searched a database developed at the University of Massachusetts that includes published articles on access and health outcome barriers.

We included articles reporting in investigator-initiated research and secondary data analyses with quantitative methods that controlled for covariates such as age, education, socioeconomic status, and measures of wellness. Articles and recommendations based on expert opinion or anecdotal experience were excluded, as were case studies. No articles using rigorous qualitative research methodology were found.

Results

More than 400 articles were initially identified, but only 21 met the inclusion criteria. Most articles reported on outcome problems with limited-English speaking patients (five studies) or on strategies to overcome this language barrier by using bilingual physicians or professional interpreters (seven studies). All of these are categorized below as language studies and summarized in Tables 1 and 2. A second group of articles reported on the evidence for potential physician bias in racially and ethnically discordant physician-patient relationships (four studies). These are presented in Table 3 and categorized below as bias studies. The last group of articles (Table 4) examined relationship-building behaviors of physicians, focusing on differences in rapport building, demonstration of empathy, and quality of communication skills beyond language of interview (five studies).

Language

In 1990, more than 14 million Americans were not proficient in English.¹³ Existing strategies for improving access for limited-English-speaking (LES) patients include care by bilingual/bicultural providers, use of bilingual/bicultural employees as community health workers and culture brokers, use of bilingual employees who interpret in addition to their regular work, the use of professional interpreters, and the use of translation via written or other technologies.¹⁴

Five studies were identified that showed a correlation between LES ability of patients and perceived quality of outcomes in comparison to English-speaking patients. The results are summarized in Table 1. Four of these studies measured quality by surveying patients. For example, one survey of Hispanics in Arizona regarding health status, access barriers, and care satisfaction showed that language of interview was a more significant variable than ethnicity.¹⁵ Three other studies surveyed patients following medical encounters, reporting on differences in satisfaction, provision of information, and compliance.¹⁶⁻¹⁸

The study by Baker¹⁷ was unique in that he surveyed 467 patients from one of three groups: those interviewed in English, those interviewed with an ad hoc interpreter, and a third group interviewed with no interpreter despite a patient's report that one was needed. Those who used ad hoc interpreters or who went without a needed interpreter indicated that providers were less friendly, less respectful, and less concerned. For those needing an interpreter but not using one, these findings were magnified. These patients were also less satisfied with time spent by provider and with interpersonal aspects of care. Another emergency room study with pediatric patients demonstrated that children with LES parents had longer, more-costly visits with more testing due to the inability to communicate with parents.¹⁹

Table 2 summarizes those studies examining language concordance between a physician and patient and methods to bridge language difference. Three studies of Spanish-speaking Latino patients observed a correlation between doctor-patient language concordance and quantifiable outcomes. For example, Latino patients with a chronic condition (asthma) and cared for by a language-concordant physician asked more questions, had greater recall of recommendations, had lower use of the emergency room, and had more compliance with follow-up care.²⁰ In another study of a homogeneous population, poor, LES Spanish-speaking Hispanics with a language-concordant physician had more information recall and asked more questions of their physicians than those cared for by an English-speaking physician.²¹ A stratified random analysis of Latino and Caucasian patients with diabetes and hypertension from the Medical Outcomes Study found a correlation between physical function and better well-being when the primary care physician spoke the same language.²²

Four studies have focused on outcome measures with interpretation methods. In the first study (not included in Table 2), physician and patient satisfaction with interpretation methods were surveyed using a Likert scale developed by the authors. Validity and reliability testing of the instrument were not reported. Both physicians and patients were most satisfied with professional interpreters. Patients, but not physicians, were satisfied with use of a family member or with use of a bilin-

