Title

The language divide. The importance of training in the use of itnerpreters for outpatient practice.

Journal

Journal of General Internal Medicine, 19(2)

Authors

Karliner, Leah S.
Perez-Stable, Eliseo
Gildengorin, Virginia

Publication Date

2004-02-01

DOI

10.1111/j.1525-1497.2004.30268.x

Peer reviewed

The Language Divide

The Importance of Training in the Use of Interpreters for Outpatient Practice

Leah S. Karliner, MD, Eliseo J. Pérez-Stable, MD, Ginny Gildengorin, PhD

PURPOSE: **Provision of interpreter services for non-English-speaking patients is a federal requirement. We surveyed clinicians to describe their experience using interpreters.**

SUBJECTS AND METHODS: **In this cross-sectional study we surveyed clinicians in three academic outpatient settings in San Francisco (*N* = 194) regarding their most recent patient encounter which involved an interpreter. Questions about the visit included type of interpreter, satisfaction with content of clinical encounter, potential problems, and frequency of need. Previous training in interpreter use, languages spoken, and demographics were also asked. Questionnaires were self-administered in approximately 10 minutes.**

RESULTS: **Of 194 questionnaires mailed, 158 were completed (81% response rate) and 67% were from resident physicians. Most respondents (78%) were very satisfied or satisfied with the medical care they provided, 85% felt satisfied with their ability to diagnose a disease and treat a disease, but only 45% were satisfied with their ability to empower the patient with knowledge about their disease, treatment, or medication. Even though 71% felt they were able to make a personal connection with their patient, only 33% felt they had learned about another culture as a result of the encounter. Clinicians reported difficulties eliciting exact symptoms (70%), explaining treatments (44%), and eliciting treatment preferences (51%). Clinicians perceived that lack of knowledge of a patient's culture hindered their ability to provide quality medical care and only 18% felt they were unable to establish trust or rapport. Previous training in interpreter use was associated with increased use of professional interpreters (odds ratio [OR], 3.2; 95% confidence interval [CI], 1.4 to 7.5) and increased satisfaction with medical care provided (OR, 2.6; 95% CI, 1.1 to 6.6).**

CONCLUSIONS: **Clinicians reported communication difficulties affecting their ability to understand symptoms and treat disease, as well as their ability to empower patients regarding their healthcare. Training in the use of interpreters may improve communication and clinical care, and thus health outcomes.**

KEYWORDS: **interpreters; language barriers; patient–clinician communication.**

J GEN INTERN MED 2004;19:175–183.

Received from the Division of General Internal Medicine, Department of Medicine, Medical Effectiveness Research Center for Diverse Populations, Center for Aging in Diverse Communities, University of California (LSK, EJPS, GG), San Francisco, San Francisco, Calif.

Address correspondence and requests for reprints to Pérez-Stable: 400 Parnassus Ave, Box 0320, Room A-405, San Francisco, CA 94143–0320 (e-mail: eliseops@medicine.ucsf.edu).

Communication and language are fundamental components of medical care. Yet, for more than 46 million Americans, English is not their first language. At least 21 million of those people speak English poorly or not at all and this language divide makes their interaction with the health care system more challenging.[1] Other research studies have shown that language barriers contribute to disparities in health care access and quality of care measures.[2–8] Additionally, there is a growing body of literature showing that use of professional interpreters may decrease these disparities.[9–12] Recognizing the importance of clear communication in health care, federal law (under Title VI) requires all health care organizations receiving federal funds to provide appropriate interpretation services by bilingual staff or professional interpreters free of charge for patients with limited English proficiency.[13] However, the Office of Civil Rights published guidance on interpretation of this law allows for limited English proficiency patients to choose to use family or friends as their interpreters.[14]

Physicians rely on the use of interpreters to help them and their limited English proficiency (LEP) patients navigate through the medical visit. Recommendations about the most effective ways to make use of interpreters in medical care include using only professional interpreters, scheduling extra time for visits, using word-for-word translation, utilizing the interpreter as a cultural broker, and addressing the patient directly, not the interpreter.[15–18] There are few studies that have addressed what clinicians are actually doing in practice when they see a LEP patient. In depth understanding of clinician practice will help further identify ways to decrease health disparities for these patients.

The goal of this study was to describe how primary care clinicians in an academic practice actually utilize interpreters, as well as whether there are times when they do not use an interpreter, but wish they had. We were interested in whether any previous training in use of interpreters, the type of interpreter used, fluency in another language, or exposure to cultures other than the dominant US English language culture were associated with the clinician's satisfaction of the interpreter-mediated visit. Additionally, we also addressed whether any of these factors predicted whether or not the clinician used a professional interpreter.

METHODS

Setting

The five General Medical Practices affiliated with the University of California San Francisco (UCSF) and located at three geographic sites were included. Together these practices account for approximately 100,000 medical visits per year and include a public hospital-based clinic. At the

time of the survey, fifty attending physicians, 136 residents, and 8 nurse practitioners staffed the practices and these clinicians provided longitudinal primary care to an ethnically diverse population of adult patients. There were limited English proficiency (LEP) patients at all sites, including a large proportion of immigrants from Latin America, Asia, and Russia. Patient differences among clinical sites were determined primarily by type of insurance coverage and approximately 40% of patients seen in the public hospital clinic had no insurance coverage. The type of LEP patients also varied somewhat by site with more Russian speaking patients at three of the sites. Distribution of Spanish- and Chinese-speaking patients were similar by clinical sites. Professional interpreters were available at all sites including salaried, trained interpreters in Spanish, Chinese, and Russian. Contract interpreters were used for less frequent languages, but their training was unknown. We estimated that approximately 20% to 30% of visits required an interpreter (personal communication from a conversation with Helen Chen, MD, Director General Medicine Clinic, San Francisco General Hospital), but professional interpreters were requested on only 10% to 15% of visits (personal communication in writing with Tatyana Latushkin, Director Interpreter Services, UCSF).

