Patterns of Communication through Interpreters:

A Detailed Sociolinguistic Analysis

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BACKGROUND: Numerous articles have detailed how the presence of an interpreter leads to less satisfactory communication with physicians; few have studied how actual communication takes place through an interpreter in a clinical setting.

OBJECTIVE: Record and analyze physician-interpreter-patient interactions.

DESIGN: Primary care physicians with high-volume Hispanic practices were recruited for a communication study. Dyslipidemic Hispanic patients, either monolingual Spanish or bilingual Spanish-English, were recruited on the day of a normally scheduled appointment and, once consented, recorded without a researcher present in the room. Separate postvisit interviews were conducted with the patient and the physician. All interactions were fully transcribed and analyzed.

PARTICIPANTS: Sixteen patients were recorded interacting with 9 physicians. Thirteen patients used an interpreter with 8 physicians, and 3 patients spoke Spanish with the 1 bilingual physician.

APPROACH: Transcript analysis based on sociolinguistic and discourse analytic techniques, including but not limited to time speaking, analysis of questions asked and answered, and the loss of semantic information.

RESULTS: Speech was significantly reduced and revised by the interpreter, resulting in an alteration of linguistic features such as content, meaning, reinforcement/validation, repetition, and affect. In addition, visits that included an interpreter had virtually no rapport-building "small talk," which typically enables the physician to gain comprehensive patient history, learn clinically relevant information, and increase emotional engagement in treatment.

CONCLUSIONS: The presence of an interpreter increases the difficulty of achieving good physician-patient communication. Physicians and interpreters should be trained in the process of communication and interpretation, to minimize conversational loss and maximize the information and relational exchange with interpreted patients.

KEY WORDS: physician-patient communication; interpretation; Hispanic health; dyslipidemia.

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The number of adult immigrants to the United States continues to rise, and with this increase has come an increase in the number and variety of non-English-speaking patients seen in primary care, outpatient settings. As a result of this increase, there is a large and growing interest in the role and impact of race/ethnicity on patient care and outcomes,^{1,2} and within this area of research a growing interest in the role and impact of language barriers generally,^{3,4} and interpreted language specifically.⁵⁻¹⁹ Many articles identify reduced levels of satisfaction, either with communication itself or the overall

physician-patient relationship, when an interpreter is present^{7,14,17,18}; others evaluate the correctness of the interpretation itself,^{6,12,13,16} and find that interpreters significantly change what is said by the patient and the physician. A smaller number of studies focuses on the actual "discourse processes" that are involved in speaking through an interpreter,^{5,9-11} and find that not only do words change through interpretation, but that the actual process of communication itself is significantly altered by the presence of an interpreter.

As incidence of dyslipidemia is on the rise—in both the general population and among the Hispanic community—this disease state was singled out as a topic for the study. Ensuring that all participants were discussing at least one medical condition in common also served to limit the number of variables that could influence the discourse.

The influence of language barriers on clinical outcomes has also been established through various metrics,^{6,8,19} as has the overall role of physician-patient relations and communication in long-term management of chronic disease.²⁰⁻²² In this article, we outline the findings of an in-office linguistic study in which transcripts of physician-patient-interpreter interactions were analyzed for content, form, and influence of the interpreter on the interaction as a whole.

METHODOLOGY

Interactions between primary care physicians, interpreters, and Spanish-dominant Hispanic patients having dyslipidemia were video-recorded and audio-recorded in the absence of an observer. In this methodology, physicians are research subjects similar to patients; all recorded parties (physicians, patients, interpreters) were consented, and patients and physicians received honoraria for participating in the research.

Recruiting letters were sent to a regionally diverse sample of 880 physicians from a list of high prescribers of statin drugs with high-volume practices and large Hispanic populations; the letter was blinded as to the sponsor and invited physicians to participate in an observational study of communication. Physicians who replied and passed screening criteria (see Table 1) were scheduled for a research day; 9 physicians were recruited from 4 regions (New York, California, Texas, and Florida). Screening criteria were applied to maximize the likelihood of capturing a high volume of appropriate physician-patient interactions.