Table 1
Results of Outcome Studies With LES Versus ES Patients

Source	STUDY POPULATION			Practice	Study Type	Covariates	Outcome	
	#	Mean Age (Years)	Demographics				Measure	Results*
Kirkman-Liff et al, ¹⁵ 1991	4,217	NR	Hispanics ES versus LES	N/A Arizona households	Cross-sectional patient telephone survey	Socioeconomic status	Health status Access Barriers Satisfaction	LES < ES LES < ES LES < ES LES < ES
David and Rhee, ¹⁶ 1998	139	Cases=57 Controls=47	ES (controls) versus LES (cases) Hispanics Nonprofessional Interpreters used for LES	Outpatient internal medicine clinic	Cross-sectional patient survey	No control for measures of education or socioeconomic status No report on survey validity	MD explanation Satisfaction MD perception Time with MD Mammogram	LES < ES LES < ES LES < ES NS NS
Baker, ¹⁷ 1998	467	36	Hispanics ES versus LES ± nonprofessional interpreter	ED	Cross-sectional patient survey	Age, gender, literacy, health status, anticipated satisfaction	MD friendliness MD respect MD show of concern Sufficient time	LES < ES LES < ES LES < ES NS
Carrasquillo et al, ¹⁸ 1999	2,333	ES=47 LES=41	ES (controls) versus LES (cases) Latino, African American, Asian, and Eastern European	Five EDs	Cross-sectional patient survey	Age, gender, race/ethnicity, education, income, insurance status, chief complaint, urgency, having primary MD	Satisfaction Discharge instruction Overall care Courtesy Respect	LES < ES LES < ES LES < ES LES < ES LES < ES
Hampers et al, ¹⁹ 1999	2,467	LB=30 months No LB=36 months	209 children with LB for family/MD 2,258 children with no LB for family/MD	ED	Prospective cohort study	Race, ethnicity, insurance, MD level, triage category	Length of time in ED Total ED test charges	LB > nLB LB > nLB

ED—emergency department, ES—English speaking, LB—language barrier, LES—limited English speaking, MD—physician, nLB—no language barrier, NR—not reported, NS—nonsignificant

* The following results were all significant with $P < .05$ or lower. LES < ES=scores or measures lower with limited English-speaking patients compared to English-speaking patients; LB > nLB=amount larger for families with language barrier than families with no language barrier.

gual physician colleague. Physicians, but not patients, were satisfied with interpretation by telephone.²³

The second study was a randomized study of 49 postpartum visits that compared two types of professional interpretation: proximate-consecutive (typically performed in the triadic interview with a patient, physician, and interpreter) and remote-simultaneous (the form of simultaneous translation used in the United Nations with special technology). The remote type of interpretation was judged to be superior in many ways. Patient and physician utterances were both increased using the remote method. There were 12% fewer inaccuracies of words spoken by physicians and 13% fewer inaccuracies of words spoken by patients. Both patients and physicians preferred the remote method, although interpreters preferred the proximate method.²⁴

In a third study, use of health services and preventive screening exams was studied in four health maintenance organization practice sites prior to and following the addition of professional interpreters to on-site staff. Retrospective record review, after the intervention, revealed that patients with limited English proficiency had more office visits and increased use of prescription drugs, as well as increased numbers of rectal exams, flu vaccines, and fecal occult blood testing. However, there was no statistical change in use of mammography, PAP testing, or physical breast exam.²⁵

One other study demonstrated that even professional interpretation might have its limitations. A cross-sectional sample of patients was videotaped during visits with physicians in a multi-ethnic university clinic. English-speaking patients made almost three times as