Questionnaire

We designed a 28-item survey instrument based on a review of the medical literature regarding the use of medical interpreters, information about the patient populations at the study sites, and our own experience using interpreters in clinical settings (available online at www.jgim.org). Our questionnaire was piloted on 5 practicing academic internists who saw their patients in acute care settings rather than in primary care. It was then revised for improved readability, comprehension, and acceptable length. The demographic items included age, gender, race/ethnicity, language spoken at home as a child, language spoken other than English and fluency of that language, type of clinician (attending or resident physician, nurse practitioner), half-days per week in continuity practice, and prior training received regarding working with interpreters.

We asked about frequency of interpreter use in the respondent's prior 2 weeks in practice. Clinicians were then asked to recall the last encounter in which an interpreter was used in their practice. Most of the items focused on recall of that visit. Using the last recalled interpreter-mediated encounter, items on the type of interpreter used (professional, relative, friend, or staff), language spoken, type of appointment (new or follow up), time allotted in the schedule for the appointment, and perceived sufficiency of allotted time were asked. Clinicians were asked to assess whether their goals for the visit were accomplished and their perception of whether the patient's goals were accomplished. They were asked to identify (yes/no) if any of 12 possible topics were covered during the visit (e.g., symptoms, lab results, self-management of disease, and family issues).

The clinicians' satisfaction with provision of 8 particular tasks was asked (e.g., diagnose or treat a disease, relieve symptoms, make a personal connection, and empower patient with knowledge). Respondents were also asked about their satisfaction with the medical care provided in general. Participants were asked to identify whether any of 10 possible problems (yes/no) hindered their ability to provide quality medical care (e.g., trouble eliciting patient treatment preferences, interpreter talking too much or too little, lack of knowledge of a patient's model of disease, and unable to establish trust or rapport). In addition, we asked about the frequency in the prior month that the clinician wished that she/he had used an interpreter and reasons for not using an interpreter at those times. We also asked the respondent to rate his/her own ability at using interpreters from 0 (always a big challenge) to 100 (no challenge at all), and to state his/her willingness to receive additional training in the use of interpreters and state what training format would be most useful. The questionnaire is available from the authors.

Data Analysis

Data were analyzed using the SAS statistical package, version 8.2. (SAS, instant/Snc., Carg, NC).[19] Descriptive statistics including frequencies, distributions, means, and medians were evaluated. Bivariate analysis utilizing χ^2-test, Fisher's exact test, Student's t tests, and nonparametric methods were used to evaluate the association of each demographic factor with each of the items asked about the interpreter-mediated encounter. We constructed a multivariate logistic regression model and included predictors of primary interest, as well as other predictors if they were significant on bivariate analysis at the $P = .05$ level. The model assessed whether previous training on interpreter use (some or none), ability to speak a language other than English, or exposure to another culture (as measured by speaking a language other than English at home as a child) were associated with the use of a professional interpreter rather than an ad-hoc interpreter, and with the clinician's satisfaction with the medical care provided (very satisfied/satisfied vs other). Gender, being a faculty or resident physician, clinical site, number of half-days in practice, and clinician ethnicity were also included in the model.

RESULTS

Response Rate and Demographics

Questionnaires were mailed to 186 physicians (50 faculty physicians and 136 residents) and 8 nurse practitioners. Five of the physicians were family practitioners and the remainder were general internists. All of the respondents had continuity care practices at one of the study sites. Completed questionnaires were received from 158 of 194 (81% response rate) potential participants after two mailings. Forty-five of the respondents were attending physicians (90% response), 105 were resident or fellow

Table 1. Demographics of Respondents to Survey on Use of Interpreters, University of California San Francisco 2000*

	n	%
Gender		
Female	84	53.2
Male	74	46.8
Race/ethnicity		
White	101	63.9
Asian	31	19.6
Latino	12	7.6
African American	4	2.5
Pacific Islander	1	0.6
Multiethnic	9	5.7
Language other than English spoken at home as a child	14	9.7
Speak and understand one or more languages other than English	121	77.6
Languages spoken		
Spanish	68	56.2
French	23	19.0
German	15	12.4
Mandarin	10	8.3
Cantonese	3	2.5
Hebrew	6	5.0
Russian	3	2.5
Other (18 languages)†	29	24.0
Type of clinician		
MD attending	45	28.5
MD resident/fellow	105	66.5
Nurse practitioner	8	5.1
Years out of medical or NP school		
10 years or more	32	23.7
Less than 10 years	103	76.3
Past training regarding working with interpreters		
None	61	40.1
Some	91	59.9

* *Numbers may not always add up to 158 because of missing responses to specific items; percentages given are percent of number of responses to that specific item.*
† *Danish, Swedish, Greek, Arabic, Farsi, Croatian, Japanese, Dutch, Italian, American Sign Language, Taiwanese, Portuguese, Korean, Vietnamese, Hindi, Urdu, Tamil, Maratho.*

physicians (77%), and all 8 nurse practitioners completed the questionnaire.

The respondent demographics are detailed in Table 1. Notably, 64% of the respondents were white and 53% were women. Sixty percent of the respondents reported some kind of prior training on the use of interpreters; however, 44% (40/91) of these had attended only one lecture. The mean age of the respondents was 34 years (standard deviation [SD] = ± 7.3 years) and the range was 21 to 59 years. The median number of half-days in practice was 1, ranging from 1 to 8.

Of the respondents, 121 (78%) spoke and understood a language other than English. Thirty-six of these clinicians (30%) spoke more than one other language, including 5 people who spoke 3 or more languages. Of all respondents who could speak another language, 42 reported fluency, 63 reported that they were able to interview a patient, and 52 reported that they could only converse casually in a particular language other than English. Fourteen (9%) of the respondents reported speaking a language other than English at home as a child. Of these, 12 spoke Spanish, 8 spoke Chinese, 2 spoke Vietnamese, and 17 spoke 15 other languages.

Interpreter-Mediated Encounter

The median number of times in the prior 2 weeks that respondents used an interpreter was 2, ranging from 0 (16%) to 20. Of the most recent recalled encounter utilizing an interpreter, the majority utilized professional interpreters. Twenty different patient languages required the use of an interpreter. Most of the appointments were follow-up visits. Half of the appointments were 30 minutes long. Nearly half of the clinicians felt that the time allotted in the schedule was insufficient. On average, those who felt that the time allotted was not sufficient preferred to have 21 more minutes per visit (Table 2).

