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BARRIERS TO INTERPRETER USE IN THE MEDICAL CLINICAL ENCOUNTER

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ABSTRACT

BARRIERS TO INTERPRETER USE IN THE MEDICAL CLINICAL ENCOUNTER. Luz Evelyn Jimenez (Sponsored by William Sledge, M.D.). Department of Psychiatry, Yale University School of Medicine, New Haven, CT.

The Limited English Proficiency (LEP) population in the United States requires interpreters in order to receive appropriate medical care. However, interpreters are not used consistently in clinical encounters. This study aims to identify the barriers that interfere with providing this service, as well as to propose some possible ways of overcoming these barriers. A systematic review of the literature was conducted using Medline, the Cumulative Index to Nursing and Allied Health Literature (CINAHL), and PsycINFO. Twenty articles that presented barriers to interpreter use were identified. These barriers referred to either professional interpreters or ad hoc interpreters, or were general barriers. The barriers to professional interpreter use most frequently identified related to cost. Most of the cost-related barrier citations were found in studies conducted in the U.S. The barriers to ad hoc interpreter use most frequently identified related to concern about the interpreters' ability to interpret. I determined that appropriate provision of interpreters to the LEP community would require four elements: 1) The consistent use of professional interpreters, and the elimination of ad hoc interpreter use. 2) Research into the possible financial benefits that may arise from increased interpreter use, and how the cost of providing interpreters may be offset by the widespread benefits of using them. 3) Professionalization of interpreter services, with quality assurance and standardized training and evaluation of interpreters. 4) Increased education and training for patients and providers about the language services that are available and how to access them, and about how to work with an interpreter efficiently and effectively. One possible solution that would allow the implementation of all of the above elements is a national interpretation service.

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INTRODUCTION

In a country in which so many languages are spoken, it is inevitable that people who do not speak the same language will come in contact. In many of these instances, a general understanding of what each person desires will often suffice. This is not the case, however, in a medical encounter between a healthcare provider and a patient who do not speak the same language. In medical encounters, it is essential that the two parties find a way to understand each other precisely, as a general understanding may not only be insufficient, but may also be dangerous and costly. The details of the patient experience are necessary for the provider to properly diagnose and establish a course of treatment for the patient, and the details of the diagnosis and course of treatment are needed for compliance, proper care, and improved health of the patient.

According to the United States Census of 2000, 17.9% of the U.S. population 5 years of age and older speak a language other than English at home, and 8.1% speak a language other than English at home and speak English less than "very well" *(1)*. According to a 2002 report to Congress from the Unites States Office of Management and Budget, Spanish is the most common foreign language spoken by people with limited English proficiency (LEP), of the twenty foreign languages most commonly spoken in the United States *(2)*.

With this kind of a population, one can imagine that encounters between patients and providers who do not speak the same language are common. In order to facilitate communication between the two parties, a third party is often utilized as an interpreter. This third party can be a stranger in the waiting room, a family member, a friend, a staff

member such as a nurse or other support staff, another health care provider not involved in the case, or a professional interpreter.

In general, people who are not present in the clinical environment as interpreters but are used in this capacity are called "ad hoc" interpreters, while people who are hired specifically to provide interpretation services are called professional interpreters. The distinction is not always completely clear, however. For example, Flores found that some New Jersey hospitals have interpretation duties for staff who are contracted for other duties unrelated to interpreting *(3)*. In this situation, it is unclear whether or not these staff members are serving as professional interpreters when they are serving an interpretation role.

Nonetheless, the fact that interpreters are necessary in order to facilitate and allow communication during a clinical encounter is clear. Galbraith showed that 14% of the parents in that study reported having ever had difficulty speaking with or understanding their child's provider because they did not speak the same language *(4)*. Baker found that patients who had not used an interpreter were significantly less likely than patients who had used one to judge their understanding of their treatment plan as good to excellent *(5)*. Bischoff showed that, when interpreters were provided, mean scores for communication and overall satisfaction were similar in gender-concordant and gender-discordant encounters. However, mean scores were lower when interpreters were not present, especially in the gender-discordant group *(6)*.

Health Disparities

Health disparities are also an issue for the LEP population, as English proficiency has been shown to correlate with health disparities and a variety of problems of access and quality in several studies. Wilson found that LEP patients with a physician who does not speak their same language were more likely to report difficulty understanding a medical situation and labels, and to report bad medication reactions *(7)*. Ngo-Metzger showed that patients who did not have language-concordant physicians reported receiving less health education compared to those who had language-concordant physicians, although this was no longer the case when an interpreter was present *(6)*. However, this study also showed that language-discordant patients reported worse interpersonal care and were more likely to rate their providers lower than language-concordant patients. DuBard found that Spanish-speaking Hispanics had significantly worse access to healthcare than English-speaking Hispanics, and were significantly more likely to report not having received such preventive services as a flu shot and dental visit in the past year, and a pneumonia vaccine ever. Both Spanish-speaking as well as English-speaking Hispanics showed low use of other preventive services *(8)*.

These health disparities and problems of quality and access extend to the care provided to children as well. Galbraith showed that children whose parents spoke a primary language at home other than English were significantly less likely to report always receiving illness care as soon as they wanted when compared to children whose parents spoke English at home as the primary language *(4)*. Receiving illness care and routine care as soon as wanted was also less likely to be reported in this study by children of parents who reported ever having had difficulty communicating with the child's provider because of language differences when compared to children whose parents had

not had these kinds of communication problems. Flores showed that children whose primary language at home is not English are more likely than children whose primary language at home is English to not have a usual source of care, to have a usual source of care that never or sometimes provides understandable explanations, to not have had a medical visit within the past 12 months, and to not have had a preventive care medical visit within the prior 12 months or within the previous 24 months *(9)*.

In terms of satisfaction, LEP patients can also be less satisfied with the healthcare services they receive. Morales found that Latino patients responding to the survey in Spanish had lower satisfaction scores than Latinos and non-Latino whites answering in English, while also rating provider communication, explanations about prescribed medications and about medical tests and procedures, and reassurance and support, among others, lower *(10)*. Carrasquillo showed that non-English speaking patients were significantly less likely to be satisfied with courtesy and respect, completeness of care, waiting time, discharge instructions, and the explanation of what was done than English-speaking patients, and were less likely to return to the same emergency department if they had another problem that required emergency care *(11)*.

Government involvement and prevalence of interpreter use

In 1964, the Civil Rights Act was enacted. It included Title VI, which prohibits discrimination due to race, color, or national origin, by any entity receiving federal finances *(13)*. In August 2000, Executive Order 13166, "Improving Access to Services for Persons with Limited English Proficiency," was signed by President William Clinton. This order was meant to guide federally-funded agencies in reviewing their services and

ensuring that they are accessible to the LEP population *(14)*. In 2001, the Office of Minority Health of the U.S. Department of Health and Human Services published the "National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health Care," shown in Table 1, which are meant to be used by health care organizations and individual providers who wish to make their healthcare services more accessible both linguistically and culturally *(12, 15)*. The standards are organized by themes: Culturally Competent Care, Language Access Services, and Organizational Supports for Cultural Competence. Of note, the standards that relate to language access services are the only 4 of the 14 standards that are federal requirements for any recipients of federal funds *(12, 15)*.

Despite the government's support of appropriate language services for the LEP population, and despite several regulations and government mandates requiring that these services be provided, interpreters are not being used as frequently as needed. Flores found, in a statewide evaluation in New Jersey, that while 98% of hospitals reported offering interpreter services, only 13% had a formal interpreter services department, only 3% had full-time interpreter staff, and 5% had volunteer interpreters *(3)*. Carrillo-Zuniga showed that about 23% of the faculty and 19% of the medical students at the Medical College of Georgia who responded to the survey were either not at all familiar or only somewhat familiar with the National CLAS standards *(16)*. Baker found that an interpreter was not used for 46% of the patients who participated in his study for whom either the patient or the examiner thought an interpreter was necessary *(5)*. Morales showed that 15% of health plan members reported having needed an interpreter during the past 6 months. Of these, 7% reported having needed an interpreter and always having

Table 1: National Standards on Culturally and Linguistically Appropriate Services (CLAS) *(12)*