Table 2

Strategies That Improve Outcomes With LES Patients

Source	STUDY POPULATION			Practice	Study Type	Covariates	Outcome Measure	Results*
	#	Mean Age (Years)	Demographics					
<i>Workforce Strategies</i>								
Manson, ²⁰ 1988	96	53	Spanish-speaking Latinos with asthma ± bilingual MD	IM	Retrospective audit	Age, gender Payer status Disease severity	Missed appointment Medicine compliance ED visits Admission	For patients > 8 visit: LC < LD LC > LD LC < LD NS
Seijo et al, ²¹ 1991	51	62	All patients Hispanic; poor to fair English; low socioeconomic status; n=24, visit with bilingual, bicultural MD n=27, visit with monolingual MD	General medical clinic	Cross-sectional observation	Homogenous population	Patient information recall Patient question-asking behavior	LC > LD LC > LD
Perez-Stable et al, ²² 1997	236	61	37 ES Latinos 73 LES Latinos 126 Caucasians 63% female ± bilingual MD	University IM: A/R/NP	Patient survey	Age, gender Education Illness burden Ethnicity	Physical function Psychological well-being Health perceptions Pain	LC > LD LC > LD LC > LD LC < LD
<i>Interpreter Strategies</i>								
Hornberger et al, ²⁴ 1996	49	NR	49 SS mothers with infants	Well baby clinic	Randomized intervention using two interpretation methods	Homogenous sample	MD utterances Mother utterances Interpreter errors MD satisfaction Patient satisfaction	RS > PC RS > PC RS > PC RS > PC RS > PC
Jacobs, ²⁵ 2001	4,380	ISG=46 CG=43	327 LES Spanish and Portugese 4,053 CG	HMO practice sites	Retrospective chart review	Gender Age Income Years enrolled	Office visits Rx written Rx filled Phone calls Urgent care visits Mammograms Breast exams Pap tests FOB testing Rectal exams Flu vaccines	LES > CG LES > CG LES > CG NS NS NS NS LES > CG LES > CG LES > CG
Rivadeneira, ²⁶ 2000	38	37	19 ES: 15 female, 4 C 19 SS: 17 male, 1 C, 1 CA 20 male/18 female RNs interpreting	University clinic	Cross-sectional observation	Education level Ethnicity	# of verbal offers by patients Patient-centered scores of MDs	SS < ES (7 versus 20) SS < ES (.6 versus 1.1)

A—attending, C—Caucasian, CA—Central American, CG—control group, CH—Chicano, ED—emergency department, ES—English speaking, FOB—fecal occult blood, IM—internal medicine, ISG—interventional study group, MD=physician, LC—language concordant, LD—language discordant, LES—limited English speaking, M—Mexican, NP—nurse practitioner, NR—not reported, NS—nonsignificant, PC—proximate consecutive interpretation, R—resident, RN—registered nurse, RS—remote spontaneous interpretation, SS—Spanish speaking

* The following results were all significant with $P < .05$ or lower. LC > LD=language concordant higher than language discordant; LC < LD=language concordant lower than language discordant; RS > PC or RS < PC= remote spontaneous interpretation higher or lower than proximate consecutive interpretation; SS < ES=scores with Spanish speakers less than English speakers; LES > CG=intervention with limited English-speaking rates higher than control group.

Table 3

Studies of Physician Bias, Rapport Building, and Patient Preference, With Race/Ethnicity As Variables

Source	STUDY POPULATION				Study Type	Controls	Outcome Measure	Results*
	#	Mean Age (Years)	Demographics	Practice				
Van Ryn, ²⁷ 2000	618	Patients=65 MD=45	57% C, 43% AA, 53% male Years of education =12 SES: 33% high, 33% moderate, 33% poor	Eight New York hospitals	Cross-sectional physician and patient survey	Education SES Age Gender	Feelings of affiliation Risk of substance abuse Intelligence Interest in active lifestyle/ cardiac rehabilitation MD participa- tory style	C > AA C < AA C > AA C > AA C > AA
Todd, ²⁸ 1993	139	32	108 C, 31 H	ED	Retrospective cohort analysis	Ethnicity Gender Language Insurance Injury Fracture reduction Time of day	Administration of pain medication	C > H
Todd, ²⁹ 1994	138	34	138 C, 69 H	ED	Prospective cohort analysis		Measure of pain by patients versus estimate of pain by MDs	NS
Todd, ³⁰ 2000	217		127 AA 90 Caucasians	ED	Retrospective chart review	Insurance Fracture reduction Time of day Time since injury	Administration of pain medication	C > AA

AA—African American, C—Caucasian, ED—emergency department, H—Hispanic, MD=physician, NS—nonsignificant, SES—socioeconomic status

* The following results are statistically significant at $P < .05$ or lower. C > AA/C < AA=measure higher/lower for Caucasians than African American patients. C > H/C < H=measure higher/lower for Caucasians than Hispanic patients.

many offers of information. Spanish-speaking patients were less likely to receive facilitation from physicians and were more likely to have their comments ignored despite the presence of a professional interpreter.²⁶ We could not find any studies that measured outcomes of training providers in the use of interpreters.