Table 2. Characteristics of Most Recent Recalled Encounter Requiring an Interpreter as Reported in a Survey on Use of Interpreters, University of California San Francisco 2000*

	n	%
Type of interpreter		
Professional	97	67.4
Clinic staff	12	8.3
Relative of patient	34	23.6
Friend of patient	1	0.7
Language spoken		
Russian	39	26.0
Cantonese	31	20.7
Spanish	17	11.3
Mandarin	14	9.3
Vietnamese	13	8.7
American sign language	7	4.7
Korean	6	4.0
Arabic	6	4.0
Other (12 other languages)†	12	8.0
Type of appointment		
New	21	14.1
Follow up	128	85.9
Time allotted for appointment		
15 min	40	26.1
20 min	24	15.7
30 min	81	52.9
40 min	5	3.3
60 min	3	2.0
Whether clinician felt time allotted was sufficient		
Yes	80	51.0
No	77	49.0
If time allotted was not sufficient, how much more time was needed, minutes		
Mean	20.8	
Median	15	
Range	5–60	

* *Numbers may not always add up to 158 because of missing responses to specific items; percentages given are percent of number of responses to that specific item.*
† *Ethiopian, Tagalog, Cambodian, Italian, Farsi, Hindi, Armenian, Serbian, Portuguese, Burmese, Samoan, other unspecified.*

Table 3. Clinician Satisfaction with Most Recent Recalled Encounter Requiring an Interpreter as Reported in a Survey on Use of Interpreters, University of California San Francisco 2000, %

"Did you accomplish what you set out to during the encounter?"	
Yes	90
No	10
"Do you think the patient accomplished what he or she set out to during the encounter?"	
Yes	83
No	17
Clinician satisfaction with the medical care provided	
Very satisfied	10
Satisfied	68
Neither satisfied nor dissatisfied	14
Dissatisfied	7
Very dissatisfied	1

The majority of clinicians perceived that both they and the patient had accomplished their goals during the encounter. Seventy-eight percent (123/157) of respondents were either satisfied or very satisfied with the medical care they provided (Table 3). Specifically, they were frequently satisfied with their ability to perform concrete medical tasks such as diagnose or treat a disease, and relieve symptoms. Yet, when it came to communication oriented tasks such as empowering the patient with knowledge of his/her diagnosis, treatment, therapy, or need for lifestyle modification, respondents were much less satisfied (Fig. 1). Although 71% of respondents felt that they had made a personal connection during the encounter, only 33% felt that they had learned about another culture. Although respondents generally felt satisfied that they were performing the specific medical tasks of diagnosis, treatment, and symptom relief, 108/155 (70%) reported having had trouble eliciting exact symptoms, 67/154 (44%) reported having had trouble explaining the treatment, and 78/154 (51%) reported having had trouble eliciting treatment preferences (Fig. 2).

Non-Use of Interpreters

One hundred and three/156 (66%) clinicians reported that about twice (mean 2.3, median 2, range 1 to 20) in the prior month they had not used an interpreter, but

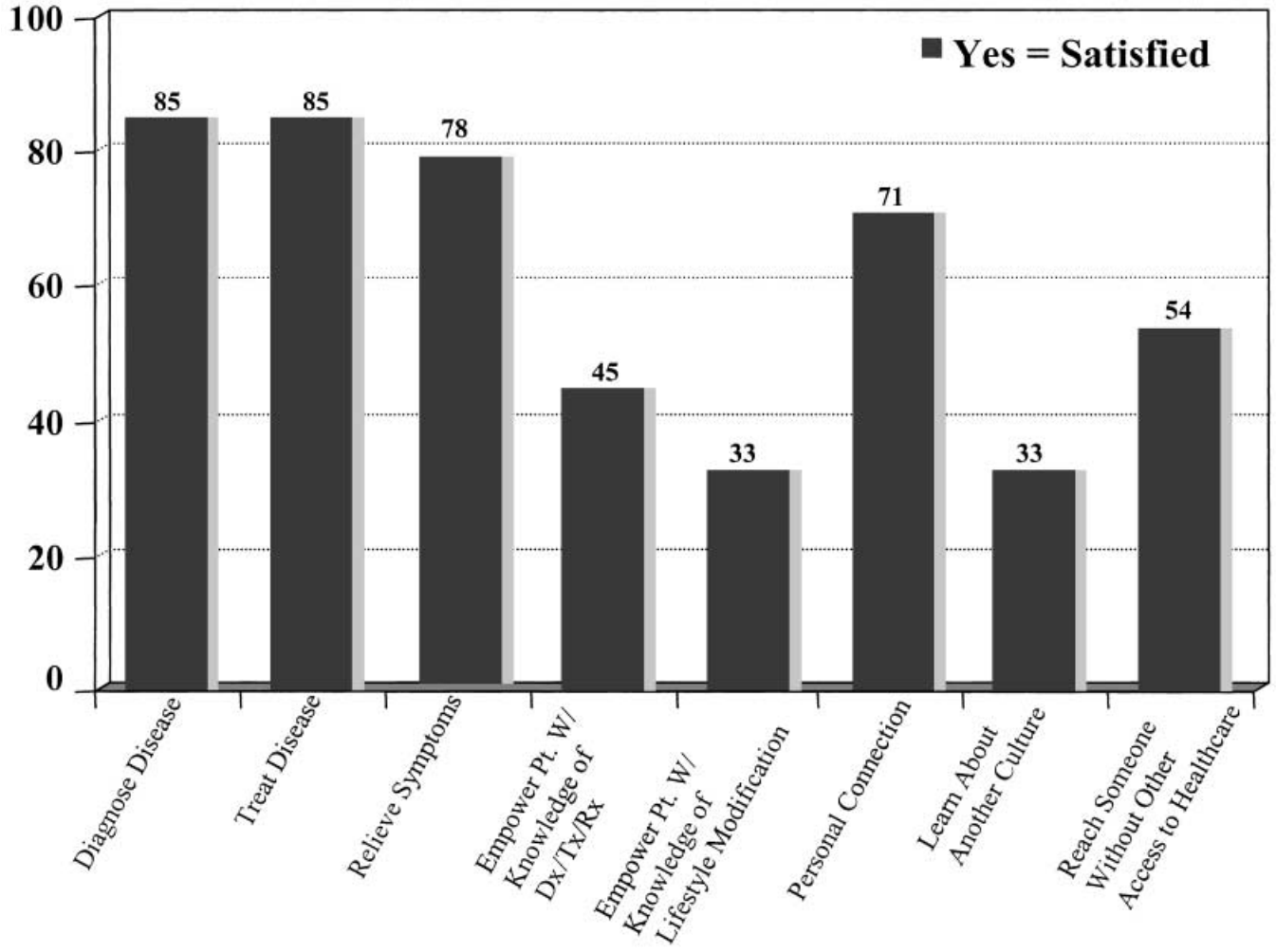


FIGURE 1. Clinician satisfaction with ability to perform specific tasks.