Standard number	Text of the standard
1	Health care organizations should ensure that patients/consumers receive from all staff member's effective, understandable, and respectful care that is provided in a manner compatible with their cultural health beliefs and practices and preferred language.
2	Health care organizations should implement strategies to recruit, retain, and promote at all levels of the organization a diverse staff and leadership that are representative of the demographic characteristics of the service area.
3	Health care organizations should ensure that staff at all levels and across all disciplines receive ongoing education and training in culturally and linguistically appropriate service delivery.
4	Health care organizations must offer and provide language assistance services, including bilingual staff and interpreter services, at no cost to each patient/consumer with limited English proficiency at all points of contact, in a timely manner during all hours of operation.
5	Health care organizations must provide to patients/consumers in their preferred language both verbal offers and written notices informing them of their right to receive language assistance services.
6	Health care organizations must assure the competence of language assistance provided to limited English proficient patients/consumers by interpreters and bilingual staff. Family and friends should not be used to provide interpretation services (except on request by the patient/consumer).
7	Health care organizations must make available easily understood patient-related materials and post signage in the languages of the commonly encountered groups and/or groups represented in the service area.
8	Health care organizations should develop, implement, and promote a written strategic plan that outlines clear goals, policies, operational plans, and management accountability/oversight mechanisms to provide culturally and linguistically appropriate services.
9	Health care organizations should conduct initial and ongoing organizational self-assessments of CLAS-related activities and are encouraged to integrate cultural and linguistic competence-related measures into their internal audits, performance improvement programs, patient satisfaction assessments, and outcomes-based evaluations.
10	Health care organizations should ensure that data on the individual patient's/consumer's race, ethnicity, and spoken and written language are collected in health records, integrated into the organization's management information systems, and periodically updated.
11	Health care organizations should maintain a current demographic, cultural, and epidemiological profile of the community as well as a needs assessment to accurately plan for and implement services that respond to the cultural and linguistic characteristics of the service area.
12	Health care organizations should develop participatory, collaborative partnerships with communities and utilize a variety of formal and informal mechanisms to facilitate community and patient/consumer involvement in designing and implementing CLAS-related activities.
13	Health care organizations should ensure that conflict and grievance resolution processes are culturally and linguistically sensitive and capable of identifying, preventing, and resolving cross-cultural conflicts or complaints by patients/consumers.
14	Health care organizations are encouraged to regularly make available to the public information about their progress and successful innovations in implementing the CLAS standards and to provide public notice in their communities about the availability of this information.

one, 4% reported having needed an interpreter and usually having one, and 4% reported having needed an interpreter and never or sometimes having one *(17)*. She also found that, among the health plans that participated in the study, 18-59% of the 5-24% of members who reported needing an interpreter always had one, while 16-50% never or sometimes had one. Galbraith showed that, of the 6% of parents who reported needing an interpreter in order to communicate with their child's provider, 52.7% reported not always being able to get an interpreter if needed *(4)*. It is clear that the U.S. healthcare system is not meeting the language service needs of the LEP population satisfactorily.

The current study

As we have seen, limited English proficiency affects the care that patients in this population receive and their level of satisfaction with that care. Several studies have demonstrated health disparities related to limited English proficiency, affecting both children and adults. Interpreters appear to increase the level of satisfaction as well as the understanding that patients have of the medical encounter.

The Federal government has mandated that adequate language services be provided to the LEP population, and has provided guidance in doing so, both in the form of recommendations and mandates. However, despite all of the information discussed thus far, interpreters are not being used or provided as frequently as they should be, and LEP patients continue to have difficulty accessing the healthcare system in a language they can understand.

The purpose of this study is to attempt to define from the appropriate literature the major barriers that prevent proper utilization of appropriate and adequate interpretation

services by providers and the LEP community. The aim of this thesis is to analyze and discuss these barriers as well as to suggest steps that can be taken and solutions that can be implemented in order to overcome them and ensure that all LEP patients can access the healthcare system in a language they are comfortable with and can understand, therefore allowing them to participate in their medical care fully.

METHODS

I conducted a systematic review of the literature using Medline, PsycINFO, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL), where I believed clinically-related articles addressing barriers to interpreter use were most likely to be found. In order to find the studies from which the data would be collected, I created a concept table of the terms to be used in the search for the articles to be reviewed. I used the concept table to organize variations, alternates, and terms related to the terms "barriers," "interpreter," and "clinical encounter." I included terms based on the

Table 2: Search terms used to begin the systematic review in Medline

Variations/key words for "Barriers"	Variations/keywords for "Interpreter"	Variations/keywords for "Clinical encounter"
Language barrier	Interpreter	Office visit
Communication barrier	Translator	Sick visit
Issue	Translating	Check-up
Factor	Cultural broker	Exam
Interference	Conduit	Examine
Obstruction	Patient advocate	Patient-provider relationship
Interfere	Ad hoc	Patient-clinician
Limits	Third party	Medical
Obstacle	Language	
	Cultural competence	
	Patient-provider communication	
	Limited English proficiency	
	Comprehension	

"Keywords" section of articles used for background research, as well as on common synonyms and frequently used substitutions or related ideas for terms of interest. The search terms I ultimately used to begin the search are shown in the Table 2.

Table 3: Search textlines used in Medline

(Communication barriers or language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp) and (patient advocacy or translating or exp Professional-patient relations or exp Comprehension or (interpreter$ or interpretation).mp. or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or "Quality of Health Care" or (comprehen$ or translat$).mp.) and (exp Office Visits or exp Physical Examination or (clinical encounter$ or sick visit$ or check-up$).mp. or hospital visit$.mp.)
(Communication barriers or language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp) and (patient advocacy or translating or exp Professional-patient relations or exp Comprehension or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or "Quality of Health Care" or (comprehen$ or translat$).mp.) and interpreter$.mp.
(Communication barriers or language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp.) and (Patient advocacy or translating or exp Professional-patient relations or exp Comprehension or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or "Quality of Health Care" or (comprehen$ or translat$).mp.) and (exp Office Visits or exp Physical Examination or (clinical encounter$ or sick visit$ or check-up$).mp. or hospital visit$.mp.)

Once the search terms to be used and the databases in which the search would be conducted had been established, I outlined the following inclusion criteria:

1. Articles must be written in English.
2. Citations must be dated from 1967 to the present. Although 1964 was the year in which the Civil Rights Act was instituted, which included Title VI, 1967 was chosen because the version of PsycINFO used included articles from 1967 to the present.
3. References must be actual studies with a defined methodology outlined and in which a section of the results related to barriers to interpreter use. Editorials and commentaries were not included.
4. Articles must relate to the medical clinical encounter.

Using these criteria, I conducted the search in November 2008, first running the search in Medline. The same search was then run in CINAHL and PsycINFO, with resulting changes in the search terms and keywords based on lack of results within the specific search engines. The textlines used in each search engine are shown in Tables 3, 4, and 5.

Articles that resulted from the search were first sorted by relevance determined by title and abstract review. Articles deemed to possibly be relevant to this report were then reviewed in depth, and included if the results and discussion section were found to contain information on barriers to interpreter use that resulted from the study. A record was kept of each article's identified barriers.

Table 4: Search textlines used in the Cumulative Index to Nursing and Allied Health Literature (CINAHL) database

(Communication barriers or Language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp.) and (Patient Advocacy or exp Professional-Patient Relations or (interpreter$ or interpretation).mp. or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or "Quality of Health Care" or (comprehen$ or translat$).mp.) and (exp Office Visits or exp Physical Examination or (clinical encounter$ or sick visit$ or check-up$).mp. or hospital visit$.mp.)
(Communication barriers or Language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp.) and (Patient Advocacy or exp Professional-Patient Relations or interpreter$.mp. or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or "Quality of Health Care" or (comprehen$ or translat$).mp.) and (exp Office Visits or exp Physical Examination or (clinical encounter$ or sick visit$ or check-up$).mp. or hospital visit$.mp.)
(Communication barriers or Language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp.) and (Patient Advocacy or exp Professional-Patient Relations or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or "Quality of Health Care" or (comprehen$ or translat$).mp.) and (exp Office Visits or exp Physical Examination or (clinical encounter$ or sick visit$ or check-up$).mp. or hospital visit$.mp.)
(Communication barriers or Language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp.) and (Patient Advocacy or exp Professional-Patient Relations or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or "Quality of Health Care" or (comprehen$ or translat$).mp.) and interpreter$.mp.

Table 5: Search textlines used in PsycINFO

(communication barriers or Language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp.) and (exp Comprehension or (interpreter$ or interpretation).mp. or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or (comprehen$ or translat$).mp. or foreign language translation or "quality of care"/ or health care delivery/ or health care services/ or health disparities/ or therapeutic processes or patient advoca$.mp.) and (exp Physical Examination or (clinical encounter$ or sick visit$ or check-up$).mp. or (office visit$ or hospital visit$).mp.)
(communication barriers or Language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp.) and (exp Comprehension or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or (comprehen$ or translat$).mp. or foreign language translation or "quality of care"/ or health care delivery/ or health care services/ or health disparities/ or therapeutic processes or patient advoca$.mp.) and interpreter$.mp.
(communication barriers or Language or ((language$ or communicat$) adj2 (barrier$ or issue$ or factor$ or interfere$ or limit$ or obstacle$)).mp.) and (exp Comprehension or cultural broker$.mp. or english proficien$.mp. or (conduit$ or ad hoc or third party).mp. or (comprehen$ or translat$).mp. or foreign language translation or "quality of care"/ or health care delivery/ or health care services/ or health disparities/ or therapeutic processes or patient advoca$.mp.) and (exp Physical Examination or (clinical encounter$ or sick visit$ or check-up$).mp. or (office visit$ or hospital visit$).mp.)