Evidence of Physician Bias

Table 3 summarizes those studies that either directly or indirectly examine stereotyping and bias in physician-patient interactions. The most direct evidence of such physician bias comes from a study of 618 post-angiogram visits performed by mostly Caucasian physicians with Caucasian and African American patients. Eight New York hospitals participated in the study. The authors surveyed physicians' perceptions of and attitudes toward patients, focusing on patients' personal and psychosocial characteristics, behavior, and likely role demands. They studied whether these perceptions or attitudes were affected by patient race or socioeconomic status as independent variables. Physicians were

somewhat less likely to have a positive perception of African Americans on a number of issues. Physicians rated African Americans as less likely to be the kind of person they could be friends with, as being less likely to be free of substance abuse problems, and less likely than Caucasians to be interested in an active lifestyle and cardiac rehabilitation. Finally, physicians rated African Americans as less intelligent and less educated than Caucasians. All of these relationships were stronger if the patient was from a lower socioeconomic class.²⁷

Additional indirect evidence of racial bias emerged from studies comparing pain treatment for long-bone fractures in emergency departments for Caucasians versus Hispanics and Caucasians versus African Americans. Studies in Los Angeles revealed that Hispanic males were half as likely to receive analgesia despite equivalent estimates of pain intensity by both physicians and patients.^{28,29} The same authors performed a retrospective review of African Americans and Caucasians with long-bone fractures in Atlanta. Blacks had a

Table 4

Studies on Relationship Building, With Race and Ethnicity As Variables

Source	STUDY POPULATION				Study Type	Controls	Outcome Measure	Results*
	#	Mean Age (Years)	Demographics	Practice				
Shapiro, ³⁷ 1981	61	NR	39 C, 15 LES-H, 7 ES-H	Resident clinic	Cross-sectional observation		Rapport building by MD Explanations Patient satisfaction rate	C > H C > H C > H
Hooper et al, ³⁸ 1982	150 15 MDS	< 45=28 45-64=68 65-74=40 ≥ 75=12	67 C, 74 H All English speaking All MDs C	Teaching hospital outpatient clinic	Cross-sectional observation	Age, gender, patient appearance	Measure of physician empathy Rating of interview skill	C > H C > H
Sleath, ³⁹ 2000	407	18-37=103 38-50=108 51-57=90 58-88=106	62% ES-H 38% C	Internal medicine and family practice resident clinics	Cross-sectional observation	Age, gender, health perception, education, MD familiarity	MD demonstra- tion of empathy MD demonstra- tion of positiveness	NS C > H
Cooper- Patrick, ⁴⁰ 1999	1,816	All > 18	784 C patients 814 AA patients 36 C MDs 16 AA MDs 10 Asian MDs 2 Latino MDs	IPA: 32 internal medicine and family practices	Telephone survey	Age, gender, education, marital status, self- reported health, length of MD-patient relationship	Participatory decision-making style C and AA patients with C MD Race Concordant versus discor- dant relation- ships	AA < C RD < RC
Kaplan, ⁴¹ 1995	8,316	46.5	78.3% non- minority 21.7% minority 61.3% female 19.6% report fair or poor health 193 general internist MD 92 family physicians	NR	Secondary analysis of MOS	MD age, gender, specialty, ethnicity, practice type, geography Patient age, gender, education, ethnicity, health status	Participatory decision-making style Physician style with minority versus non- minority patients Minority patients with minority versus non- minority MD	Minority score < non- minority Minority MD < non- minority MD

AA—African American, C—Caucasian, ES—English speaking, ES-H—English-speaking Hispanic, H—Hispanic, IPA—independent practice association, LES—limited English speaking, MD—physician, MOS—Medical Outcomes Survey, NR—not reported, NS—nonsignificant, RC—race concordant, RD—race discordant.