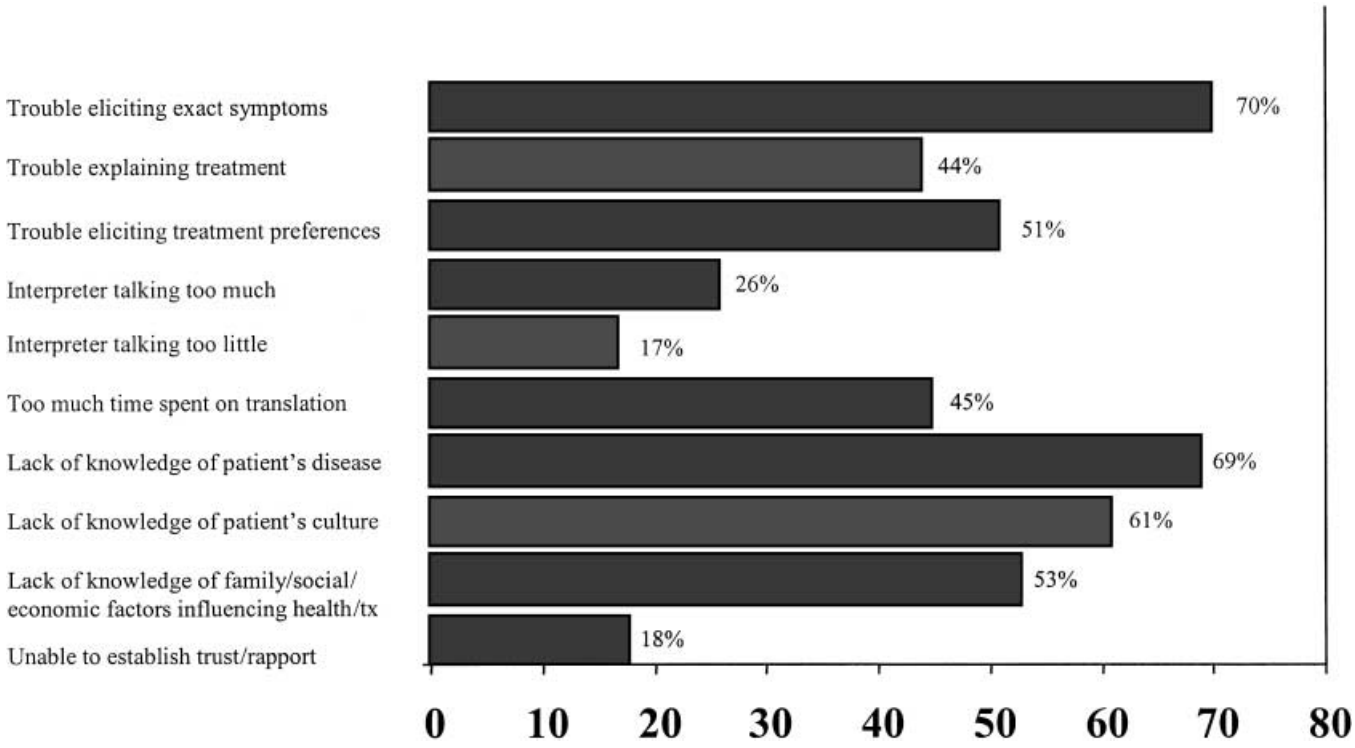


FIGURE 2. Problems hindering clinician's ability to provide quality care during encounter.

wished they had. Of these clinicians, 81/103 (79%) reported that it was because the interpreter was unavailable owing to time constraints and 34/99 (34%) reported that an interpreter was unavailable for that patient's language. However, 26/96 (27%) of clinicians reported that they had not thought to schedule an interpreter, and 17/98 (17%) reported that they were sufficiently fluent in the patient's language. Ten out of 97 (10%) reported that the patient declined to work with an interpreter, and 14/96 (15%) reported that they preferred direct communication with the patient to working through an interpreter.

Self-Assessment and Additional Training

When asked to self-categorize on a continuum describing their ability to use interpreters in the ambulatory setting, clinicians placed themselves as only moderately challenged. The scale was from 0, "always a big challenge," to 100, "no challenge at all." The mean self-score was 57, and the median was 60. The range was from 10 to 100. However, 132/157 (84%) of the respondents were willing to have additional training in the use of interpreters.

Type of Interpreter Utilized, Effect of Prior Training, and Language Ability

Clinicians whose encounters used professional interpreters were more likely to be very satisfied or satisfied with the medical care they provided than those whose encounters used ad-hoc interpreters, although this difference was not statistically significant (81% vs 67%, $P = .06$). There was no difference in their satisfaction with goal accomplishment, satisfaction with their ability to perform specific tasks, or reporting of problems hindering their ability to provide quality medical care.

Having prior training in the use of interpreters did not affect the number of times clinicians used interpreters in the previous 2 weeks, but these clinicians were more likely to use professional interpreters (78% vs 53%; $P = .002$). There was no difference in satisfaction with goal accomplishment between clinicians with prior training and those without prior training (91% vs 90%; $P = .82$). Clinicians who spoke languages other than English as a child at home were less likely to feel that the patient accomplished his/her goals (65% vs 86%; $P = .01$). Clinicians who spoke and understood a language other than English more frequently felt satisfied with their ability to treat a disease (88% vs 74%; $P = .03$). Clinicians who spoke and understood another language were more likely to not use an interpreter owing to preferring more direct communication with the patient (19% vs 0%; $P = .02$).