On the appointed day, a researcher was sent to the physician's office to record interactions with patients who were "likely to discuss" dyslipidemia. Researchers did not reveal the study

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Table 1. MD Screening Criteria

- Specialist in General Medicine, Family Practice, Internal Medicine
- Between 2 and 30 years in practice
- > Fifteen lipid-lowering prescriptions written in a typical week
- $\geq 50\%$ of patients predominantly Spanish speaking
- $\geq 80\%$ of Spanish speaking patients are adults 21 or older
- Speak and understand “some Spanish” or “little or no Spanish”; only 1 MD recruited who was “fluent or bilingual in Spanish,” to serve as a “contrary” case to help understand the communication problems that occur in interactions with interpreters
- > 70% of time spent in direct patient care
- No current affiliations with pharmaceutical company or other health care manufacturer

sponsor or the specific study objectives to avoid biasing participants in favor of a specific medication or pharmaceutical company. Patients were first identified and approached by office staff, who asked patients whether they were interested in participating in a study of communication. Those patients who agreed in the initial contact were then presented to the researcher, who obtained consent from the participants to be taped during their interaction with the physician and interviewed immediately following the office visit. The consent form listed MBS/Vox (an independent research consultancy group) as the entity that would conduct the study, and assured patients their participation was voluntary and confidential. Patients were also assured that the recordings of their visits and interviews would be used only for “research, education, and training purposes.” Patients were then placed in the exam room, where the researcher would turn on the video and audio equipment and then leave. Physicians were given instructions that, should the patient become uncomfortable during videotaping (e.g., during a breast exam or similar), the lens cap could be placed on the camera without turning off the sound, or the camera could be turned to the wall. In practice, the stationary camera was not turned off, but frequently did not capture all participants as they moved around the exam room. For this reason, audio transcripts were the primary source of data for analysis.

After giving informed consent, the patient would have his or her regularly scheduled visit with the physician, using an interpreter if necessary, and upon completion of the visit the researcher would return to the room, turn off the recorders, and interview the patient in a separate room. Interviews were conducted in Spanish, and focused on the overall relationship with the physician and the specific interaction that had just taken place. At the end of the workday, physicians were also interviewed, in English, about the patients who had been observed that day.

All components of the interaction (visit, patient postvisit interview, physician postvisit interview) were transcribed and translated from Spanish to English by a professional translation agency, which also conducted quality assurance on the validity of the transcription and translation. Transcripts were based on audio recordings; videotapes were used for both quality control purposes in cases of specific analysis where visual cues would allow a better understanding of the communication dynamic, and, where possible, to add nonverbal cues (e.g., shrugging, nodding the head). Transcripts were not “sanitized,” in that grammatical and other disfluencies were not corrected; however, they were not coded for pauses, overlaps (“latching”), rate of speech, or other details of the quality of

speech, as the focus of analysis was the semantic content of the utterances and their pragmatic implications.

Because the visits were not observed while taking place, inclusion in the study sample was posthoc. Visits where dyslipidemia did not form a part of the conversation were not included in the study sample, but any visit with a discussion of dyslipidemia and its management was placed in the sample, eventually yielding a sample “*n*” of 16 from the predetermined number of field days allotted to the study. The analyses followed closely the general research principles laid out in the field of interactional sociolinguistics,^{23–25} where systematic patterns of conversation between speakers are identified and analyzed using transcripts of naturally occurring data; the study also relies on theories of interpreting in general²⁶ and interpreted medical discourse in particular^{5,9–11} that have identified consistent influences of interpreters on the form and content of conversation.

Specifically, the analysis began with a coding of every word spoken, using the following codes that are broken into 2 sets of larger codes, “cholesterol-related talk” and “noncholesterol-related talk” (Table 2).

Secondly, key components of the discourse were identified through “bottom-up” hypothesis generation and were then applied to the transcripts systematically; for example, all patient direct questions (identified using subject-object inversion or similar grammatical features) were identified, coded, and analyzed. All patient complaints were identified and analyzed, as was the patient’s alignment with the physician on key aspects of “what was said” during the interview (using the postvisit interviews).

For this last analysis, agreement was reasonably high between patient and physician, although the topics upon which they agreed were notably vague. For example, 1 patient, a 78-year-old woman from Cuba, understood that her cholesterol was “high” and that she should “watch what you eat”; she also understood that her next step, clinically, was to return to “see if her numbers were lower.” Her physician essentially

Table 2. Coding of “Topics and Time”

	% of Visit
Cholesterol-related topic	
Disease education	7
Follow-up tests	6
Side effects	5
Disease meds	4
Compliance	4
Long-term consequences	3
Family history	2
QOL	1
Rx benefits/risks	1
Total	33
Non-cholesterol-related topic	
Meds/other	15
Alternate treatments	14
Symptoms	8
Small talk	7
Other MDs	6
Tests	5
Comorbidities	4
General health	4
Insurance	2
Follow-up visits	2
Total	67

agreed—during the visit, she was told her cholesterol was 232, that she should exercise more and watch her diet, and that she should continue her medication and come back to see whether it was working better. Most patients knew their diagnosis, and knew their next steps, to this level of specificity; what was not clear was their motivation to follow the physician's recommended advice, or whether they understood concretely what that advice was (re: compliance/persistence; type of diet; type of exercise; etc.)