* The following results are statistically significant at $P < .05$ or lower. C > A/C < AA=measure higher/lower for Caucasians than African American patients. C > H/C < H=measure higher/lower for Caucasians than Hispanic patients. M > C=effect higher for minority than for Caucasian patients. RD < RC=race discordant scores lower than race concordant scores.

66% greater risk of receiving no analgesia, when compared to whites, after controlling for several covariates.³⁰

Relationship Building Between Patient and Physician

Rapport building via the use of empathy and effective communication skills is critical to forming effective and trusting relationships with patients. Empathy has demonstrated importance in the positive building of relationships.³¹ Positive nonverbal³² and verbal³³ expressions to patients that demonstrate active listening and respect for the patient's positive attributes also improve the physician-patient relationship. Additionally, communication skills that assist in patient assessment, particularly elicitation skills to understand the patient's perspective of symptoms and explanatory health belief models, increase patient satisfaction, trust, and compliance. Negotiation skills are also crucial to elucidate the patient's perspective and encourage patient empowerment.³⁴⁻³⁶ Studies that compared physician communication and rapport-building skills in racially and ethnically concordant and discordant relationships with patients are summarized in Table 4.

Three observational studies measured the ability of medical students and residents to build relationships with Hispanic patients in comparison to Caucasian patients. Two of the studies showed significantly decreased rapport building and empathy with Hispanic compared to Caucasian patients, even when interviews were conducted in English.^{37,38} In the third study, internal medicine and family practice residents spoke significantly fewer positive expressions to Hispanics than to non-Hispanic patients. More positive expressions occurred if patients knew the physician and if they were more educated and rated as healthier. However, in this study, expressions of empathy, while few, were equivalent in interviews with Hispanics and non-Hispanic white patients.³⁹

Two of the above studies comparing care for Caucasians and Hispanics also demonstrated poorer interviewing skills by English-speaking resident physicians with English-speaking Hispanics. Interviewing skills of residents with Anglos were rated significantly higher than with Hispanics.³⁸ In the second study, trainees provided better explanations and more feedback of higher quality to Anglo patients.³⁷

Two additional studies measured participatory decision making by physicians with racially concordant and discordant patients. Negotiation and encouragement of patient participation in problem management by physicians were rated worse by African American patients compared with Caucasians in a telephone survey of privately insured patients from 32 group practices. Ratings of white and minority physicians were not different overall, but patients in race-concordant relationships believed visits were more participatory than in discordant ones. A participatory decision-making style

by physicians also correlated strongly with patient satisfaction. This trend was enhanced when there was gender concordance as well.⁴⁰ A secondary analysis of the Medical Outcomes Study, a 4-year longitudinal observational exploration, assessed participatory decision-making styles of physicians with both minority and non-minority patients. Minority patients on average rated physicians lower than non-minority patients. Interestingly, however, minority patients scored non-minority physicians somewhat higher than minority physicians.⁴¹ While the results were statistically significant ($P < .05$), we point out that score differences were small.

We could not identify any studies that examined improvements in physician communication as a result of training. In contrast, there is growing evidence that training of patients to be more assertive is an effective strategy to improve doctor-patient communication.⁴²

Discussion

This review provides evidence that race, ethnicity, and language all affect the quality of the doctor-patient relationship. Minority patients, especially those not proficient in English, are less likely to engender empathic responses from physicians, less likely to establish rapport with physicians, less likely to receive sufficient information, and less likely to be encouraged to participate in medical decision making. These characteristics have all been linked to patient satisfaction, patient compliance, and care outcomes in the general literature on the doctor-patient relationship. Some of the literature also validates calls for a more diverse physician workforce, since minority patients are more likely to choose minority physicians, be more satisfied by language-concordant relationships, and feel more connected and involved in decision making with racially concordant physicians. Studies support the conclusion that professional interpreters are more likely to bridge the gaps in access experienced by non-English-speaking patients, although at least one study demonstrated persistently poor communication skills on the part of the physicians using such interpreters.