Faculty Physicians Compared with Residents

Faculty physicians and residents did not differ in their responses on most items. Type of interpreter used, language spoken, type of appointment, satisfaction with medical care provided, satisfaction with ability to perform the specific tasks, number of times they wished they had used an interpreter, and self-assessment of ability to use interpreters in the ambulatory setting were similar by training level. However, faculty physicians were more likely than residents to

Table 4. Adjusted Odds of Clinician Satisfaction with the Medical Care Provided and of Clinician Use of a Professional Interpreter During the Encounter

Predictor	Very Satisfied or Satisfied Odds Ratio (95% CI; *P* Value)*	Used a Professional Interpreter Odds Ratio (95% CI; *P* Value)*
Previous training on interpreter use	2.6 (1.1 to 6.6; .037)	3.2 (1.4 to 7.5; .007)
Speak a language other than English	0.6 (0.2 to 1.8; .329)	2.5 (0.9 to 6.8; .080)
Spoke a language other than English at home as a child	0.9 (0.2 to 3.2; .825)	0.6 (0.2 to 2.3; .470)

* *Adjusted for gender, being a faculty or resident physician, clinical site, number of half-days in practice, and clinician ethnicity.*
CI, confidence interval.

have undergone some kind of prior training in the use of interpreters (76% vs 52%, $P = .007$). Faculty physicians reported more frequent use of interpreters in the prior 2 weeks (mean = 4.0 vs 2.5, $P = .04$) and less time allotted for the visit (15-minute visits vs 30-minute visits, $P < .0001$). Faculty physicians were less likely to feel that the time allotted was sufficient (33% vs 63%, $P = .001$). Although both groups were equally likely to feel that the patient had accomplished his/her goals during the visit, faculty physicians were less likely to feel they had accomplished their own goals during the visit (73% vs 98%, $P < .0001$). Faculty were less likely than residents to feel that the interpreter talked too much (9% vs 33%, $P = .002$), and less likely to not use an interpreter because they were sufficiently fluent in the patient's language (4% vs 23%, $P = .03$). Lastly, despite being similar in the majority of their responses, faculty were less likely to be willing to have additional training (71% vs 89%, $P = .007$).

Multivariate Analysis

The multivariate model was used to determine the association of previous training on interpreter use, ability to speak a language other than English, and having spoken a language other than English at home as a child with the use of professional interpreters and with satisfaction with the medical care provided (Table 4). Previous training in the use of interpreters was associated with use of a professional interpreter in the most recent recalled encounter. This effect remained after adjusting for potential demographic confounders and other responses to the questionnaire. None of the other predictors in the model was significantly associated with use of a professional interpreter; however, there was a trend toward significant association with the ability to speak a language other than English. Previous training in the use of interpreters was also associated with the clinician being very satisfied or satisfied with the medical care provided. This effect remained after adjusting for potential demographic confounders. None of the other predictors in the model was significantly associated with increased satisfaction.

Although use of a professional interpreter was weakly associated with increased satisfaction on bivariate analysis, it was not included in the model. This is because tests of association between previous training in the use of interpreters and type of interpreter used showed these two predictors to be highly associated, and in unadjusted logistic regression previous training in the use of interpreters was more significantly predictive of satisfaction than was type of interpreter. A test for interaction between previous training in the use of interpreters and the type of interpreter used was not significant (data not shown).

DISCUSSION

This study was designed to describe clinicians' use of interpreters in an ambulatory, primary care setting at an academic medical center. We focused on clinician's reports of their experience in the room with LEP patients and interpreters. Although others have examined patient and physician satisfaction with particular types of interpreters,[20–22] this is the first study we know of to examine physicians' perceived satisfaction with the medical care they provide to their limited English-proficient patients via the use of interpreters. We were interested in their satisfaction with the time available, perceived ability to perform concrete tasks, and their perceived ability to communicate effectively regarding their LEP patients' health. We found that despite feeling satisfied in general with the interpreter-mediated encounters, many clinicians preferred to have more time, and most had trouble eliciting symptoms and treatment preferences as well as difficulty explaining treatment. In addition, most reported being dissatisfied with their ability to empower their LEP patients with knowledge about their diseases and about important risk factor modification. Previous training in the use of interpreters was positively predictive both of clinicians using professional interpreters, and of increased satisfaction with the medical care provided.

In the busy academic practice sites where the survey was conducted, interpreters were needed both frequently and for many different languages. This emphasizes the importance for physicians to focus on learning general skills to use in cross-cultural encounters, rather than only culture or language-specific facts.[23] Although many of the clinicians themselves spoke languages other than English, suggesting at least some experience with cultures other than the dominant English-speaking one, it would be impossible for any one clinician to have in-depth knowledge of all 20 of the languages and cultures encountered in our study.

We found that clinicians reported that 67% of encounters utilized on-site professional interpretation service,

which is the method of interpretation recommended by most experts.[15–18,24] This may overestimate the actual proportion using interpreter services; by comparison, in a study surveying 495 primary care physicians in the Greater Bay Area of Northern California, only 6% of encounters with non-English-speaking patients utilized professional interpretation services as opposed to clinic staff and families.[25] However, 60% of the clinicians in our study reported not using an interpreter in prior encounters with LEP patients either because a professional interpreter was unavailable in the patient's language or unavailable owing to time constraints, or because they had not known they would need an interpreter ahead of time. In addition, many clinicians wrote in comments complaining that they did not have enough time during the visit with the interpreter, or that the quality of interpreters varied tremendously from language to language and from individual to individual. Some of these concerns may be addressed in the future if new methods of professional interpretation, remote simultaneous medical interpretation (RSMI) and video medical interpretation (VMI), fulfill their promise and become widely available. Remote simultaneous medical interpretation promises to allow simultaneous interpretation via headsets as performed at the United Nations. The interpreters can be stationed at a remote location, possibly allowing for distant access to interpretation in many languages.[26] It remains a question whether these interpreters can act as cultural-brokers, helping clinicians understand culturally informed disease and treatment models, as many on-site professional interpreters and family members now do.[27–29] Video medical interpretation utilizes video conferencing technology to allow interpretation to take place in real-time from a remote location, while at the same time maintaining three-way nonverbal communication among the patient, interpreter, and clinician. It also allows access to interpreters in languages that would otherwise be unavailable.[30]