SAMPLE

The final sample comprised 16 physician-patient interactions, 13 of which included an interpreter and 3 which were conducted entirely in Spanish. This sample size is similar to that of other studies that analyze directly observed, interpreted medical discourse, where sample sizes of 21 interpreted patient encounters,¹² 19 interpreted patient encounters,¹⁸ and 13 interpreted patient encounters^{13,16} were used as valid sample sizes. In all interpreted examples, interpreters were either family members ($n=2$) or nursing/office staff ($n=11$); this is in keeping with findings from other observational studies, where the volume of patients who need interpretation often far outstrips the ability of the generally small group of professional, hospital-based interpreters on staff.^{5,11} Previous research has established that physicians and patients interact differently with family member interpreters than with office or clinic staff, even those staff who are not primarily used as interpreters (as was the case for all interpreters in this study); briefly, family member interpreters are frequently treated as patient surrogates, and clinic-based interpreters frequently act on behalf of the medical institution.⁹ Regardless, the patterns of interference seen in the analysis presented below held for both the family member and the clinic-based interpreters, in that one of the primary hallmarks of interpreted medical discourse is a considerable loss of information between the 2 primary speakers: the patient and the physician.

The average visit length was 11 minutes 23 seconds, ranging from a long of 24 minutes 20 seconds to a short of 3 minutes 50 seconds. The patient sample had 4 male and 12 female patients, ranging in age from 35 to 78. Patient education ranged from "none" to a 4-year college degree (grade school 2; high school 7; college 5; "none" or N/A 2). Patients originated from a variety of Spanish-speaking locations, including Cuba (4), Colombia (4), Dominican Republic (2), Mexico (3), Puerto Rico (2), and El Salvador (1). The patient's length of relationship with physician ranged from less than 1 year (2 patients) to 5 to 6 years (3 patients); the mean relationship length was 3 years. The length of relationship implied that the patterns of communication observed were not overly influenced by the potentially "ephemeral" relationships between physicians and migrant patients who do not have routine contact with the medical system.

RESULTS

There were many ways in which the presence of an interpreter changed the conversation, including balance of time spent speaking, content omissions/revisions/reductions, number of questions asked by the patient, and redirection of utterances; all of these will be explored more fully below.

TIME SPENT SPEAKING

Several previous articles have defined and then quantified the types of errors made by interpreters,^{11-13,16} and these analyses have shown that a large percentage of what is said is changed. Before exploring what, exactly, is being said or changed, and how, we adopted a broader view of the patterns of conversation and analyzed the percentage of talk as represented by the time each speaker spent talking, and took this to be an overall measure of whose content is being reduced and whose is being otherwise modified.

To conduct this analysis, every word of the transcripts was coded by the speaker, and the time spent speaking was roughly equated to the sheer volume of words spoken. As everything that is said should be interpreted, if interpretation was taking place verbatim, no matter how the time spent speaking is divided between the physician and the patient, the interpreter's speech will simply double the speech of the physician and the patient: (patient time talking)+(physician time talking)=(interpreter time repeating what physician says and what patient says).¹¹ Thus, the proportion of speech by the interpreter should be roughly 50% of the overall speaking time of the visit, no matter what the ratio of physician speaking time is to patient speaking time. This analysis does not take into account "side conversations" between the interpreter and either the physician or the patient, unrelated to the process of interpreting, which in one study¹⁶ took place in almost 30% of "segments" of the interview; even taking this into account, however, the amount of time spent speaking by the interpreter should bear some proportion to the amount of time spoken by the patient and the physician (Fig. 1).

The final analysis of time spent speaking shows that both physicians and patients are saying more than is being translated, and in the case of physicians, much more (Fig. 2).

Physicians spoke 49% of the words spoken in the visit, patients spoke 24%, and interpreters spoke 27%. Taking into account that some portion of the interpreter's words were not "interpretations" per se but instead side conversations, these percentages meant that the overall tendency of interpreters is to reduce what is said, sometimes, as in Example 4, below, to a dramatic degree. The loss of this amount of verbal production will undoubtedly influence the tone of the conversation, and, more importantly, the semantic content.