While the evidence is convincing that "majority" physicians need to be more effective in developing relationships and in their communication with ethnic and racial minority patients, we found no studies that demonstrate improvement through training. This finding is likely to be due to the paucity of formal training programs in medical schools and residencies.^{43,44}

Limitations

Our review of the literature has limitations. While we define culture broadly in practice, we limited our review only to ethnicity, race, and language. Additionally, we could not find studies using rigorous qualitative methods from peer-reviewed journals. Moreover, the broad scope of work published in books, a rich

source of medical anthropology, was not reviewed. Additional limitations include the significant number of studies conducted in emergency medicine settings and involving trainees that may not generalize to a larger population of patients in continuity-based relationships with experienced physicians.

Recommendations

Based on the findings of our literature review, we make four recommendations. First, we must train patients to be more assertive when obtaining medical care. Significant improvements with information exchange and patient satisfaction following only a 20-minute training have been demonstrated.⁴²

Second, more serious efforts to diversify the physician workforce in both clinical and academic roles must replace current rhetoric. There is considerable evidence that African Americans and Hispanics desire and obtain more care from African American and Hispanic physicians, respectively.^{45,46} The problems encountered in racially, ethnically, and linguistically discordant physician-patient relationships reported here provide further rationale for this recommendation.

Third, we need to expand our view of the doctor-patient relationship to include the entire "environment" of care. Using professional interpreters as culture brokers and using new interpreter technologies appear to be helpful. Additionally, integrating community health workers into practices has been a successful strategy, but a discussion of this topic is beyond the scope of this review.⁴⁷⁻⁴⁹

Fourth, while we intuitively support continued training of physicians and physicians in training to be more culturally competent, researchers need to redirect their attention to demonstrate the effectiveness of this training and to study new interventions and care strategies. Evaluation must be prospective and include health outcomes as endpoints. Too often, the study outcomes have relied on self-reported patient satisfaction, which have been shown to be less reliable across language differences.⁵⁰ Additionally, those investigators who have demonstrated significant achievement in the study of the doctor-patient relationship and communication must take up the challenge of diversifying their study populations—both the physicians and the patients.

Most of the studies we reviewed report disparities with ethnically or language-discordant physician-patient interactions. Therefore, we suggest that more emphasis should be placed on training physicians to deal with concordant experiences for underrepresented minority patients. For example, do African American physicians interrupt less often with African American patients than Caucasian physicians do? Is nonverbal communication between ethnically concordant patient-physician pairs different from communication between discordant pairs? Does ethnic concordance affect pa-

tient trust and disclosure of concerns? Without addressing issues such as these, the goals of Healthy People 2010 may still be our goals in 2050.

Acknowledgments: We thank Andrew Dzaugis, Rosemary Leary, and Nancy Harger, all staff of the Homer Gage Library of UMass Memorial Health Care, for their assistance with the literature search and retrieval of articles.

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REFERENCES

1. Mayberry RM, et al. Morehouse Medical Treatment Effectiveness Center. Racial and ethnic differences in access to medical care. Menlo Park, Calif: The Henry J. Kaiser Family Foundation, 1999.
2. Geiger HJ. Race and health care—an American dilemma? *N Engl J Med* 1996;335(11):815-6.
3. US Department of Health and Human Services. Healthy People 2010 (conference edition, in two volumes). Washington, DC: US Department of Health and Human Services, 2000.
4. Like RC, Steiner RP, Rubel AJ. Recommended core curriculum on culturally sensitive and competent health care. *Fam Med* 1996;28(4):291-7.
5. Loudon RF, Anderson PM, Paranjit S, Greenfield SM. Educating medical students for work in culturally diverse societies. *JAMA* 1999;282(9):875-80.
6. Flores G. Culture and the patient-physician relationship: achieving cultural competency in health care. *J Pediatr* 2000;136:14-23.
7. Townsend JM, Fulchon C. Minority faculty—recruiting, retaining, and sustaining. *Fam Med* 1994;26(10):612-3.
8. Geiger HJ. Comment: ethnic cleansing in the groves of academe. *Am J Public Health* 1998;88(9):1299-300.
9. Rosenberg EE, Lussier M-T, Beaudoin MD. Lessons for clinicians from physician-patient communication literature. *Arch Fam Med* 1997;6:279-83.
10. Stewart MA. Effective physician-patient communication and health outcomes: a review. *CMAJ-JAMC* 1995;152(9):1423-33.
11. Frayne SM, Burns RB, Hardt EJ, Rosen AK, Moskowitz MA. The exclusion of non-English-speaking persons from research. *J Gen Intern Med* 1996;11:39-43.
12. Shapiro J, Lenahan P. Family medicine in a culturally diverse world: a solution-oriented approach to common cross-cultural problems in medical encounters. *Fam Med* 1996;28(4):249-55.
13. US Bureau of the Census. Statistical abstract of the US 1990 census, 113th edition. Washington, DC: US Bureau of the Census, 1993.
14. Riddick S. Improving access for limited English-speaking consumers: a review of strategies in health care settings. *J Health Care Poor Underserved* 1998;suppl 9:S40-S61.
15. Kirkman-Liff B, Mondragon D. Language of interview. Relevance for research of Southwest Hispanics. *Am J Public Health* 1991;81(11):1399-404.
16. David RA, Rhee M. The impact of language as a barrier to effective health care in an underserved Hispanic community. *Mt Sinai J Med* 1998;65(5&6):393-7.
17. Baker DW, Hayes R, Fortier JP. Interpreter use and satisfaction with interpersonal aspects of care for Spanish-speaking patients. *Med Care* 1998;36:1461-70.
18. Carrasquillo O, Oran J, Brennan JA, et al. Impact of language barriers on patient satisfaction in an emergency department. *J Gen Intern Med* 1999;14:82-7.
19. Hampers LC, Cha S, Gutglass DJ, Binns HJ, Krug SE. Language barriers and resource utilization in a pediatric emergency room. *Pediatrics* 1999;103:1253-6.
20. Manson A. Language concordance as a determinant of patient compliance and emergency room use in patients with asthma. *Med Care* 1988;26:1119-28.
21. Seijo R, Gomez H, Freidenberg J. Language as a communication barrier in medical care for Latino patients. *Hispanic Journal of Behavioral Science* 1991;13:363.