Although a large majority of clinicians felt satisfied with the medical care they provided, there was a high degree of dissatisfaction with certain tasks. Specifically, most clinicians were dissatisfied with their ability to empower the patients with either knowledge of their diagnosis and treatment, or of their need for lifestyle modification. Among the medically underserved, empowering the patient to partner with the physician is one of the keys to actively maintaining and improving health.[31] While most clinicians felt satisfied with their ability to diagnose and treat a disease as well as with their ability to relieve symptoms, more than half of them also reported communication problems which hindered their ability to provide quality medical care. These included problems eliciting exact symptoms, eliciting treatment preferences, and explaining treatment. It is difficult to understand how clinicians can diagnose, treat, and relieve symptom complexes when they are unable to communicate adequately regarding symptoms and treatment. We can only hypothesize that either our participants wanted so much to deliver quality medical care that despite their difficulties with communication they felt that they had done so, or their standards and expectations for these encounters was lower than might be true in language-concordant encounters. It is notable that even though a third person was present to interpret, and there were clearly multiple challenges involved, almost two-thirds of our respondents felt that they were able to make a personal connection with the patient during these encounters.

There are several limitations to our study. First, our questionnaire only addressed the clinician's perspective. It would be interesting to compare this perspective with those of the patient and the interpreter. Second, we did not compare encounters using interpreters to language concordant encounters, either in English or in another language. Baker et al. have shown that the use of interpreters and language concordance improve patients' perceived understanding of their disease in the emergency department; however, the authors did not distinguish between the interpreter-mediated and language-concordant encounters.[32,33] In another study in this primary-care setting, Spanish language concordance between patient and physician was associated with less pain, better scores on health-related quality of life measures, and better psychological status.[8] Nor did we address partial language concordance, for example, when a clinician speaks some Spanish but uses a Spanish-speaking interpreter with a monolingual Spanish-speaking patient, or chooses not to use an interpreter at all. A third limitation may be recall bias since our results depend upon the participant's ability to accurately recall their experience. We attempted to lessen this problem by asking participants to answer most of the questions with regard to their most recent recalled encounter using an interpreter. This makes it more likely that the participants responded to the questionnaire with good recall because their answers were in the context of an encounter which they reported remembering. In addition, 84% of our participants reported having used an interpreter in the prior 2 weeks, making it more likely that they had a recent encounter from which to draw their responses. Finally, our questionnaire responses were not compared with direct observation of what the clinicians actually do in practice. The generalizability of our findings may be limited to academic settings and may not apply to clinicians in full-time practice.

Understanding the clinician's experience is only the first step toward insight into the successes and challenges of these complex encounters. The acutely hospitalized patient may provide a setting that maximizes challenges of interpreter-mediated communication. In addition to the patient and interpreter perspectives, comparison with language concordant and partially concordant encounters, there remains the issue of the optimal type of interpretation. Some Spanish-speaking patients may actually prefer using family members and friends as interpreters in order to receive help maneuvering through the medical system after the physician visit, despite the fact that they report more satisfaction with professional interpreters.[34] Ethnicity

has been associated with different preferences for care at the end-of-life,[35] and thus the need for an interpreter is likely to affect communication of these preferences. One study found that clinical outcomes in diabetic patients, such as obtaining glycohemoglobin, dietary consults, and routine eye exams, do not differ for limited-English proficiency patients as compared with English-proficient patients.[36] On the other hand, trained-interpreter-mediated visits were characterized by less patient-centered care in monolingual Spanish-speaking Latinos.[37] Errors in interpretation were frequent and often of potentially serious clinical consequence in a study of outpatient pediatric encounters, although the gravity of the errors was less when a professional interpreter was used.[38] The accuracy of what is translated, and the future of the VMI (which allows for cultural brokerage) and RSMI (which does not allow for cultural brokerage) methodology, all need further study. Ultimately, how to improve interpreter-mediated interactions in a manner that will subsequently improve outcomes such as accuracy of diagnosis, breadth and depth of covered topics, increased comprehension of tests and medications, decreased symptom complexes, control of chronic illness, and frequency of emergency department visits and hospitalizations remains a question.

In conclusion, there are many limited-English proficiency patients presenting to academic primary care settings. These encounters require interpreters in a myriad of different languages. This indicates a need for clinicians to learn general skills to use in cross-cultural/cross-language encounters, rather than simply culture or language-specific facts. Clinicians report communication difficulties affecting their ability to understand symptoms and treat disease, as well as their ability to empower patients regarding their healthcare. However, despite the great challenges of these encounters, clinicians do feel that they are able to make personal connections with their LEP patients, and they are satisfied with the medical care they provide. Although some clinicians have received training in working with interpreters, many have had little or none. Previous training in the use of interpreters increases both the use of professional interpreters and clinician satisfaction with the medical care they provide.

Research was supported by grant no. P30 AG15272 awarded by the National Institute on Aging, National Institute of Nursing Research, and Office of Research on Minority Health, grant no. D22HP00349 by the HRSA Residency Training Grant in General Internal Medicine, and a grant from The California Endowment to the University of California, San Francisco.

These results presented in part at the Society of General Internal Medicine Annual Meeting, San Diego, CA, May 2001.

We appreciate the collaboration of the faculty physicians, residents, and nurse practitioners in the General Medicine and Family Medicine Practices at UCSF and SFGH, and the thoughtful review of the questionnaire by Eva Aagaard, Stephen McPhee, and Anna Nápoles-Springer. We thank Cecilia Populus-Eudave for administrative support.