From this analysis, which shows unambiguously that not everything that is said is being interpreted, we went on to examine what, exactly, is being changed or lost in the conversation.

CHANGES IN WHAT IS SAID

As with previous studies,^{11-13,15} several categories of error or change in content and form of conversation were identified.

FIGURE 1. Expected time spent talking as percentage of the visit, by participant.

FIGURE 2. Actual time spent talk as percentage of the visit, by speaker type.

These were as follows:

- content omissions (leaving out important information);
- content revisions (changing important content); and
- content reductions.

In some ways, these categories are not mutually exclusive, as “revisions” to content by definition implies that some words have been omitted and replaced by others; the intent is to define the primary change that occurs through the process of interpreting. All of these changes are potentially significant in a general medical setting, where language is fundamental to both diagnosis and the explanation of a treatment plan. Every visit studied had at least 1 example of each of these changes. While it is possible that these changes are “functional” in the sense that they may save time in a busy clinic, they fundamentally change the nature of the physician-patient interaction.⁹

The category of *content omissions* (leaving out important information) is observed most frequently when the interpreter reduces phrases with multiple semantic elements to one “key” element (note that words in standard font are spoken in English; those in *italics* are spoken in Spanish originally):

Example 1: Content Omissions

Doctor: Okay, tell her. . .you know. . .it's just too many things at once so we're going to have to do one thing at a time. The most important thing is her heart. She's got to see Doctor [Name]. . .she's had heart attack, she's had heart surgery, she's got a lot of problems, so she's got to see Doctor [Name] tomorrow or the next day, I'll make sure she goes for the appointment. She's not having any chest pain now?

Interpreter: *Does your chest hurt?*

Physician and 73-year-old female with medical staff acting as interpreter

The category of *content revisions* (changing important content) often appears less an attempt to simplify a multipart utterance to its key component (as with *content omissions*), and more a simple difficulty in conveying the semantic content of the utterance with precision:

Example 2: Content Revisions

Doctor: Tell her she's got to really stick to a diet, got to lose some weight, that's really important.

Interpreter: *She says that it's very important that you watch what you eat, a strict diet, because you have diabetes, and high cholesterol, so. . .*

Patient: *They give us the food there, how do you say, the diet food comes, and I'm a very good eater, sometimes the only thing I don't eat is greens because it doesn't have salt or anything, but I'm a good eater, and they give us good food. And at home at night I don't eat much.*

Interpreter: She says she's very well disciplined eating, so she doesn't know.

Doctor: Okay, exercise.

Interpreter: *Exercise.*

Patient: *Yes, we exercise. But the problem is that the new lady has us do the exercises sitting down.*

Interpreter: *She says there is a new person there doing the exercises.*

Doctor: Good, so she should participate.

Physician and 78-year-old female with medical staff acting as interpreter

The category of *content reductions* (synthesizing long passages of talk) appears more often when physicians or patients have produced exceptionally long stretches of talk without providing a break for interpreting. In these cases, responsibility may be more with the primary interlocutors (physician or patient) than with the interpreter, who cannot be expected to retain entire paragraphs at a time and then report them verbatim:

Example 3: Content reductions

Doctor: Okay. At that time, your cholesterol was something like 380. Your low-density lipo-proteins were 200, and your high-density lipo-proteins were around, uh, around 100. I'm sorry, around 60. Um, we put you on diet and exercise and, um, you did come down a little bit, not much, so we decided to put you on some Lipitor. We started you out at, at uh, 10 milligrams, um, but that didn't really work. And after about three months, we progressively got you increased to uh, 30. Right now, presently, uh, your cholesterol is still around 240, with your high-density lipo-proteins um, about 180 and your high-densities about 60. So we got your total down, but we're getting your high-densities down instead of your low-densities. Can you explain that to her? Um, basically tell her that um, the cholesterol is not coming down as much as we want it to come down, and the bad cholesterol is not coming down as fast as we'd like it to come down, even though we've increased her medication.

Interpreter: *Okay. He is saying that your cholesterol is not lowering like he wants it to lower with the medication, and exercise and diet, that's what he said to you.*

Patient: Yes.

Physician and 40-year-old female with medical staff acting as interpreter

These 3 types of transformation (revision, omission, reduction) are, again, not mutually exclusive: Example 3 shows all 3, where nearly all of what was said by the doctor is omitted, the “bad cholesterol” is revised to “cholesterol,” and the final utterance is revised to include the concept of “diet and exercise,” which appeared originally in the context of a recap of therapeutic steps taken, not their effect on cholesterol lowering. In one sense some forms of revision are inevitable when words in one language are changed into another language, but the above examples are not merely examples of inevitable linguistic transformation: they show fundamental changes in the content and form of the utterances.

LOSS OF “SMALL TALK”

While the sample of same-language Spanish interactions was small ($n=3$), there were several ways in which these discussions differed from the interpreted, Spanish-English conversations. The most striking was the near-categorical lack, in interpreted visits, of what is frequently referred to as “small talk,” that is, socially oriented talk that is designed to further relationships rather than establish medical facts. This type of “pleasant conversation”²⁷ is recommended for Hispanic patients, who often value inclusion of the family and community in medical discussions. While this type of talk is common in the same-language sample, it is almost completely absent

from the interpreted visits. An example of same-language small talk is shown in Example 4, below:

Example 4: Small talk in same-language Spanish discourse

Doctor: *And you gained 7 lbs and the cholesterol is on top of the total, above 300. And the LDL, which is the bad cholesterol, is at 198. And you are only 35 years old. This cannot be. Your husband is a friend of mine. . .and he pays me double to take care of you. Take care of yourself. Pay attention to me, lose weight, but I have to give you medicine.*

Physician and 35-year-old female

It is not possible, nor even prudent, to assume that all physicians practicing today will be friends with the spouses or partners of all of their patients, regardless of their ethnicity. What is clear from the data sample, however, is that, in the presence of interpreters, there is a complete absence of almost any form of a purely social interaction, with a patient population that has been identified as requiring more, not less, of this type of communication to feel comfortable in a clinical setting. We believe that the language barrier itself and the presence of the interpreter make such talk difficult to conduct and that the physician and the patient thus avoid venturing into the "social" realm; if this belief is mistaken, something else needs to account for the utter lack of purely social talk in the observed interpreted visits. Regardless of the cause, however, it is clear that the lack of "social" discourse completely eradicates the physician's ability to diagnose for himself or herself any psycho-social disorders or compliance/adherence issues related to social situation that may arise with interpreted patients.

QUESTIONS ASKED BY PATIENTS

A final pattern observed in these interactions showed that, on average, the Spanish-speaking patients asked relatively few direct questions, and the questions that they did ask were frequently answered directly by the interpreter and never conveyed to the physician. Questions play an important and multifunctional role in physician-patient discourse. Besides their most obvious function, which is to clarify a need for information on the part of the patient, questions also perform several signaling functions, including signaling to the physician a level of patient engagement with their own care.¹⁰

In the 13 interpreted visits, patients asked on average 1.75 direct questions per visit (28 overall questions). Of these, 8 were answered directly by the interpreter, and never translated to the physician. This has at least 2 consequences: the first is that patients are being given information by their interpreter and not their physician; and the second is that physicians are given the impression that their Spanish-speaking patients ask even fewer questions than they already do, potentially signaling a lack of interest on their part. This type of action is an extreme example of "role exchange,"¹⁵ where the interpreter takes on the role, not of a language conduit, but of a full-fledged participant in the medical discussion.

Example 5: Questions being answered directly by the interpreter

Doctor: Does she take one, or she takes two from each different bottle?

Interpreter: *Of these, are you taking both, or only one?*

Patient: *It's the same? I don't know which they are.*

Interpreter: *Yes, they are the same.*

Patient: *What is the name?*

Interpreter: *They are the same. You are taking them from both. They are the same.*

Patient: *They are the same. I take one.*

Physician and 73-year-old female with medical staff acting as interpreter

Some questions are quite possibly answered correctly by the interpreter (as when a patient asks where the prescription is refilled), and in these cases it is only the secondary function of signaling interest to the physician that is lost. However, there are cases where the question asked is of a more purely "medical" nature, and is being answered by the interpreter. In Example 5, we can see that the interpreter is answering a medical question relating to the types of medication the patient is taking, to a degree it is not clear is prudent: while it is clear from subsequent discourse that the patient has at least 2 bottles filled with identical medications, she is also taking several other medications that could be confusing to her. The mere fact of her confusing her pills should be of consequence for the physician, and is never fully translated.

DISCUSSION

As we have shown, the presence of an interpreter influences what is said and heard by patients and physicians in systematic and important ways. While this and other studies of a similar nature have a relatively small "n," the patterns of communication uncovered are both systematic and, given the nature of 3-party, 2-language discourse, somewhat predictable.¹¹ Larger studies might be able to explore more fully the systematic conversational differences between subsets of interpreters, say family members versus professional interpreters, various language interpreters (e.g., Russian vs Spanish vs Vietnamese interpretation), or even child versus spouse interpreters.

Regardless of the outcomes of such future studies, it appears that many of the basic structural difficulties exist regardless of who is interpreting for whom, again based more in the nature of interpreted discourse itself and the time constraints of a medical interaction than through the specifics of the interpreter. At a content level, content is reduced, revised, and omitted. Reductions and changes made by the interpreter can lead to misdiagnosis or emphasis on the wrong condition; as a result, the elaboration of a treatment plan and the patient's likely persistence on that plan may also be affected. On an interactional level, the patient's questions are often short-circuited by the interpreter. The perception of the patient when receiving an answer to his/her question by the interpreter's "own" perception of what is important is of tremendous implications in diagnosis and management, as the determination of clinical relevance is at the heart of diagnosis in an outpatient primary-care setting.

On an interpersonal level, the presence of a third person in the interview adds a level of "coldness" to the relationship between patient and physician. The discourse becomes less personal and more "facts-only"; at the same time, those facts become less reliable. Not having a "small talk" to build a relationship decreases the possibilities of developing a "friendly" conversation that can lead to increased interest in learning more about the disease. As a result, a patient may not feel comfortable telling the doctor sensitive details through an interpreter, especially if it is a family member interpreting for the patient.

In addition, the use of untrained interpreters increases the possibilities of misdiagnosis through misinterpretation. Management instructions may be poorly conveyed, which in turn can lead to poor adhesion plans and may be perceived on the part of the physician as a lack of interest on the part of the patient in the management of his/her own disease, creating a potentially self-fulfilling prophecy of low expectations on the part of both patient and physician. This situation can lead to suboptimal outcomes with increased possibilities of further legal ramifications for the physician in the case of actual misdiagnosis.

The implications for these findings are wide-ranging. They confirm earlier findings that interpreted discourse follows a very different pattern from same-language discourse, and they raise important questions such as:

- What is the correct balance of roles for an interpreter (e.g., how much should she be recognized as a legitimate participant in the discourse?)
- To what degree are physicians responsible for their own medical decisions if they can not know what is/is not said on their behalf?

In addition, this study reveals several areas that can form the basis for education in improved communication techniques. For example:

- How best to teach communication principles, to both interpreters and practicing physicians?
- How best to utilize interpreters and to make sense of interpreted visits?

The answer, we believe, lies in a 2-fold approach: increasing awareness of the magnitude of the problems posed by speaking through an interpreter, and working with physicians and other health care providers to train them on the proper use of interpreters in a medical setting, including ensuring that the role being played by the interpreter is the one that the physician feels is most appropriate. In the words of Karliner et al. 2004¹⁴: "Training in the use of interpreters may improve communication and clinical care, and thus health outcomes." One way to validate such an approach would be to set up a large-scale interventional trial, using immediate (e.g., patient and physician satisfaction) and long-term (e.g., chart reviews for outcomes; Rx refill data) endpoints to measure the impact of such a training intervention in the use of interpreters.

Hispanic and other non-English-speaking populations are on the rise. To provide non-English-speaking patients optimal medical treatment in a culturally sensitive way, it is of utmost importance for the medical community to develop strategies to overcome the limitations of untrained interpreters and physicians in communication through a third person, such as Pfizer's "Vida Sana" program aimed at educating physicians about Hispanic health needs and improving interactions between Hispanic patients and medical care providers. The benefits of such an approach will include the following: improved understanding of the disease process on the part of the patient, leading to greater compliance/persistence to a treatment plan; increased mutual satisfaction in the interaction and a greater chance of physician and patient sharing both the goals of the visit and also achieving those goals; greater chance of identifying psycho-social disorders or dis-

eases and structural barriers to compliance/persistence relating to the patient's social situation; and decreased chances of misunderstandings, with subsequent decrease in possible legal implications. We believe that such an approach is critical in today's multicultural health care environment, where long-term outcomes have been shown to be influenced by issues of race, ethnicity, and communication,¹ and where Spanish-speaking patients are a daily reality of clinical practice.

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