22. Perez-Stable EJ, Napoles-Springer A, Miramontes JM. The effects of ethnicity and language on medical outcomes of patient care with hypertension and diabetes. *Med Care* 1997;35(12):1212-9.
23. Kuo D, Fagan MJ. Satisfaction with methods of Spanish interpretation in an ambulatory care clinic. *J Gen Intern Med* 1999;14:547-50.
24. Hornberger JC, Gibson CD, Wood W, et al. Eliminating language barriers for non-English-speaking patients. *Med Care* 1996;34(8):845-56.
25. Jacobs EA, Lauderdale DS, Meltzer D, Shorey JM, Levinson W, Thisted RA. Impact of interpreter services on delivery of health care to limited-English-proficient patients. *J Gen Intern Med* 2001;16:468-74.
26. Rivadeneyra R, Elderkin-Thompson V, Silver RC, Waitzkin H. Patient centeredness in medical encounters requiring an interpreter. *Am J Med* 2000;108(6):470-4.
27. Van Ryn JB. The effect of patient race and socioeconomic status on physicians' perceptions of patients. *Soc Sci Med* 2000;50:813-28.
28. Todd KH, Samaroo N, Hoffman JR. Ethnicity as a risk factor for inadequate emergency room department analgesia. *JAMA* 1993;269(12):1537-9.
29. Todd KH, Samaroo N, Hoffman JR. The effect of ethnicity on physicians' estimates of pain severity in patients with isolated extremity trauma. *JAMA* 1994;271(12):925-8.
30. Todd KH, Deaton C, D'Adamo AP, Goe L. Ethnicity and analgesic practices. *Ann Emerg Med* 2000;35(1):11-6.
31. Brock CD, Salinsky JV. Empathy: an essential skill for understanding the physician-patient relationship in clinical practice. *Fam Med* 1993;25(4):245-8.
32. Koss T, Rosenthal R. Interactional synchrony, positivity, and patient satisfaction in the physician-patient relationship. *Med Care* 1997;35(11):1158-63.
33. Hall J, Rotor DL, Katz NR. Meta-analysis of correlates of provider behavior in medical encounters. *Med Care* 1988;26:657-75.
34. Kleinman A, Eisenberg L, Good B. Culture, illness, and care: clinical lessons from anthropologic and cross-cultural research. *Ann Intern Med* 1978;88:251-8.
35. Berlin EA, Fowkes WC. A teaching framework for cross-cultural health care. Application in family practice. *West J Med* 1983;139:934-8.
36. Zweifler J, Gonzalez AM. Teaching residents to care for culturally diverse populations. *Acad Med* 1998;73:1056-61.
37. Shapiro J, Saltzer E. Cross-cultural aspects of physician-patient communication patterns. *Urban Health* 1981;Dec:10-5.
38. Hooper EM, Comstock LM, Goodwin JM, Goodwin JS. Patient characteristics that influence physician behavior. *Med Care* 1982;20(6):630-8.
39. Sleath B, Rubin RH, Arrey-Wastavino A. Physician expression of empathy and positiveness to Hispanic and non-Hispanic white patients during medical encounters. *Fam Med* 2000;32(2):91-6.
40. Cooper-Patrick L, Gallo JJ, Gonzales JJ, et al. Race, gender, and partnership in the patient-physician relationship. *JAMA* 1999;282:583-9.
41. Kaplan SH, Bandek B, Greenfield S, Rogers W, Ware JE. Patient and visit characteristics related to physicians' participatory decision-making style. Results from the Medical Outcomes Study. *Med Care* 1995;33:1176-87.
42. Post DM, Cegala DJ, Miser WF. The other half of the whole: teaching patients to communicate with physicians. *Fam Med* 2002;34(5):344-52.
43. Flores G, Gee D, Kastner B. The teaching of cultural issues in US and Canadian medical schools. *Acad Med* 2000;75:451-5.
44. Culhane-Pera KA, Like RC, Lebensohn-Chialvo P, Loewe R. Multicultural curricula in family practice residencies. *Fam Med* 2000;32(3):167-73.
45. Gray B, Stoddard JJ. Patient-physician pairings: does racial and ethnic congruity influence selection of a regular physician? *J Comm Health* 1997;22(4):247-59.
46. Moy E, Bartman BA. Physician race and care of minority and medically indigent patients. *JAMA* 1995;273(19):1515-20.
47. Corkery E, Palmer C, Foley ME, Schechter CB, Frisher L, Roman SH. Effect of a bicultural community health worker on completion of diabetes education in a Hispanic population. *Diabetes Care* 1997;20(3):254-7.
48. Cook-Gotay C, Wilson ME. Social support and cancer screening in African American, Hispanic, and Native American women. *Cancer Practice* 1998;6(1):31-7.
49. Palos G. Cultural heritage: cancer screening and early detection. *Semin Oncol Nurs* 1994;10(2):104-13.
50. Hayes RP, Baker DW. Methodological problems in comparing English-speaking and Spanish-speaking patients' satisfaction with interpersonal aspects of care. *Med Care* 1998;36(2):230-6.