REFERENCES

1. US Bureau of the Census. Table 1, Language Use and English Ability, Persons 5 Years and Over, by State. Washington, DC: United States Government Printing Office; 2000.
2. Carasquillo O, Orav EJ, Burstin HR. Impact of language barriers on patient satisfaction in an emergency department. J Gen Intern Med. 1999;14:82–7.
3. Kirkman-Liff B, Mondragon D. Language of interview: relevance for research of southwest Hispanics. Am J Public Health. 1991; 81:1399–404.
4. Lasater LM, Davidson AJ, Steiner JF, Mehler PS. Glycemic control in English- vs Spanish-speaking Hispanic patients with type 2 diabetes mellitus. Arch Intern Med. 2001;161:77–82.
5. Manson A. Language concordance as a determinant of patient compliance and emergency room use in patients with asthma. Med Care. 1988;26:1119–28.
6. Derose KP, Baker DW. Limited English proficiency and Latinos' use of physician services. Med Care Res Rev. 2000;57:76–91.
7. Sarver J, Baker DW. Effect of language barriers on follow-up appointments after an emergency department visit. J Gen Internal Med. 2000;15:256–64.
8. Perez-Stable EJ, Napoles-Springer A, Miramonts JM. The effects of ethnicity and language on medical outcomes of patients with hypertension or diabetes. Med Care. 1997;35:1212–9.
9. Parsons L, Day S. Improving obstetric outcomes in ethnic minorities: an evaluation of health advocacy in Hackney. J Public Health Med. 1992;14:183–91.
10. Kline F, Acosta FX, Austin W, Johnson RG. The misunderstood Spanish-speaking patient. Am J Psychiatry. 1980;137:1530–3.
11. Tocher T, Larson E. Quality of diabetes care for non-English-speaking patients: a comparative study. West J Med. 1998;168:504–11.
12. 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.
13. US Department of Health and Human Services, Office of Minority Health. National Standards of Cultural and Linguistically Appropriate Services in Health Care. Washington, DC: United States Government Printing Office; 2000.
14. Department of Health and Human Services. Guidance to Federal Financial Assistance Recipients Regarding Title vi Prohibition Against National Origin. Discrimination Affecting Limited English Proficient Persons. Washington, DC: US Office of Civil Rights; 2003.
15. Rothschild SK. Part I. Cross-cultural issues in primary care medicine. Dis Mon. 1998;44:293–319.
16. Faust S, Drickey R. Working with interpreters. J Fam Pract. 1986;22:131–8.
17. Poss JE, Rangel R. Working effectively with interpreters in the primary care setting. Nurse Pract. 1995;20:43–7.
18. Zimmermann PG. Use of interpreters in the emergency department. J Emerg Nurs. 1996;22:225–7.
19. SAS Institute Inc. SAS/STAT (TM) User's Guide, 1.3, Version 8. Cary, NC: SAS Institute Inc.; 1999: 1028.
20. Kuo D, Fagan MJ. Satisfaction with methods of Spanish interpretation in an ambulatory care clinic. J Gen Intern Med. 1999; 14:547–50.
21. 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.
22. Derose KP, Hayes RD, McCaffrey DF, Baker DW. Does physician gender affect satisfaction of men and women visiting the emergency department? J Gen Intern Med. 2001;16:218–26.
23. Carrillo JE, Green AR, Betancourt JR. Cross-cultural primary care: a patient-based approach. Ann Intern Med. 1999;130:829–34.
24. Eytan A, Bischoff A, Loutan L. Use interpreters Switzerland's psychiatric services. J Nerv Ment Dis. 1999;187:190–2.

25. Hornberger J. Itakura H, Wilson SR. Bridging language and cultural barriers between physicians and patients. Public Health Rep. 1997;112:410–7.
26. Hornberger JD, Gibson CD, Jr., Wood W, et al. Eliminating language barriers for non-English-speaking patients. Med Care. 1996;34:845–56.
27. Acosta FX, Cristo MH. Development of a bilingual interpreter program: an alternative model for Spanish-speaking services. Prof Psychol. 1981;12:474–82.
28. Acosta FX, Cristo MH. Bilingual-bicultural interpreters as pyschotherapeutic bridges. A program note. J Comm Psych. 1982;10:54–6.
29. Vasquez C, Javier RA. The problem with interpreters: communicating with Spanish-speaking patients. Hosp Comm Psych. 1991; 42:163–5.
30. Paras M, Leyva OA, Berthold T, Otake RN. Videoconferencing Medical Interpretation: The Results of Clinical Trials. San Francisco, CA: Health Access Foundation Report; 2002.
31. Reilly BM, Schiff G, Conway T. Part II. Primary care for the medically underserved. Challenges and opportunities. Dis Mon. 1998;44:321–46.
32. Baker DW, Parker RM, Williams MV, Coates WC, Pitkin K. Use and effectiveness of interpreters in an emergency department. JAMA. 1996;275:783–8.
33. 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.
34. Kuo D, Fagan MJ. Satisfaction with methods of Spanish interpretation in an ambulatory care clinic. J Gen Intern Med. 1999;14:547–50.
35. Kagawa-Singer M, Blackhall LJ. Negotiating cross-cultural issues at the end of life 'You Got to Go Where He Lives'. JAMA. 2001; 286:2993–3001.
36. Tocher TM, Larson E. Do physicians spend more time with non-English-speaking patients? J Gen Intern Med. 1999;14:303–9.
37. Rivadeneyra R, Elderkin-Thompson V, Silver RC, Waitzkin H. Patient-centeredness in medical encounters requiring an interpreter. Am J Med. 2000;108:470–4.
38. Flores G, et al. Errors in medical interpretation and their potential clinical consequences in pediatric encounters. Pediatrics. 2003; 111:6–14.