A few citations included in the results were referenced in the articles identified through the search engines, but were not themselves discovered through the review with the search engines.

RESULTS

Twenty articles were found that addressed barriers to interpreter use within the results sections. Several of these articles also included information about attempted or possible solutions. The titles and primary authors of these articles are included in Table 6, as well as the barriers and solutions cited by those articles.

Barriers to interpreter use

Ten of the studies identified through this systematic review had been conducted in the United States, eight were from Australia, and two came from the United Kingdom. I classified barriers identified by the articles into barriers to ad hoc interpreter use and to professional interpreter use, as well as general barriers, where the study identified the barrier but not the type of interpreter to which it related. If a barrier could be identified as pertaining to one group despite lack of specification, or if it had been found in other articles as being relevant to both types of interpreters, then it was included in the barriers to ad hoc and/or professional interpreter use.

Of the twenty articles, eight identified barriers to ad hoc interpreter use, seventeen identified barriers to professional interpreter use, and seven mentioned barriers to both.

Table 6: Citations identified through the systematic review, citing barriers to interpreter use and solutions

Author	Title	Barriers	Solutions	Country
Gadon, M *(18)*	Caring for patients with limited English proficiency: the perspectives of small group practitioners	**Ad hoc:** 1. Dual job responsibility for office staff. 2. Concerns about reliability & accuracy of interpretation due to lack of medical training of non-clinical staff & lack of professional interpreter training of clinical/non-clinical staff. 3. Concerns about loss of confidentiality, incomplete/inaccurate interpretation, increased physician liability **Professional:** Telephonic: 1. Extra time & inconvenience. 2. Impersonal quality. 3. Loss on non-verbal input from patient 4. Lack of awareness about availability of service. 5. Anticipated barriers: lack of phone jacks or multiple phones in exam rooms. 6. quality and HIPAA compliance of professional interpreters. 7. cost of interpreter services	**Attempted:** 1. Supplemental federal funding as LEP pts were uninsured. 2. Use interpreters at hospital with which physicians are affiliated free of charge. **Possible:** Caring for large volume of same-language LEP pts with a professional interpreter or bilingual provider may be profitable	US

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Torres, M *(19)*	Rural hospitals and Spanish-speaking patients with limited English proficiency	**General:** 1. Lack of funding	**Attempted:** 1. Send staff to medical interpretation training. 2. Partnerships with neighbors	US
Park, ER *(20)*	Internal medicine residents' perceptions of Cross-cultural training: Barriers, needs, and educational recommendations	**Professional:** lack of time and interpreter availability		US

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Kazzi, GB *(21)*	Barriers to the use of interpreters in emergency room paediatric consultations	**Professional:** 1. Poor identification of the need for an interpreter. 2. Use of ad hoc interpreters. 3. Lack of awareness about interpreter service availability. 4. Respondent desire to have the consultation in English without assistance.	**Attempted:** 1. standard set of questions to be asked at all registrations to identify carers that speak another language primarily at home, and inform of the access to trained interpreters, facilitate access to trained interpreters. 2. Cordless telephone that can be taken to bedside has been purchased **Possible:** 1. place signs advising of available interpreter service in multiple languages in several visible locations. 2. Install speakerphones in consultation rooms to be used in telephone interpreting. 3. Facilitate employment of bilingual health workers, though staff should not substitute for interpreters.	Australia

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Atkin, N *(22)*	Getting the message across - Professional interpreters in general practice	**Professional:** (listed from most commonly mentioned to least. Chart found in article) 1. Presence of bilingual general practitioners/staff. 2. Interpreters not needed. 3. Family members were used. 4. Time consuming. 5. Patient awareness. 6. Cost to practice. 7. Inconvenient or difficult. 8. Unavailable. 9. Language rare. 10. Other arrangements. 11. Patient preference. 12. Bad experience.	**Possible:** 1. Financial incentives ex. Medicare item, Practice Incentive Payment for interpreter use. 2. Promotion of available services to providers and patients. 3. Providing medical interpreter training to staff who have adequate language skills	Australia
Hornberger, J *(23)*	Bridging language and cultural barriers between physicians and patients	**Ad hoc:** Negative comments made about available services: 1. Concerns raised about use of untrained interpreters, esp. nonmedical staff ex. Intepreter may speak English poorly **Professional:** Negative comments about available services: 1. Limited availability of interpreters results in long waits. 2. Concerns about quality of services offered by professional interpreters. Mixed comments about available services: 1. Need trained interpreters and government can't provide for free. 2. Unaware of interpretation services available to them	**Attempted:** county-sponsored managed care plan allowing providers of patients insured by MediCal 24-hour access to remote interpretation by trained interpreters. **Possible:** 1. Increase physician awareness of options for bridging language barriers. 2. New techniques for bridging language barriers ex. Using cellular phones and computers	US

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Shapiro, J *(24)*	Primary care resident, faculty, and patient views of barriers to cultural competence, and the skills needed to overcome them	**General:** resident reasons for disliking interpreted interviews: 1. Less personal, less natural, too time-consuming. 2. Interpreters were poorly trained and didn't translate accurately. Faculty perceptions of interpreters: 1. Interpreters lacked skill. 2. Interpreter use inhibited a personal connection with the patient, could potentially damage the doctor-patient relationship.		US
Heaney, C *(25)*	Use of interpreter services in a metropolitan healthcare system	**Professional:** negatively effect use of interpreters: 1. Prefer to use client family/friends. 2. Prefer to use other bilingual staff members. 3. Organizing interpreter services takes too long. 4. Lack of protocols and guidelines for interpreter use. 5. Unsure how to work with interpreters. 6. Lack of training with interpreters.	**Possible:** 1. Further promotion and education regarding interpreter services availability and procedure for accessing them. 2. Onsite interpreter coordination service may decrease use of informal interpreters, and potentially negative outcomes that can result. 3. Educate staff about use of formal interpreters	Australia

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Lee, TS *(26)*	Health care interpreters: a physiotherapy perspective	**Professional:** 1. Prefer communication strategies other than interpreters: family, nonverbal communication or bilingual staff. 2. Suspicious about interpreter's ability to transmit intended message accurately - suspect lengthening, adding to, or shortening interpretations based on length of sentences or words. 3. Interpreters may dominate the relationship. 4. Stress produced by attempting to complete consultations on time when using an interpreter, and concern that other clients might be placed at a disadvantage. 5. Generalization of a negative perception of one interpreter to all health care interpreters. 6. Perceived cost of professional interpreter	**Possible:** 1. One study participant recommended a volunteer interpreter service, but authors show why this is not feasible 2. Educating physiotherapists about interpreter collaboration, value of interpreters, and risks that result from not using professional interpreters. Increasing physiotherapist exposure to the health care interpreter service may lead to interpreter use being the norm. 3. Using phone interpreter services until face-to-face interpreter is available.	Australia

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Ahmed, R *(27)*	Cultural competence and Language Interpreter Services in Minnesota - Results of a Needs assessment survey administered to physician members of the Minnesota Medical Association	**Ad hoc:** Bilingual support staff not adequately trained in medical interpretation **Professional:** 1. Too little notice to arrange for interpreter services. 2. Inconvenient to contact an interpreter service 3. Competency or reliability of interpreters. 4. Shortage of available interpreters. 5. Cost. 6. Don't know options/resources. 7. Waiting time **General:** Frustration regarding interpreter use: 1. Sole availability of untrained interpreters like relatives. 2. Misinformation and lack of support/guidance from clinic about necessity of interpreters. 3. Bilingual support staff who may not be adequately trained in medical interpreting	**Possible:** Education about services that exist, how to access and pay for them	US
Plunkett, A *(28)*	Difficulties experienced by carers from non-English-speaking backgrounds in using health and other support services	**Professional:** loss of confidentiality	**Possible:** assurance about confidentiality	Australia

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Martinez-Gibson, EA *(29)*	Addressing Language Access in Health Care	**Ad hoc:** 1. Bilingual staff/health care providers serving dual roles causes neglect of other duties while interpreting. 2. Bilingual staff may lack medical terminology and medical knowledge skills, while health care providers may have medical knowledge and lack medical terminology. 3. Level of proficiency of friends and family members is unknown, possibly leading to inaccurate interpreting **Professional:** 1. Wait time due to demand for interpreter. 2. Financial burden for federally funded and non-federally funded facilities. 3. Telephone interpreter "'is not the most effective/efficient, and user-friendly way to interpret.'"	**Possible:** telephone interpreters may require less funding than full-time interpreter	US
Burbano O'leary, SC *(30)*	The truth about language barriers: one residency program's experience	**Professional:** 1. Waiting time. 2. Lack of availability. 3. Cumbersome communication. 4. Lack of interpreter medical knowledge	**Possible:** 1. Training residents in interpreter use. 2. Maximize availability of hospital interpreters by assessing variable needs throughout hospital. 3. Facilitate use of interpreter services, possibly by requiring third-party reimbursement for interpreter services.	US

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Lee, TS *(31)*	Physiotherapists' communication strategies with clients from culturally diverse backgrounds	**Ad hoc:** 1. Use of family members not recommended by hospital because of possible bias: family members put across their own opinion, not as reliable as professionals.	**Possible:** Education of physiotherapists about the role and background of professional interpreters including cost, ethical standards, interpreters' training, how to collaborate with professional interpreters to ensure effective, efficient use of professional interpreters	Australia
Vandervort, EB *(32)*	Linguistic services in Ambulatory clinics	**Ad hoc:** 1. Concern nonclinical staff is not medically trained. 2. Try to use family members and friends rarely because of concern for confidentiality, patient comfort, and lack of clinical or medical training, with possibly resulting incorrect interpretation. **Professional:** Telephone interpreters used infrequently due to cost **General:** 1. Friends and family utilized because of cumbersome process of locating an interpreter within the clinic. Barriers to providing "quality interpreter services" - 2. Shortage of staff. 3. Lack of Spanish-speaking health care professionals. 4. Management of patients with multiple co-morbid conditions. 5. Dual roles of interpreters. 6. Administrative resource allocation for staff. 7. Lack of funds dedicated for interpreter services. 8. Poor clinician use of interpreters	**Attempted:** In-service training for staff that provides interpreter services **Possible:** 1. Outside training of interpreter staff. 2. Advocating for specialized funding for interpreter services	US

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Richardson, A *(33)*	"Reduced to nods and smiles": Experiences of professionals caring for people with cancer from black and ethnic minority groups	**Ad hoc:** Use of family members thought to be unsatisfactory: 1. Unfair on those involved, especially children translating for parents. 2. Distressing information could be withheld. 3. Participant might not be able to talk to patient, being shielded from them by protective relatives, particularly female patients from some cultures. 4. Participants felt uncomfortable about "colluding" with relatives. **Professional:** Discussed as "serious problems...encountered with generic interpreters" vs. specialist medical interpreters - 1. Unobtainable when needed, being too busy to come on short notice. 2. Unclear what the interpreter told patient, withholding difficult messages, altering the meaning of information to be translated. 3. Participants could not convey underlying message, which could be conveyed by inflection of voice or body language. 4. Breach of cultural norms ex. male interpreter discussing intimate issues with female patient. 5. Patients might not want to use interpreter from own ethnic community due to fear that private difficulties will become a source of gossip. 6. Concern for impact of this work ex. giving bad news, on the interpreter	**Possible:** 1. Greater training for existing interpreters in coping with medical situations and increased support. 2. Service providers should ensure that competent interpreters are available for consultations. 3. Awareness of need should be included in staff induction and training programs, representatives from ethnic minorities should be involved in local service planning.	UK

Table 6: Continued

Author	Title	Barriers	Solutions	Country
Rhodes, P *(34)*	A problem of communication? Diabetes care among Bangladeshi people in Bradford	**Ad hoc:** 1. Family that serve as interpreters may not be able to make the appointment. 2. Not reasonable to discuss some things in front of children **Professional:** 1. "They can't get hold of Bengali interpreters." 2. Most people preferred to rely on relatives, even when alternatives were available.	**Possible:** Developing skills of bilingual healthcare workers	UK
Maltby, H *(35)*	Health promotion for Vietnamese women and their families	**Professional:** Vietnamese women did not trust interpreters to interpret appropriately		Australia
Nailon, RE *(36)*	Nurses' concerns and practices with using interpreters in the care of Latino patients in the Emergency Department	**Professional:** 1. Medically certified interpreters often not readily available to nurses in the ED. 2. Hospital administrators perceived to frown upon nursing use of on-call medically certified interpreters, thought to be due to cost. 3. Expected delays. 4. Desire to not waste resources by calling interpreter to have patient tell story to nurse and physician	**Possible:** Ancillary staff should receive formal training in techniques of medical interpreting.	US
Giacomelli, J *(37)*	A review of health interpreter services in a rural community: A total quality management approach	**Professional:** 1. Interpreter not available. 2. Family and friends more accessible **General:** 1. Patient perceived to speak English	**Possible:** 1. Increase number of interpreters. 2. Train staff in use of Telephone Interpreter Service (available in Australia), appropriate use of trained interpreters. 3. Measurement tool for assessing language proficiency	Australia

Five references identified general barriers that were not classified by the study as pertaining to either ad hoc or professional interpreters. However, I was later able to re-classify the barriers cited by two of these articles to the ad hoc and/or professional categories. The other three articles identified barriers that could be included in the ad hoc and/or professional categories, while also identifying general barriers that did not fit into either category.

Table 7: Barriers to ad hoc interpreter use derived from all studies

Barrier	No. of Articles citing the barrier
Unreliable/incomplete/inaccurate interpretation	6
Lack of medical/professional interpreter training	5
Dual responsibility for staff	3
Loss of confidentiality	2
Unfair/disruptive to family	2
Increased physician liability	1
Patient discomfort	1
Interpreter interference/lack of objectivity	1
Provider discomfort	1

The barriers identified by each study were classified into the categories shown in Tables 7, 8, and 9, which show both the barrier identified and the number of articles that cited it. The most frequently identified barrier to professional interpreter use was interpreter availability. The main barrier to ad hoc interpreter use that was identified was unreliable/incomplete/inaccurate interpretation. There was no general barrier that was mentioned more than any of the other general barriers.

As mentioned earlier, the three countries in which researchers had conducted studies were the United States, the United Kingdom, and Australia. The barriers identified were then also classified based on the country in which the study was done, as the United States and Australia specifically have distinct approaches to the funding provided for interpreters, and I wanted to draw out any differences in barriers that might

result from these approaches. None of the studies conducted in Australia and the United Kingdom identified barriers that would fall into the "General Barriers" category. The three studies mentioned earlier that identified general barriers that did not fit into either the professional or ad hoc categories were conducted in the U.S., and none of the barriers was mentioned in more than one study.

Table 8: Barriers to professional interpreter use derived from all articles

Barrier	No. of Articles citing the barrier
Interpreter availability	11
Time constraints/inconvenience	10
Quality of interpreters/interpretations	8
Cost	7
Use of ad hoc interpreters/other arrangement	7
Patient resistance/preference/comfort	4
Lack of awareness about services	4
Loss of non-verbal input/personal connection	3
Loss of confidentiality	3
Bad experience/generalization	2
Need for an interpreter not identified	1
Lack of protocols/guidelines/training for interpreter use	1
Barriers specific to the study	1
Interpreters not needed	1
Patient awareness	1
Impact on interpreter	1
Perceived discouragement of interpreter use	1

The studies conducted in Australia and the UK identified few barriers to the use of ad hoc interpreters, as shown in Tables 10 and 11. The majority of the articles that ultimately commented on barriers to ad hoc interpreter use, six out of nine, were studies that were conducted in the U.S. However, the four most frequently identified barriers to ad hoc interpreter use in the studies conducted in the United States were the same as those most frequently identified when all of the studies were counted. The order of barriers to ad hoc interpreter use identified in U.S. studies is shown in Table 12.

The main barriers to professional interpreter use cited in the two studies conducted in the UK were interpreter availability and patient resistance/preference/comfort, which were mentioned by both. In the studies done in

Australia, the most frequently cited barrier to professional interpreter use was the use of ad hoc interpreters or having other arrangements, such as using nonverbal communication *(26)*. This was followed by time constraints or the inconvenience of obtaining a professional interpreter. Of the studies conducted in the U.S., seven identified interpreter availability as well as time constraints/inconvenience of obtaining an interpreter as barriers to professional interpreter use. The next most frequently cited barriers were cost and interpreter/interpretation quality.

Table 9: General Barriers to interpreter use, derived from studies conducted in the U.S.

Barrier	No. of Articles citing the barrier
Loss of non-verbal input/personal connection	1
Time constraints/inconvenience	1
Sole availability of untrained interpreters	1
Misinformation/lack of support/guidance about necessity of interpreters	1
Staff shortage	1
Management of multiple co-morbid conditions	1
Administrative resource allocation for staff	1
Poor clinician use of interpreters	1

Most of the barriers cited could be placed into one of three categories. These are cost, lack of interpreters being seen as experts in their field, or lack of professionalization of interpreters, and lack of education/increased training for providers and patients. The barriers that are included in each of these categories are shown in Tables 16, 17, and 18. When interpreter availability and the time constraints/inconvenience associated with interpreter use are categorized as pertaining to cost, cost emerges as the most frequently cited barrier to professional interpreter use, both in the U.S. and in general. 9 of the 10 studies conducted in the U.S. identified interpreter availability, time constraints/inconvenience, and/or cost as barriers *(18-20, 23, 27, 29, 32, 36 30)*, while only 4 of the 8 studies conducted in Australia cited these factors as barriers *(22, 25, 26, 37)*. The studies

conducted in the UK mentioned interpreter availability as a barrier, but did not mention either cost or time constraints/inconvenience.

Table 10: Barriers to ad hoc interpreter use – Australian articles

Barrier	No. of Articles citing the barrier
Interpreter interference/lack of objectivity	1
Unreliable/incomplete/inaccurate interpretation	0
Lack of medical/professional interpreter training	0
Dual responsibility for staff	0
Loss of confidentiality	0
Unfair/disruptive to family	0
Increased physician liability	0
Patient discomfort	0
Provider discomfort	0

Also in relation to cost, the Australian government provides free interpreting services such as the Doctors Priority Line, as well as other forms of interpreter support, for providers of services claimable under Medicare. The Doctors Priority Line has been available since 2000, according to Atkin *(22)*. Three of the studies analyzed here that were conducted in Australia were published prior to that year *(28, 35, 37)*. Only one of these studies mentioned a barrier related to cost *(37)*, which may indicate that even prior to the provision of interpreter services, cost may have been more emphasized in the U.S. than in Australia.

Table 11: Barriers to ad hoc interpreter use – articles from the UK

Barrier	No. of Articles citing the barrier
Unfair/disruptive to family	2
Unreliable/incomplete/inaccurate interpretation	1
Provider discomfort	1
Lack of medical/professional interpreter training	0
Dual responsibility for staff	0
Loss of confidentiality	0
Increased physician liability	0
Patient discomfort	0
Interpreter interference/lack of objectivity	0

Solutions

Several of the references found also included information about solutions to inadequate interpreter use that either had been attempted or that could be possible ways of solving this issue. Several of the recommendations related to increased

funding for interpretations services, as well as to increased training and education about services available, how to work with interpreters, and the importance of doing so. The various proposed and attempted solutions associated with their respective references are included in Table 6.

Table 12: Barriers to ad hoc interpreter use – U.S. articles

Barrier	No. of Articles citing the barrier
Unreliable/incomplete/inaccurate interpretation	5
Lack of medical/professional interpreter training	5
Dual responsibility for staff	3
Loss of confidentiality	2
Increased physician liability	1
Patient discomfort	1
Interpreter interference/lack of objectivity	0
Provider discomfort	0
Unfair/disruptive to family	0

DISCUSSION

I divided the barriers to interpreter use identified through this systematic review of the literature into general barriers to interpreter use, as well as barriers to ad hoc and professional interpreter use specifically. There are common themes throughout the references, independent of the type of interpreter to which they refer. We must understand these barriers in order to overcome them and ultimately provide adequate interpretation services to the LEP population through the use of professional interpreters.

Barriers to ad hoc interpreter use

Ad hoc interpreters can sometimes be used in clinical encounters. Diamond found that residents thought that using family members as ad hoc interpreters saved time and also required little effort *(38)*. However, their use should be discouraged or eliminated except for the most special of cases, as ad hoc interpreter use can be problematic for many of the same reasons that were cited as barriers to ad hoc interpreter

use in the studies discussed in the Results section. For example, lack of training and mistrust that accurate, complete, reliable interpretation is taking place when an ad hoc interpreter is being used is consistent with the concern that ad hoc interpreters may be providing inaccurate information that could affect the outcome of the clinical encounter. Flores conducted a study comparing interpretation errors committed by hospital interpreters, which were professional interpreters employed by the hospital department of interpreter services who had undergone some degree of screening and evaluation for language proficiency but had no on-going training or evaluation, and ad hoc interpreters, which were family members or friends, nonclinical staff, strangers, and clinical staff with no interpreter training or screening. The study showed that, in pediatric encounters, hospital interpreters and ad hoc interpreters committed a comparable number of errors. However, those errors committed by ad hoc interpreters were significantly more likely than those committed by hospital interpreters to have potential clinical consequences *(39)*.

Table 13: Barriers to professional interpreter use – articles from the UK

Barrier	No. of Articles citing the barrier
Interpreter availability	2
Patient resistance/preference/comfort	2
Quality of interpreters/interpretations	1
Use of ad hoc interpreters/other arrangement	1
Loss of non-verbal input/personal connection	1
Loss of confidentiality	1
Impact on interpreter	1
Cost	0
Time constraints/inconvenience	0
Lack of awareness about services	0
Bad experience/generalization	0
Need for an interpreter not identified	0
Lack of protocols/guidelines/training for interpreter use	0
Barriers specific to the study	0
Interpreters not needed	0
Patient awareness	0
Perceived discouragement of interpreter use	0

Professional interpreters may also serve the best interests of the patient more than ad hoc interpreters. For example, in a systematic review, Karliner found that professional interpreters improve clinical care to a greater degree than ad hoc interpreters, making the quality of care for patients with a language barrier approach or match the quality of care received by patients without a language barrier *(40)*.

Table 14: Barriers to Professional interpreter use – Australian articles

Barrier	No. of Articles citing the barrier
Use of ad hoc interpreters/other arrangement	5
Time constraints/inconvenience	3
Interpreter availability	2
Quality of interpreters/interpretations	2
Cost	2
Bad experience/generalization	2
Patient resistance/preference/comfort	2
Lack of awareness about services	1
Loss of non-verbal input/personal connection	1
Loss of confidentiality	1
Need for an interpreter not identified	1
Lack of protocols/guidelines/training for interpreter use	1
Interpreters not needed	1
Patient awareness	1
Barriers specific to the study	0
Impact on interpreter	0
Perceived discouragement of interpreter use	0

In addition to this data showing that professional interpreters may be more effective than ad hoc interpreters, it seems that the use of family members as interpreters is particularly problematic. The U.S. Department of Justice Civil Rights Division has said, in regards to oral interpretation and Executive Order 13166, that it is generally not acceptable for a federally funded organization to rely on family members and friends of an LEP person to provide interpretation services, except in rare emergency situations *(41)*. Rosenberg found that many family members, when acting as interpreters, felt that their role was to ensure understanding, not necessarily to translate exactly what was said, and concluded that family members can act as a third party, communicating directly with the physician and translating only when necessary *(42)*. After a study of 4 interviews in which a family member served as the interpreter for the encounter, Ebden stated that the

quality of the information provided through the interpretation for the history would have made it difficult to arrive at the correct diagnosis *(43)*.

Table 15: Barriers to professional interpreter use – U.S. articles

Barrier	No. of Articles citing the barrier
Interpreter availability	7
Time constraints/inconvenience	7
Cost	5
Quality of interpreters/interpretations	5
Lack of awareness about services	3
Use of ad hoc interpreters/other arrangement	1
Loss of non-verbal input/personal connection	1
Loss of confidentiality	1
Barriers specific to the study	1
Perceived discouragement of interpreter use	1
Patient resistance/preference/comfort	0
Bad experience/generalization	0
Need for an interpreter not identified	0
Lack of protocols/guidelines/training for interpreter use	0
Interpreters not needed	0
Patient awareness	0
Impact on interpreter	0

Ad hoc interpreters may also have a conflict of interest that may interfere with proper interpretation. Ebden also concluded that the family relationship between the patient and the interpreter could present further difficulties for interpreting *(43)*. Family members and friends may find it difficult to ask certain questions or to share certain diagnoses with the person for whom they are interpreting. They may also be less objective, providing their own opinion about the information and the course of action, or including and excluding information. Family members may not want certain family information to be shared. For example, one can imagine a situation where a family member serving as interpreter may not translate information about domestic violence or other abuse in the home.

Table 16: Barriers related to the cost of interpretation services

Interpreter Type	Barrier
Ad hoc	Dual responsibility for staff
	Unfair/disruptive to family
Professional	Interpreter availability
	Time constraints/inconvenience
	Cost
General	Time constraints/inconvenience
	Staff shortage

Staff members may also have a conflict of interest. One of the major conflicts of interest would be time. Staff

may make increased use of summation, exclusion, and minimization of information when interpreting in an effort to decrease the amount of time spent in the encounter and return to performing other duties. Staff members may also be less objective, sharing their opinion about the information and the course of action both through the addition and exclusion of information.

Table 17: Barriers related to the professionalization of interpreter services

Interpreter Type	Barrier
Ad hoc	Unreliable/incomplete/inaccurate interpretation
	Lack of medical/professional interpreter training
	Loss of confidentiality
	Increased physician liability
	Patient discomfort
	Interpreter interference/lack of objectivity
	Provider discomfort
Professional	Quality of interpreter/interpretations
	Use of ad hoc interpreters/other arrangement
	Loss of confidentiality
General	Sole availability of untrained interpreters

Therefore, it would appear that the concern that both providers and patients can have about whether or not their input is being translated correctly is appropriate, especially when an ad hoc interpreter is being used. This concern, however, as well as most of the others that were cited as barriers to ad hoc interpreter use, could be ameliorated by the use of professional interpreters. With the use of professional interpreters, there would no longer be concern that staff are neglecting other duties when they are serving as interpreters, or that they will be drawn away from the clinical encounter and interpreting by the need to fulfill another duty. Any disruption to family, concern for asking family members to convey news that may be difficult or inappropriate for them to convey, and interpreter lack of objectivity or interference, could be helped by the use of professional interpreters.

These barriers to ad hoc interpreter use may therefore actually be useful in that they may decrease the frequency with which ad hoc interpreters are used. However,

some of the concerns and issues raised about ad hoc interpreters were also identified as barriers to professional interpreter use, such as the quality of the interpretation and patient discomfort with interpreter use. We will now discuss these barriers and the barriers that were mentioned specifically in regards to professional interpreter use. We will also discuss some possibilities for overcoming these barriers, so that professional interpreter use can become the norm for interpreted encounters.

Table 18: Barriers related to the education/training of providers and patients

Interpreter Type	Barrier
Ad hoc	None
Professional	Patient resistance/preference/comfort
	Lack of awareness about services
	Loss of non-verbal input/personal connection
	Bad experience/generalization
	Need for an interpreter not identified
	Lack of protocols/guidelines/training for interpreter use
	Interpreters not needed
	Patient awareness
	Impact on interpreter
	Perceived discouragement of interpreter use
General	Loss of non-verbal input/personal connection
	Misinformation/lack of support/guidance about necessity of interpreters
	Poor clinician use of interpreters

Barriers to professional interpreter use and general barriers

Several barriers specific to professional interpreter use were identified in addition to the barriers that were common to ad hoc and professional interpreters. However, most of these barriers can be viewed from the perspective of three main categories: financial concerns, professionalization of the interpreter, and education/training of providers and patients. I could also classify most of the general barriers identified by three of the US studies *(24, 27, 32)* within these three categories.

Financial concerns

The cost of providing interpretation services extends beyond the payments that are made to interpreters. Cost is also relevant when discussing interpreter availability and the amount of time a patient spends with a provider, which can increase when an interpreter is involved due to the repetition of information in another language. Therefore, beyond the actual identification of the direct cost of the interpreter as a barrier in several of the studies, the citing of interpreter availability/staff shortage and the time constraints and inconvenience associated with interpreter use during the clinical encounter or in accessing an interpreter are also elements of cost, as mentioned in the Results section. Consequently, including these barriers under the category of cost makes cost the most frequently cited barrier to professional interpreter use.

It is interesting to note the cross national perspective mentioned in the Results section, where most of the studies conducted in the U.S. identified one of these 3 barriers to interpreter use, while only half of the studies conducted in Australia cited these factors as barriers. Perhaps there is a tendency for U.S. studies to emphasize cost to a greater degree than Australian studies. It is more difficult to comment on the importance of cost in the UK, since only 2 studies were conducted there.

Although the reasons for this possible difference in the appearance of cost-related barriers in each country's literature are unclear, the difference may be due to Australian governmental support for interpretation services. The Australian government provides free interpreting services such as the Doctors Priority Line, as well as other forms of interpreter support, for providers of services claimable under Medicare, as mentioned in the Results section. It is interesting to note that the authors of one of the Australian studies that mentioned cost as a barrier indicate that the cost of providing the interpreter

services is minimal, and that these physiotherapists may actually have been misinformed about the cost of providing the service, or were using this as an excuse for not providing the service *(26)*.

It seems that one way of attempting to help break down some cost-related barriers in the U.S. would be to increase financial support of interpreter services. Several studies have examined the financial aspect of providing interpreter services. One study found that the expense of an "enhanced interpreter service," in which the interpreter rounded with the team each morning and was available via pager to the nurses, physicians, and patients when needed, represented 1.5% of the overall cost of caring for the hospitalized patient *(44)*. Another study found an average cost of $79 per interpretation episode to provide interpreter services for one year for 380 patients who participated in the intervention group of the study *(45)*. The authors also note that this cost is higher than that shown by national data, which they state shows the cost of most interpreter services programs to be approximately $35 per interpretation. Lastly, this study also showed a total cost per person for providing this interpretation service of $279, while the average cost for all of the study enrollees was $2.40 per year *(45)*.

Therefore, we see a wide range for the possible expense of interpreter services. Ultimately, the cost of language services can be affected by a number of factors, including the patient population in question, the skill of the provider in working with an interpreter, the skill of the interpreter in accurate and efficient interpretation, and how frequently interpreters are used, among others. It is inevitable that the direct overall cost of providing healthcare will increase when healthcare providers begin to provide interpreters for all LEP patients consistently. While this may be a legitimate cost for a

service that improves care, it is also clear that increased financial support could help eliminate some of the barriers related to cost. The healthcare system can also minimize or offset the cost of providing this service through professionalization of interpreters and through education of providers.

In terms of time constraints and the inconvenience associated with accessing an interpreter for an encounter, increased financial support could lead to increased hiring of interpreters, which would increase availability and decrease time spent waiting for an interpreter. However, this does not address the concern that using an interpreter will increase the time spent in the encounter. Lee's article *(26)* found that one of the physiotherapists participating in the study would routinely allow extra time for encounters with clients who needed interpreters, that several of the physiotherapists felt that extra treatment time was necessary due to time spent in dialogue, and that there was concern that the extra time might be a disadvantage for other patients, who might not be seen as a result. This concern is particularly valid in settings such as private practice, where the correlation between the number of patients seen and payment received is much clearer to providers than it might be in a hospital setting, therefore possibly leading to further concern about using interpreters in this situation.

In terms of actual length of the clinical encounter, one study showed that while patients using either a telephone interpreter or a patient-supplied ad hoc interpreter spent a longer amount of time with their provider compared to patients who did not require an interpreter, patients who used a hospital interpreter, professional interpreters that had completed a training and certification process, did not spend a significantly different amount of time with their provider than patients who had not required an interpreter *(46)*.

Kravitz showed a somewhat different result: compared to English-speaking patients, non-English-speaking patients who used health system interpreters, who were either paid interpreters or bilingual physicians, significantly increased the amount of time spent with their physician, although those using personal interpreters, ad hoc interpreters who were friends or family members, did not significantly increase the amount of time spent with the physician *(47)*.

Therefore, the literature has differing information about how the use of interpreters affects the length of time spent in the clinical encounter. Although I have not found literature specifically addressing the elements of interpreter use that affect the length of the clinical encounter, it would seem that it can be affected by several factors. For example, a provider inexperienced in the use of interpreters may require increased time for repetition and clarification. Interpreter skill and efficiency may similarly affect the length of the encounter. Finally, a patient who is unfamiliar with interpreters or with how to function within the triad may require more time. The first two of these are issues that can be addressed with education of providers and with the professionalization of interpreters and their services. In terms of the patient, the amount of time spent in the encounter will most likely decrease over time, as they gain further experience in how to function within the triad of the clinical encounter most effectively. Time in the clinical encounter can also be decreased if patients receive some education about how to work with interpreters.

Even if the amount of time spent in clinical encounters was not increased with interpreter use, the issue of the direct cost of interpreters is an important matter that contributes to decreased use of interpreters. In a 2002 report to Congress, the United

States Office of Management and Budget estimated the cost of providing interpretation services for LEP patients in inpatient, outpatient, and Emergency Room settings to be as high as $267.6 million *(2)*, although this is an estimate that relies on ad hoc interpreters such as medical staff and family and friends in addition to professional interpreters. Therefore, it can be assumed that this estimate of the direct cost of providing interpretation services would be higher if the services were provided solely by professional interpreters.

However, the cost of providing professional interpreters to the LEP community may be balanced by the money that could be saved in other areas of healthcare. The difficulty that arises here, and the reason that it appears that the provision of interpreters could be so costly, is that it is much simpler to measure the amount of money that is being spent in payment for interpreters than it is to measure the money saved when they are used. We do not have information on the cost offset of mistakes and missed opportunities for improving the care provided when interpreter services are not utilized. The amount of healthcare dollars that would be saved overall and the benefits that would result when these interpreters are provided are much more widespread, diffuse, and difficult to measure, and may not be experienced directly by the entity that is paying for the interpreter.

Some of these indirect benefits and savings include the potential for interpreter services to allow increased practice of preventive medicine, thereby allowing for a healthier population that may need less acute medical intervention. Jacobs' study showed an increase in the number of recommended preventive services that were received by the

intervention group that received interpretation services *(45)*. It also showed an increase in the number of prescriptions that were written and filled in this group.

Furthermore, it is likely that conversations about nutrition, physical activity, screening tests, substance abuse, and safety in the home, among others, will be facilitated and therefore more likely to occur in the interpreted clinical encounter. LEP patients may begin to seek care earlier, as they realize that they will be able to communicate effectively with their providers, therefore allowing medical care for conditions that might otherwise only be seen in the Emergency Room, at times only after the condition has progressed significantly. Therefore, cost could be saved in emergency room visits in addition to the possible long-term financial effects of increased preventive care and a more stable relationship with a provider that could result from the facilitation of increased communication.

This increased communication would be most useful to the patient and the provider because it would allow not only an understanding of the words that are being said, but also of the context and culture in which they are being said. Effective communication between provider and patient must include this element of cultural competence, so that the clinical encounter can be most productive and the best care can be provided. Interpreters can be instrumental in ensuring that this element of cultural competence is not lost through the use of a third party, by serving as cultural brokers and not simply as translators.

Increased use of interpreters, and therefore increased communication, might also decrease costs by decreasing the testing that is done when language cannot be used to narrow down a differential diagnosis, or, as Keers-Sanchez points out, by decreasing

repeat testing due to inadequate communication *(48)*. Decreased return visits both to the emergency room and to primary providers due to miscommunication about diagnosis and treatment plan, and a possible decrease in misunderstandings and errors related to medications, worrisome symptoms, and follow-up, would also aid in the balance of cost of interpretation services.

A more concrete idea of the savings that could result from interpreter use could be obtained from the discussion of a theoretical situation. As discussed earlier, Jacobs' study, published in 2004, found that it cost an average of $79 per interpretation episode to provide interpreter services for one year for the patients who participated in the intervention group of the study, which was higher than the cost shown by national data, which is about $35 per interpretation *(45)*. If an interpreter were being used in a clinic, and interpreted 20 encounters in one day, using the higher cost per interpretation episode of $79, the cost of the interpreter's services per day would be $1580. However, this number must be viewed in the light of the cost-saving potential discussed above. More preventive care may be done during these interpreted visits, there may be less diagnostic testing performed, and there is less likely to be a misunderstanding about the treatment plan and medications, as well as a decrease in the possibility of committing errors that may lead to increased medical costs later.

As mentioned, this financial benefit may be real but difficult to measure because of widespread benefits. More specifically, we can consider cost if this interpreter allowed a communication to take place that may have prevented a mistake that led to hospitalization. Therefore, for $1580, using this interpreter may have avoided a $7500 expense, which was the average cost of a hospital stay in 2002, according to the Agency

for Healthcare Research and Quality (AHRQ) *(49)*. In other words, the avoidance of one hospitalization in 95 interpretation episodes would have paid for the cost of providing the interpretation service for 95 encounters, given these assumptions. This is an example of cost offset, where the savings in healthcare dollars would actually be contributing to paying for the interpreter services that are helping to produce it.

Any other hospitalizations that may have been avoided by using the interpreter in this case would have produced savings. The savings that would come from interpreter use in this situation are clear, especially considering that the average hospital charge may have increased by the year 2004, which was when the estimate for the cost per interpretation episode was published. Also, the cost per interpretation episode may actually have been lower, leading to an even greater difference between the cost of interpretation and the cost of a possible mistake leading to hospitalization.

Despite the likely savings that the healthcare system may see with increased effective use of professional interpreters, initially funds must be invested. There are several ways in which funds could be appropriated to this purpose. For example, each individual office, clinic, and hospital could be expected to cover the cost of their interpretation services, which is one of the systems that is used in the U.S.

One possible reason for this method being ineffective is that the cost of providing interpretation services is not shared equally by providers *(50)*. Health provision centers that are located in a place with a larger concentration of LEP patients will be forced to devote a larger part of their budget to providing interpretation services than providers who are located in a place with few LEP patients. The diversity of the area is also important. A provider in a location with LEP patients who speak the same language will

require less funding for interpretation services than a provider with much more language diversity in the LEP population, who will need to be able to provide interpretation services for common languages as well as for rarer languages in their population. This unfair distribution of the burden for providing interpreters is one of the issues that would need to be considered when ensuring that all LEP patients are receiving the appropriate language services.

One possible solution to the problem of ensuring that interpretation services are available to the LEP population is the institution of a more national interpretation system. While a statewide service would be useful, a nation-wide service may be best, especially if it included two types of interpretation services: in-person interpreters and telephone interpreters. Telephone interpreters would be most useful for rarer languages, especially when the need for the interpreter was unknown previously, and in more suburban and rural areas where providers may not be in proximity to one another, therefore making a shared in-person interpreter less convenient than this would be in an urban area. They would also be most useful in the Emergency Room and for services and consultations provided by telephone.

The in-person interpreters would be most useful for scheduled appointments, and for unscheduled appointments for LEP patients who speak a more common language, especially in urban areas where a group of interpreters could work with several providers, as well as in hospitals. This would allow access to interpretation services whenever they were needed, therefore helping to address cost-related barriers such as lack of interpreter availability and the inconvenience associated with accessing an interpreter.

Professionalization of interpretation services

Several of the barriers to professional interpreter use that have been identified relate to how interpreters are perceived by practitioners and patients. These barriers include concern about the quality of the interpreter and the interpretation, the use of ad hoc interpreters or having other arrangements such as using nonverbal communication as a reason for not using professional interpreters, and the loss of confidentiality, with patients being particularly concerned that their information will be shared with other members of their community. These barriers can be addressed through several steps, which include quality assurance and standardized interpreter training that involves training in cultural competence and patient privacy issues. Ultimately, these should be components of the acquisition of a certification required in order to be able to serve as an interpreter.

One of the most interesting of the barriers cited is the use of ad hoc interpreters instead of professional interpreters. Reasons for using ad hoc interpreters range from the accessibility of ad hoc interpreters when compared to professional interpreters, to the actual preference by providers or patients for using family members or other ad hoc interpreters instead of professionals. Interestingly, it seems that, although providers and patients generally recognize that the interpreter role needs to be filled, they do not seem to feel that a professional interpreter is required for the service, as evidenced by the fact that ad hoc interpreters are frequently used.

This is in contrast to other professionals such as healthcare providers and lawyers, who are not routinely substituted by a family member, friend, or available stranger because of a delay or inconvenience in seeing them. This is because the healthcare

provider and lawyer are both seen as being experts in their particular field, as someone whose knowledge and expertise cannot be replaced by someone who does not have similar training and skill.

If patients and providers do not see professional interpreters as experts with the appropriate knowledge, skill, and expertise needed to interpret a clinical encounter, they will continue to use substitutes for professional interpreter services. As Parsons says in his essay "The Professions and Social Structure," professional authority is related to the technical competence that a person has in their particular field *(51)*. Therefore, professional interpreters must be seen as having technical competence in their field and therefore as being the experts in interpretation before they are seen as being essential in the clinical encounter.

There are several elements of the professionalization of interpreters and assurance of their expertise that must be addressed in order for them to be viewed as true professionals. One element is quality assurance, which is needed to provide the oversight and legitimacy required for an activity to be viewed as professional. We must be able to assure both providers and patients that interpreters are not only fluent in the languages they will be using in the clinical encounter, but that they are also able to translate between the patient and provider efficiently and appropriately, that they have both cultural and linguistic competence. Currently, there is no standardized manner of certifying that interpreters are qualified to perform the duty for which they have been hired. For example, Vandervort found that three of the eight clinics that participated in the study did not assess interpreter language ability, while the other 5 used a conversation to assess language ability *(32)*. Martinez-Gibson found that each of the eight institutions

in that study had individual standards for interpreters, and that serving as an interpreter could be contingent on passing a test that only screens for competency in the non-English language, on passing a test and undergoing training, or found that the method of assessing competency was unclear *(29)*.

Even within these two studies, there is great variation in the methods used to evaluate interpreters, and therefore, quite possibly also great variation in the competency and skill of interpreters. There is also little mention of training for the role interpreters will serve. If a national standard for training and evaluating interpreters were established, it would allow more confidence in interpretation services, such that patients and providers should be assured that the information they are sharing is being transmitted appropriately to the other party. It would also allow interpreters to demonstrate that they are experts in this field, perhaps leading to increased professional interpreter use.

Standardized interpreter training could also address another barrier that was identified, which is a concern for the loss of a personal connection with the patient and loss of non-verbal cues. Through interpreter training, interpreters could learn to effectively facilitate the establishment of a patient-provider relationship despite language discordance, as well as how to incorporate information about non-verbal cues into the interpretation. In this case, the interpreter would be called upon to be more than a conduit, but rather to serve as a cultural broker.

Conduit and cultural broker are two of the model roles that an interpreter can play in an encounter. As a conduit *(52, 53)*, which can also be called an invisible interpreter *(54)*, the interpreter serves only to directly translate what is said from one party to the other, without addition, subtraction, or other editing. As a cultural broker *(52, 53)*, the

interpreter brings knowledge about the patient and provider's cultures to the translation, therefore providing an interpretation of the message, such that it can be understood within the context of the culture by both parties. This role of cultural broker is significantly more useful than the conduit role, where contextual information may be lost because it is not being evaluated within the culture of the speaker. In order for practitioners to fully understand the patient and the information they are providing, as well as for the patient to fully understand the practitioner, a cultural broker is essential, such that the information can be understood as two people speaking the same language would understand it.

As Carrillo-Zuniga states, cultural and linguistic competence implies that healthcare providers can understand the cultural and linguistic needs of the patient, and will be able to respond to these sensitively and effectively *(16)*. When an interpreter is being used, the interpreter must also have linguistic and cultural competence. With the assurance that interpreters are receiving training in this area, providers may feel more confident that information beyond the actual words is not being lost and no longer view its loss as a barrier.

Concern about loss of confidentiality with interpreters can also be addressed with professionalization of the position. In general, patients trust that their healthcare providers will not share their personal information with others. This confidence should extend to interpreters as well. With national standards requiring appropriate training for interpreters in patient privacy regulations and ethical standards and the Health Insurance Portability and Accountability Act (HIPAA), which is meant to help ensure the protection of patient health information, interpreters should also begin to fall under the category of healthcare-associated personnel who are bound to maintain patient privacy. They should

be held to the same accountability as other healthcare professionals who have access to patient information, thereby providing further assurance to patients that the clinical encounter continues to be a safe environment in which to share information with the provider, even when there is an interpreter in the room.

The steps mentioned above would also help to address some of the issues of cost that were mentioned earlier. With national standards established for training and evaluating interpreters, it is possible that the cost of interpreter use would decrease from what it is projected to be now. Proper training in effective and efficient interpretation skills and assurance of the ability to interpret would allow more confidence in the interpreter's skill, therefore allowing the clinical encounter to run more effectively by minimizing attempts at verification fostered by lack of confidence in the interpreter. Increased skill would also contribute to minimizing any extra time required for the encounter because of increased dialogue. Both of these should help address the issue mentioned earlier of increased time spent with the provider when an interpreter is being used, therefore also addressing the issue of the increased cost of spending more time with the provider.

Increased use of professional interpreters will also allow increased confidence, comfort, and experience for both the patient and the provider in working with interpreters, which will also allow the clinical encounter to run more smoothly and increase time efficiency. This idea of increased experience and comfort with interpreters relates to the training and education that providers and patients can receive for working with interpreters.

Education/training for providers and patients

Several of the barriers to professional interpreter use that were identified related to training and education of either the provider or the patient. These barriers include provider lack of awareness about the interpretation services that were available, lack of training in interpreter use or poor clinician use of interpreters, not identifying the need for an interpreter, and concern that the personal connection with the patient and non-verbal input would be lost. Patient comfort or resistance to professional interpreter use was also identified. Most of these barriers can be addressed with increased education and training for providers, as well as education for patients.

Education regarding the interpretation services that are available would be useful for both providers and patients, and would likely increase interpreter use. Several of the studies that were identified through this systematic review mentioned increased education about the interpretation services that are available as a possible solution to some of the barriers to interpreter use *(21-23, 25, 27)*. Also, Heaney showed that participants who were familiar with interpreter assistance were more likely to use the service, and that those who were familiar with how to access interpreter services were more likely to use interpreters *(25)*.

Having a national interpretation service system, such as that discussed above, would help with increasing education about available interpreter services, as the education about the system could be provided to clinicians in training, such that it is a standard part of their education and a service that they can incorporate into their practice as they learn to be providers. Having a national system would also allow for a

standardized way of disseminating the information to existing providers, for example during orientation sessions for new providers, and during continuing education sessions.

Standardized information about interpretation services could also be provided to patients, both through posted information at healthcare sites and through written information. If the information being provided were about a national interpretation service, this would allow both providers and patients to be comfortable accessing interpreter services at any healthcare center, without having to learn how to navigate each system. Also, providing patients with this information and education, and identifying the service as a standard part of care, may allow increased patient comfort in the use of interpreters. This can help eliminate some barriers to use of professional interpretation services, especially if the information and education is coupled with standardized training and evaluation of interpreters.

Another part of patient education could be a brief orientation on how to work most effectively with the interpreter. If possible, the interpreter could provide this orientation to the patient, which might also make the patient feel more comfortable during the clinical encounter, as they may no longer feel that they are sharing private information in front of a stranger.

Two barriers can clearly be addressed with training of providers in the use of interpreters. These are poor clinician use of interpreters or lack of training in interpreter use, and concern about loss of a personal connection with the patient or of non-verbal input. Several of the studies identified through this systematic review of the literature also discussed training of providers in the appropriate use of interpreters as a possible solution to some of the barriers identified *(25, 26, 31 30)*. Also, Carrillo-Zuniga found

that only 53% of faculty responding to the survey agreed or strongly agreed that they know how to work with medical interpreters, while 17.3% were unable to rate their ability *(16)*.

Training in interpreter use will allow providers to begin to develop the skills required to form a personal connection with their patient despite the transfer of information through a third party. This training may also provide some skill in the assessment of non-verbal clues and their incorporation into the medical evaluation. Although it is understood that not all non-verbal clues will always be perceived and understood by the clinician in such a situation, it is possible that such valuable information need not be completely lost. If coupled with the interpreter training discussed earlier, this information could continue to be a valuable part of the encounter.

Training in the use of interpreters could also increase professional interpreter use in the clinical encounter. Karliner showed that clinicians who had received training in the use of interpreters were more likely to use professional interpreters *(55)*. This increase in professional interpreter use may result in part from increasing provider confidence in their skill when using an interpreter, as well as from increased effectiveness in working with interpreters, therefore making them more likely to request interpreters when needed. Clinicians may feel better equipped to work with an interpreter in this kind of an encounter, which will help to eliminate lack of training as a barrier to interpreter use.

Clinician training can also help to address some cost issues. With clinician training in interpreter use, the subsequent increase in skill and efficiency in participating in an interpreted clinical encounter will allow minimal increases in the time spent with

providers, therefore minimizing extra costs due to increased provider time. Provider training in the use of interpreters that also includes training in early identification of those patients who require an interpreter will also help to decrease costs, especially if this training is also provided to nurses and office staff who first encounter the patient and can initiate accessing an interpreter early in the patient visit.

CONCLUSION

The LEP population in the U.S. is large, and is likely to continue to grow. However, this population is not receiving appropriate healthcare, in part because of the language barrier that is encountered when the provider and the patient do not speak the same language. Although the law has mandated that LEP patients be provided with adequate language services, often either less than effective interpreters or no interpreter at all are what is used. This study looked at the barriers that have been identified in the literature as preventing consistent and effective use of interpreters. The barriers were divided into barriers to ad hoc interpreter use, to professional interpreter use, and general barriers. The barriers to ad hoc interpreters use were barriers that were inherent to that model of interpretation, and could be eliminated with the use of interpreters that are professionalized. The major barrier to professional interpreter use was found to be cost. Nearly all barriers could be addressed through a discussion of cost and the comprehension of the profession by both patients and providers.

It is essential that the U.S. healthcare system provide appropriate interpretation services for the LEP community. The three elements identified through this study,

namely cost, professionalization of interpreter services, and education/training must be addressed if these culturally competent language services are to be readily available and used effectively. If these themes are understood and addressed, changes can begin to be made within the healthcare system and the interpretation services provided, such that the LEP population can receive the appropriate language services, and therefore receive healthcare of the same quality as those patients who are language-concordant with their providers.

While there may be other possible ways of addressing this issue, one possible solution to providing language services, which has been discussed within the context of each of the identified themes, is a national interpretation system that would allow consistent and relatively easy access to interpreter services. Such a system would only be successful, however, with the professionalization of interpreters, such that the quality and capability of the interpreter could be assured through standardized training and competency testing, with education of providers and patients about the existence and availability of the service and how to access it, and with patient and provider training on how to work with interpreters. Such a system would also require adequate financial support to be able to service the entire U.S. LEP population effectively.

Research in several areas is needed in order to make the provision of these interpretation services a reality. One of the major areas that requires research is the benefits that providing interpretation services could bring to the healthcare system, and how the cost of providing language access to the LEP population would relate to these benefits. These cost offset studies could help to determine the actual amount of money

that would need to be invested, and whether or not the healthcare system might actually benefit from the provision of these services.

Research into elements such as how to most effectively use interpreters, how the amount of time spent in an interpreted clinical encounter can be minimized, and how interpreters can most effectively serve as cultural brokers as well as translators would also be useful in composing the kind of training that would be most useful for providers, interpreters, and patients in making the clinical encounter run smoothly and efficiently and in fostering confidence both in the interpreter and in the information that the interpreter is transferring, therefore helping to break down some of the barriers that have interfered with interpreter use thus far.

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