USE OF INTERPRETERS IN AMBULATORY PRACTICE

PROVIDER DEMOGRAPHICS

1. Please state your age on your last birthday:

_____

2. What is your gender? (please check the appropriate box):

☐ female ☐ male

3. Please identify the one group that you consider yourself to belong to:

☐ Asian

☐ Black or African American

☐ Latino/Latina or Latin American or Hispanic

☐ Native American, American Indian, or Indigenous People

☐ Pacific Islander

☐ White or European American

☐ Multiethnic or Mixed

4. If you checked Multiethnic or Mixed in number 3 above, , please check <u>all</u> that apply:

Asian ----------☐

Black or African American----------☐

Latino/Latina or Latin American or Hispanic----------☐

Native American, American Indian, or Indigenous People----------☐

Pacific Islander----------☐

White or European American----------☐

5. What language did you speak as a child at home? (check all that apply):

- ☐ Chinese – Mandarin
- ☐ Chinese – Cantonese
- ☐ English
- ☐ Russian
- ☐ Spanish
- ☐ Other (please specify:_____)

6. Do you speak and understand a language other than English?

☐ Yes ☐ No

7. If you answered yes to question #6, then which language and how fluent?

	Fluent Like A Native Speaker	Can Interview A Patient	Can Converse Casually
Chinese (Mandarin)	☐	☐	☐
Chinese (Cantonese)	☐	☐	☐
Spanish	☐	☐	☐
Russian	☐	☐	☐
Other _____ (please specify language)	☐	☐	☐
Other _____ (please specify language)	☐	☐	☐
Other _____ (please specify language)	☐	☐	☐

8. Are you an (please check appropriate box):

☐ MD attending
Year of graduation from medical school _____

☐ MD (resident/fellow)
Year of graduation from medical school _____

☐ NP
Year of graduation from NP school _____

9. How many half-days per week are you in continuity practice seeing patients?

_____

10. How much training have you received in the past regarding working with interpreters? (please check appropriate box):

☐ none ☐ 1 lecture ☐ several lectures ☐ a workshop/course

☐ other _____

ENCOUNTERS

11. How many times did you use an interpreter during your last two weeks in practice?

_____

For the last encounter you recall in which an interpreter was used, please answer the following questions #12-25:

12. What kind of interpreter did you use?

☐ Professional ☐ Patient's relative ☐ Patient's friend ☐ Staff

13. Which language was spoken?

☐ Chinese – Mandarin

☐ Chinese – Cantonese

☐ Russian

☐ Spanish

☐ Other (please specify:_____)

14. Was the appointment a new or follow-up appointment?

☐ New ☐ Follow-up

15. How much time was allotted for the appointment?

☐ 15 min ☐ 20 min ☐ 30 min ☐ 40 min ☐ 60 min

16. Did you feel the time allotted for the appointment was sufficient?

☐ Yes ☐ No

(if you answered yes to question 16, please go to question 18.)

17. How much more time did you need? _____ minutes.

18. Did you accomplish what you set out to during the encounter?

☐ Yes ☐ No

19. Do you think the patient accomplished what he or she set out to during the encounter?

☐ Yes ☐ No

20. Which of the following topics came up during the encounter (please check all that apply):

- ☐ Symptoms
- ☐ Lab results
- ☐ Diagnoses
- ☐ Treatment advice
- ☐ Medication refill
- ☐ Scheduled or recommended tests
- ☐ Information about condition
- ☐ Self-management of disease
- ☐ Lifestyle risk factors (i.e.: smoking/ drinking/ drugs/ weight loss/ exercise)
- ☐ Sexual history/questions/ counseling
- ☐ Domestic violence
- ☐ Family issues

21. How satisfied were you with the medical care you provided?

☐ Very Satisfied ☐ Satisfied ☐ Neither satisfied nor dissatisfied ☐ Dissatisfied ☐ Very Dissatisfied

22. Were you satisfied with your ability to perform the following tasks during this interaction? (please check yes or no for each task)

Diagnose a disease	☐ Yes	☐ No
Treat a disease	☐ Yes	☐ No
Relieve symptoms/pain	☐ Yes	☐ No
Empower patient with knowledge about disease/treatment/medications	☐ Yes	☐ No
Empower patient with knowledge about lifestyle modification	☐ Yes	☐ No
Make a personal connection	☐ Yes	☐ No
Learn about another culture	☐ Yes	☐ No
Reach someone without other access to healthcare	☐ Yes	☐ No

23. Did any of the following problems hinder your ability to provide quality medical care during this interaction? (please check yes or no for each problem):

Trouble eliciting exact symptoms	☐ Yes	☐ No
Trouble explaining treatment	☐ Yes	☐ No
Trouble eliciting patient treatment preferences	☐ Yes	☐ No
Interpreter talking too much	☐ Yes	☐ No
Interpreter talking too little	☐ Yes	☐ No
Too much time spent on translation	☐ Yes	☐ No
Lack of knowledge of patient's model of disease	☐ Yes	☐ No
Lack of knowledge of patient's culture	☐ Yes	☐ No
Lack of knowledge of family/social/economic factors influencing health/treatment of patient	☐ Yes	☐ No
Unable to establish trust or rapport	☐ Yes	☐ No

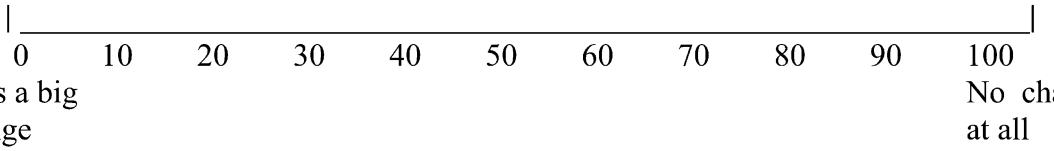
24. Were there times in the last month when you did not use an interpreter, but wished you had?

☐ Yes ☐ No If yes, how many times? _____

25. Reasons for not using an interpreter during the above encounters (please check yes or no for each reason):

I am sufficiently fluent in the patient's language	☐ Yes	☐ No
Patient refused	☐ Yes	☐ No
Interpreter unavailable due to time constraints	☐ Yes	☐ No
Interpreter unavailable for that patient's language	☐ Yes	☐ No
I did not think to schedule one	☐ Yes	☐ No
I preferred more direct communication the patient	☐ Yes	☐ No

26. Please place an "X" along the continuum below which best describes your ability to use interpreters in the ambulatory setting.



27. Would you be willing to have additional training in the use of interpreters?

☐ Yes ☐ No

28. Which of the following do you think would be most useful in helping you to use interpreters successfully in your practice?

☐ Departmental Grand Rounds

☐ Half-day workshop/interactive seminar

☐ Didactic conference (i.e. noon or clinic conference)

☐ Pamphlet/reading materials

☐ Web based /CD ROM self-learning materials

☐ Other _____

COMMENTS: