Medical Interpretation: providing a necessary service to an at-risk population

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Introduction

The United States is already considered one of the most diverse countries in the world, and one of the implications of having a diverse population is having a wide range of languages spoken by the citizens. As of 2013, almost 13% of the population over five years old speaks Spanish at home. This is significantly more than any other language other than English and represents over half of the non-English speaking population [1]. This number is only expected to rise over the next 10 years, from about 36 million people to up to 42 million. (Figure 1) This is considering the immigration rates and the fact that Latinos, due to culture, higher fertility, and average age, have higher birth rates than the average non-Hispanic white citizen [2]. With this growing population many aspects of the American economy and culture will be affected, but perhaps the most predominant of these effected fields is healthcare. The necessity for "linguistically competent care" is a hot topic of conversation in healthcare policy, and hospitals all over the US are struggling to meet the need [3]. It has been shown that language barriers greatly increase the risks to patient safety, as well as decrease the perceived availability of general healthcare [4, 5, 6, 7]. In efforts to improve the quality of care being provided to Spanish-speaking patients, the use of medical interpreters has become the norm in situations where physicians who speak Spanish are not available. Interpretation has been defined as "the conversion of a message uttered in a source language into an equivalent message in the target language so that the intended recipient of the message responds to it as if he or she had heard it in the original" [8]. As easy as this concept may seem, there are many ethical and linguistic challenges that must be considered in emotionally charged situations like healthcare. Patient-centered healthcare is a current trend in physician training and is generally perceived as the best method to ensuring quality healthcare for each individual patient. Through "patient centered" encounters, physicians attempt to understand and facilitate patients' thoughts, feelings and expectations. With this approach, doctors are able to gain almost four times more "clinically relevant" information than the traditional method of interview [9]. Unfortunately, this domain is

exceedingly sensitive to complications within language and cultural barriers and is often compromised when the physician and patient have inadequate communication [10].

This review aims to compile the current research pertaining to the importance of, current complications with, and available methods for medical interpretation in the United States. Using this information, this paper will conclude with a list of practical suggestions for improved healthcare access and quality of care for the Spanish speaking population.

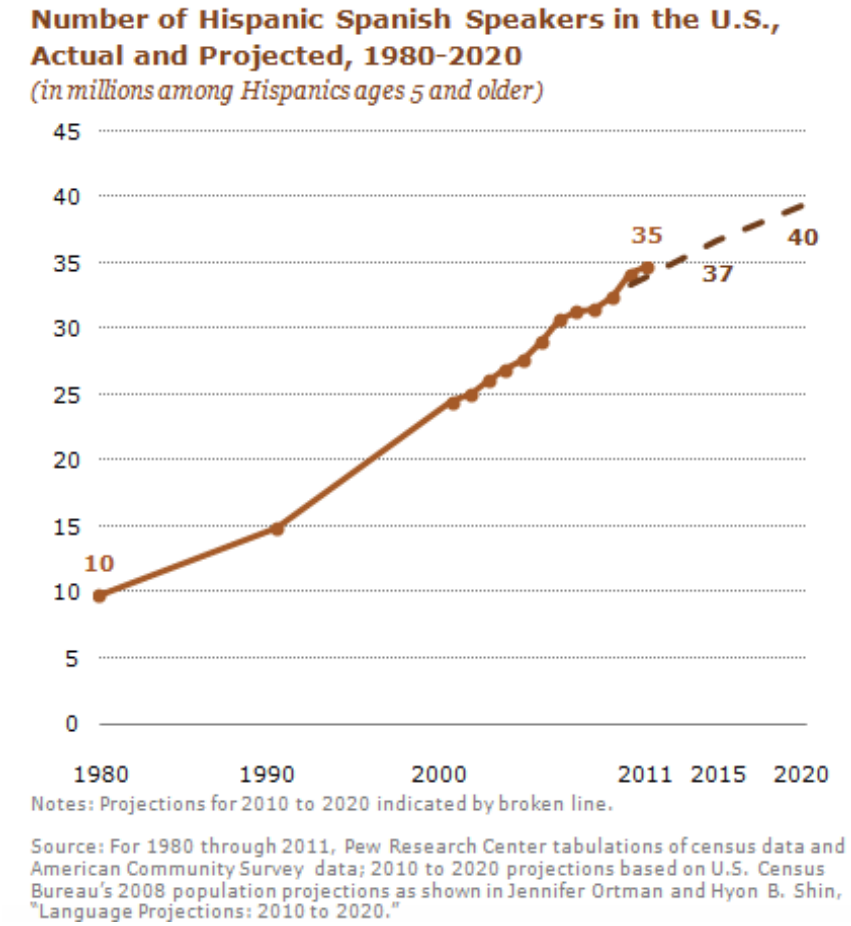

Figure 1. Actual and projected number of Spanish speakers ages 5 and over in the United States, 1980-2020. Represented in millions.

Hispanics in the United States: a population at risk

Aside from speaking a language different than the majority population, Hispanic people in the US have a unique variety of sociodemographic factors that affect their health in different ways. Preference for Spanish-language and/or limited English proficiency (LEP) has been associated with factors such as lack of insurance, less income, and lower educational attainment – all of which have been associated with increased risk of health disparities [11]. Speaking

Spanish has been correlated with a significantly lower rate of higher education [5, 12, 13]. In one study by Annette DuBard, almost 60% of Spanish-speaking Hispanics had less than a high school education. This was in comparison to 18% of English-speaking Hispanics, showing that the dividing factor is the language spoken, rather than the race or ethnicity. In addition, only 6% of Spanish speaking Hispanics had completed college as compared to 21% of English speaking Hispanics [13]. This lack of formal education contributes to misunderstandings about the healthcare system and personal health in general. Spanish-speaking patients often end up in the emergency room for all injuries or illnesses, regardless of severity. This is due to a lack of understanding about the hospital system and a familiarity with the ER, as well as lack of knowledge of their rights [14]. In addition, LEP Hispanics were more likely to report less than the recommended level of physical activity or no physical activity at all [13]. One explanation of this could be that this population does not have the health education necessary to make decisions about healthy lifestyles. This is s significant challenge when considering the importance of being educated on physical and mental health for knowing when and how to access healthcare services when needed. Spanish language preference has also been negatively associated with use of preventative services, such as mammograms and influenza vaccines. This correlation was maintained even after controlling for education and health insurance coverage, which suggests that although education is a large factor to healthcare, speaking Spanish is also independently associated with less access to or attainment of preventative measures [15, 16, 17]. The lack of health insurance is also an independent issue, which leads to avoiding healthcare due to cost and convenience. Half of Spanish-speaking Hispanics were shown to lack health insurance as compared to 23% of English speaking Hispanics [13]. This presents another reason that many Spanish patients end up in the ER for various illnesses – the fact that they do not have health insurance and they know the ER will not turn them away because they cannot pay [14]. Spanish-speaking Hispanics were more likely to have been unable to see a doctor due to cost of service than their English-speaking counterparts [13]. In addition, Latinos averaged fewer physician visits per year as compared to other ethic groups in the US. This could be due to any of these factors, but is likely correlated to the lack of health insurance and costs associated with visiting a physician [15].

Aside from language-related risk factors, there are genetic factors that can be generalized to the majority of the Spanish-speaking population in the US. The 2010 census identified a

number of characteristics and risk factors correlated to self-identification as Hispanic. These results showed a higher predominance of kidney disease and liver disease as compared to the entire population, higher rates of depression-like characteristics, difficulties in physical function (independent of age) and overall respondent-assessed health status [18].

On the other hand, Latino patients are actually more likely to comply with medical advice once it is given. Divi et al. reported that only one-fourth of Spanish-speaking participants failed to comply with discharge instructions, which was the lowest rate out of all polled categories. In the same study, the same category of patients had the highest employment rate [6]. The results of this study revealed two important facts about healthcare for Spanish-speakers: it is the access to care that is the problem, not the compliance, and that although they are employed, they do not have healthcare insurance benefits. This is the basis of the crisis of the medically underserved Spanish-speaking population here in the US.

Medical Interpretation: the band-aid effect

The most important part of healthcare is the ability to understand and access information. This wide range of necessary information includes navigating the healthcare system, how lifestyle factors affect health, and the instructions given by physicians [19]. Spanish-speakers in an English-speaking society often do not have the benefit of easily accessible information in their language. These patients have both linguistic and cultural needs that are not served by our current system [5]. In fact, the tension and emotional stress that comes with many physician encounters actually aggravates the language barrier and worsens its effects. In stressful situations, it becomes even harder to express oneself in a second language. This, combined with the physicians' lack of effort to adequately understand their patients who do not speak English, can create extreme situations where communication is nearly impossible between a patient and their provider. Patients are limited in their ability to ask questions or voice concerns, unable to accurately express their symptoms, and cannot understand instructions given to them by their providers [4]. The comments that these patients do make are even more likely to be ignored due to the physician's lack of understanding. This creates potential for lower adherence rates and therefore poorer medical outcomes among patients who do not speak the dominant language [19]. Poor patient outcomes including higher rates of negative side effects, poorer quality of life, lower chance of survival and later diagnoses have all been reported among minority groups,

specifically in response to language limitations [20]. It is known that communication problems can lead to adverse health events, but it has been shown that these communication problems are exacerbated when there is a language barrier involved. In a study by Jackson et. al comparing communication errors amongst LEP patients and English-speaking patients, the misunderstandings between LEP patients and their physicians were more likely to cause an adverse health event. 52% of adverse events for LEP patients were the result of a communication problem, as compared to only 25.9% of adverse events for English-speaking patients [21]. Another study reported a lower risk of preexisting condition related ER visits among patients who received 100% of their primary care visits with bilingual physicians as opposed to patients who did not speak the same language as their physician [22].

Taking this concept to the extremes, there are significant diagnostic risks when a physician is unable to accurately understand his patient. As an anecdotal example, one woman mistakenly signified that she was experiencing depression because she did not fully understand the question she was asked. She then had to spend hours convincing a psychiatrist of her honest mistake. Another man was unable to express his lightheadedness after a cardiac stress test, and unexpectedly fainted in the waiting room [4]. Misunderstandings or the inability to communicate with physicians leads directly to adverse effects as well. For example, a patient who does not understand medication dosage instructions may accidentally take them inappropriately. This could result in increased side effects or medicine toxicities [5].

The most common remedy for this problem within the healthcare system is the incorporation of medical interpreters. The goal of interpretation is simple: to provide means of communication between a patient and their physician in order to avoid the negative outcomes associated with the language barrier. Medical history accounts for 70% of the data needed to make a diagnosis, and with a medical interpreter service, this history can be more complete and accurate [23]. When physicians are unable to compile a complete medical history or fully understand the symptoms they are more likely to perform extensive, expensive diagnostic testing evaluations and treat patients more conservatively. This increases cost of care, time spent with the patient, and can put the patient through unnecessary physical and mental stress [5, 24]. With a way to communicate with their patients, physicians are able to better understand the patient's perspective and assess the severity and complexity of the situation, as well as address patient concerns and questions [25]. Physicians were more likely to give additional diet and physical

activity advice to patients with whom they could adequately communicate, improving the quality of care the patient was receiving as well as providing information on healthy lifestyles as a preventative measure [26].

In the perspective of the patients, satisfaction rates are significantly higher amongst patients who receive interpretation services when needed, for both quality of care and self-reported health status [12, 27, 28]. As compared to three-fourths of English speakers of all ethnicities, almost half of non-English speaking patients were not satisfied with the quality of their care [29]. These findings are also positively associated with professional interpreter use [27]. The higher satisfaction rates could be explained by the belief that interpreters do more than simply translated for their patients by assuming the role of advocator and cultural link between physician and patient [28]. Patients have reported lower satisfaction with their ability to establish a relationship with their physician, the interpersonal care received, and the quality of communication [5, 30, 31]. Lower satisfaction can result in plan disenrollment, inadequate follow up and "doctor shopping" [5]. Patients who are not satisfied with their care are also less willing to return to an ER or doctors' office when needing healthcare services [29].

Overall, it seems that interpretation would be an easy fix to overcome the language barrier, especially in healthcare. The use of trained interpreters has been associated with lessened disparities between patients who receive care from physicians able to speak their language and those who do not [27]. However, the healthcare system is complex, and a one-size-fits-all remedy without adequate regulation cannot overcome a problem of this magnitude.

Risky Business: taking on language barriers without interpreters

Being able to communicate with the physician is an obvious factor when considering quality of healthcare. The use of a professional interpreter is associated with less communication errors, increased patient understanding, higher rates of healthcare accessibility and even better clinical outcomes [11, 27, 32]. English-speaking patients (with English-speaking physicians) were more likely to offer information and questions to their physician, offering 3x as many verbal phrases [9]. Increases in office visits, prescription access and preventative exams were also noted as improvements attributed to providing professional interpretation services [33]. In studies where language ability is held constant, however, the differences between Spanish speakers and English speakers become negligible – strongly suggesting that the language barrier

is the sole reason behind the majority of healthcare disparities [34]. All of this considered, a study in San Francisco (a location with a large population of patients who likely need interpretation services) noted that only 14% of non-English speakers had any interaction with a professional interpreter during their hospital stays [35]. This quickly becomes a problem in clinical scenarios – barriers to accessible interpretation services have been associated with risks of clinical significance as well as access to healthcare services in general.

The list of "adverse events" that are more likely in LEP patients due to their limited ability to communicate is extensive. An "adverse event" is defined as any "unintended harm to the patient by an act of commission or omission rather than the underlying disease or condition of the patient" [6]. These adverse events are also more likely to cause physical harm. Half of LEP patient adverse events resulted in physical harm, as compared to only 30% of adverse events amongst English-speaking patients. They are also 3x as likely to experience a serious outcome as a result of an adverse event [6, 23]. LEP patients tend to experience longer lengths of stay in the hospital, readmissions after discharge, and infections, falls and pressure ulcers during their stay [36, 37]. These patients are also at risk for not receiving the healthcare services recommended to them [7]. Problems understanding their medical condition, confusion about medications, and bad reactions to medications are all things reported by LEP patients at higher rates than their English-speaking counterparts [11]. All of these risks are attributable to the ability of patients to communicate their needs and concerns and could be remedied with either bilingual physicians or adequate interpretation [35].

Interpretation: the good, the bad and the ugly

Many times, a medical interpreter may, either on purpose or by accident, assume a role outside of the limits of the job. This is called "role exchanging" and although interpreters do not see this as a problem, it often causes problems within the patient-physician relationship. There are three situations when this occurs: when the interpreter assumes the role of the patient, when the interpreter assumes the role of the physician, and when the interpreter engages in a non-interpretative role. Some examples of complications that arise when these role exchanges occur include:

- asking follow-up questions and summarizing the responses, rather than translating directly

- reframing the provider's questions as closed-ended
- editing the content of a translation due to misunderstanding
- providing information that was not given by either the patient or physician (usually about the healthcare system)
- explaining overly complicated things that they are not trained for (often incorrectly)
- making decisions for a patient when they are unsure
- being overly social with patients, without translating for the physician (could be omitting potentially important information, such as stress inducing factors) [31, 38].

Although these errors persist and cause problems in clinical settings, it is not necessarily the fault of the interpreters themselves. Interpreters face a wide range of ethical dilemmas within their job descriptions and often the patients are in emotional distress – making mutual understanding difficult to attain. Often times accuracy and understanding are exclusive, making direct translations impossible. Translating word-for-word also leaves no room for cultural sensitivity, so the conflict between cultural advocacy and exactness leads to confusion about the interpreter's actual role. Finally, many interpreters feel they are in a unique position to provide support to these patients who find themselves in highly stressful situations. Therefore, they face a dilemma between maintaining professionalism and providing support [20]. Interpreters must also act outside of physicians' influence. Some professional interpreters must also be in contact with patients past the appointment time to assist with appointment reminders, financial counseling, and any other administrative encounters [39]. In this capacity, the interpreters must understand professional ethics, medical vocabulary and linguistic techniques apart from direct translation between languages [40].

The patients themselves pose a different set of problems for their interpretation services. Patients often turn down interpretation due to a lack of trust or time constraints. Patients have described attempting to express themselves with limited English skills in order to avoid a reliance on others. The patients who decide to forgo interpretation service have explained their embarrassment with their limited language abilities and frustration with the communication barriers [4]. Many people who need extra assistance in clinical settings, such as an interpreter, do not want to be a burden, knowing that these services are time consuming. Adding a third party to a physician/patient interaction can also complicate the relationship continuity. Patients are afraid of stigma and discrimination stemming from their need for interpretation, and often do not trust

interpreters to accurately express their concerns [41]. Regardless of a patient's reason for declining interpretation service, this can suggest that they understand a concept or message when they do not. When patients accidentally express understanding, providers tend to not check for misunderstandings or recognize when miscommunications occur [4].

Patients are not the only party that complicates the need for and access to medical interpretation, however. Physicians are equally at fault for the lack of interpreter services being utilized in clinical situations. Physicians tend to think that their patients are understanding more than they actually are, which affects whether or not the physician will deem it necessary to call for a professional interpreter [4]. Typically, it is the responsibility of the physician to determine whether an interpreter is needed and to secure access to interpretation service. This complicates the role of the physician, because waiting for the interpreter to arrive and the addition time required for translation can lengthen an appointment significantly. Physicians do recognize that they are underusing these services, but when they are in a time sensitive situation, they believe that they can "get by" with limited language skills and get a general idea of the patient's concern. When there are time constraints to be considered, physicians tend to weigh the value of clear communication against the amount of time they are willing to spend. This decision is made easier by the convenience of using family members as ad hoc interpreters, but often times this is not adequate for complex or emotionally charged situations. Physicians justify these actions by normalizing the underuse of professional interpreters – the inconsistent access to professional interpretation has become the norm [14, 42]. When interpreters are available and utilized, physicians still alter their routine to accommodate the patient. Physicians may only emphasize critical information that is needed to make a clinical decision because they understand that simple and direct inquiries lead to more accurate interpretations and responses [9]. These succinct translations typically do not include supportive language or encourage collaboration, making the patient feel less involved in their care. This is one explanation as to why Spanish-speaking patients tend to have less hope and poorer prognoses [43]. Communication through an interpreter can present a barrier to establishing a beneficial patient-physician relationship [44].

Of all the problems with current access to medical interpretation, perhaps the direst of these stems from the healthcare system itself. The most significant of these is the lack of standards and training for professional interpreters. The standards that are in place are either not uniform across the healthcare system in the nation, or do not require official certification [45].

Because training for interpreters is not required, there are "professional" interpreters that are translating clinically significant information between patients and physicians that may not have adequate knowledge of proper behavior or appropriate vocabulary. Untrained interpreters are at a higher risk for many of the role exchanging errors, such as adding personal opinions, editing content and providing incorrect explanations [40]. Standards should be in place to regulate interpreter training and adequacy as well as define boundaries for patient interaction and provide guidance to maintain integrity of information [38, 46]. Overall satisfaction of care as rated by patients is also affected by the use of interpreter services, likely because many interpreters are not trained and therefore do not know how to appropriately handle triadic relationships. Patients who communicated through an interpreter perceived their physician as less respectful, concerned for the patient as a person, and generally less friendly [44]. These standards should also establish rules for access to interpretation where needed. Interpretation is often inaccessible in operative and procedural rooms, ambulances, specialty offices, and financial counselor appointments, all of which are high-risk situations where communication becomes particularly important [4]. The availability of professional interpretation is crucial in circumstances that require urgent clinical intervention – physicians must provide care regardless of language assistance in emergent situations, but the quality of these encounters would improve if language assistance were readily available [25]. In some situations, medications cannot be administered without a complete medical history, and physicians are unable to act without the aid of an interpreter. This type of situation is particularly common in the emergency room, where patients are left waiting in pain for an off-site interpreter to arrive and check for medicine allergies [4]. Patient satisfaction with appointment waiting time, information provided by the physician and time spent with the physician were all lower when an interpreter was required and utilized [5]. The inconsistent availability of interpreters, usually related to the lack of interpreters hired by a hospital or physician office, directly impacts the quality of care each patient receives.

Interpreters: who they are and how to access them

The majority of studies break "interpreters" into three categories: professional, ad hoc, and dual role providers. Professional interpreters are what people tend to think of when they imagine a situation involving medical interpretation. These are individuals who are hired and paid specifically to interpret for patients and physicians who do not speak the same language.

Although the amount of training is not consistent, these people typically have some kind of formal training in interpretation or medical terminology. The words "ad hoc" quite literally translate to "for this specific purpose" and that defines the role of an ad hoc interpreter [47]. These are bilingual family members, friends, or kind bystanders who aid in the medical encounter by translating between parties to the best of their ability. Dual role providers are nurses or other professionals in the healthcare field who not only perform their job outline, but also assist in situations where an interpreter is needed and not available.

Each "interpreter" type has its own benefits and downfalls. Generally, however, the best received and most widely accepted method is a professional interpreter whose sole job is to interpret medical encounters. Patient self-rated satisfaction with their healthcare service is overall higher when an interpreter is needed and provided [12]. The main concern with professional interpretation is the limited access. On the other hand, due to the lack of training and personal investment, ad hoc interpretation is generally seen as the least reliable. Family and friends, however bilingual they might be, generally do not have the knowledge of medical interpretation that is required for clinical situations. This leads to inaccurate translations that have potentially significant consequences in the diagnosis and treatment [14, 25]. The interpreter's competency in these situations is completely unknown, meaning that each translation could have incorrect technical information without either party being aware. Even worse, if the ad hoc interpreter is embarrassed at their inadequate language skills, they may unintentionally omit phrases in the conversation or alter the meaning because of their own misunderstandings [48]. In addition, problems with confidentiality, impartiality, and the inability to convey a message without overstepping the patient's autonomy are very common in ad hoc situations [14]. Although rare, there are situations where a patient might even be at risk because the ad hoc interpreter is translating. This could be due to domestic violence or elderly abuse, and potentially serious concerns would likely be unaddressed [25]. Dual role providers are usually other members of the staff who are serving as interpreters due to a lack of professionals available. Mabel Preloran's study on interpreter approaches found that of all the medical staff serving as interpreters in a hospital, not one had formal training in medical interpretation, and none of them included interpreting for patients as part of their job [49]. The idea of being "bilingual" is not sufficient to translate in clinical situations, and in this way dual role providers are similar to ad hoc interpreters. To ensure good communication between the patient and physician and to improve

quality of care, the ability to interpret in a healthcare setting should be confirmed by formal assessment [8, 46].

Although these types of interpretation are not seen as particularly trustworthy, perhaps the worst interpretation is the physician trying to "get by" without anyone to translate. As mentioned previously, physicians under time constraints often do not see the benefit of waiting for an interpreter. Those who believe they have the language skills necessary to communicate with Spanish speaking patients but do not are the most dangerous [42, 14]. All physicians who provide care in a second language must be able to gauge the patients understanding and explain each clinically relevant topic in multiple ways in order to bridge the language gap. This is harder than it seems, and even some bilingual physicians could need further training to appropriately communicate with the patients who speak the second language [25].

Access to Care: The Barriers to Bridging the Language Gap

Laws et. al reported that less than half of the patients who said that they needed assistance from a medical interpreter always or usually had access to those services [31]. This can depend on the size of the hospital, the time of day, and the clinical urgency of the patient's situation [46]. Many smaller facilities do not have the budget to hire professional interpreters, and even the larger hospitals do not have all-hours access to the interpreters that they do hire [19, 48]. The payment for interpretation services is a common barrier to hospitals hiring professional interpretation. Although the federal government mandates that hospitals that receive federal funds must provide interpreters to patients who need them, there is no compensation for these services. Medicaid and Medicare do not reimburse the hospitals for interpreters, and there is no other funding provided for this expense to the hospital [46, 50]. Another complication is the general underuse of the language services that are provided. Physicians often do not utilize the interpreters that are available due to time concerns and convenience, and because the services are not used, the hospitals are not motivated to maintain them [23, 41]. The problems cycle, however, because the less available interpreters are, the less likely physicians are to wait for them. The patients who do not ask for interpretation assistance continue this cycle. Many patients do not understand that they have a legal right to interpretation service [25]. A comprehensive study of hospitals across the nation revealed that less than half of the hospitals surveyed did not have the patients' bill of rights, and other important documents, in their most commonly

requested languages [46]. The perceived power that a physician has over his patients further exacerbates this, as patients do not feel comfortable asking for assistance from a professional interpreter. These patients are simply grateful for the care provided and sometimes embarrassed about their poor language skills. When in this situation, a patient is likely to settle for a lesser quality of care [23, 25].

Leveraging Technology: an attempt to solve the problem

As technology advances, there have been opportunities to improve on the current system of accessing medical interpreters. The four most important tenants of adequate interpretation are:

1. audibility, the ability to hear each other
2. contemporality, having no delay between messages
3. simultaneity, the ability to send and receive messages at the same time
4. sequentially, taking turns in an ordered conversation

As long as these four concepts are met, the translated conversation can be successful [30]. Keeping the four tenants in play, new systems for video and telephonic interpretation have been developed to provide quicker and easier access. Remote simultaneous interpretation, RSMI, is any situation where the interpreter is not physically present. Usually this involves both parties wearing headsets, and the technology directs the message through an interpreter to the other person [48]. There are both pros and cons to this method. For one, all four of the main communication tenants are met, so technically speaking it is an accepted form of interpretation [30]. It also solves the problem of waiting for an available interpreter and works with the time constraints that many doctors face. One example is Language Line Services, which is a company that provides telephone interpretation for 140 languages, 24 hours a day every day [51]. The convenience of this service eliminates the decision physicians have to make regarding whether or not to call in a professional interpreter. With this type of interpretation service, there is minimal time lag – because the physician does not have to wait for an interpreter, they have more time to address the concerns of the patient and answer questions. In addition, the interpreters hired for these types of services have more training and regulation, meaning that the translation tends to be more accurate [52]. When an in-person interpreter is unavailable, telephonic services are cheaper and better than no interpretation at all. However, there are many problems associated with translation over the phone. The sound quality can affect the ability of each person to understand

the message, and any technological problems can eliminate the access completely. Also, the availability of headsets can be just as limiting as the availability of professionals in person [36, 48]. Another problem arises with any message with significant educational or emotional content. When a patient needs support or demonstration, gestures play a large role in communication and RSMI is not adequate [30]. In emotional distress, it is difficult to build a relationship with someone who is not present. Interpreters, as cultural brokers, cannot gauge the patients' response over the phone without making eye contact. The response of the patient is crucial to understanding their mental status and decisions on treatment routes [20]. Overall, patient ratings for in-person interpretation were much higher than ratings for remote methods. Patients said that they felt the appointment was more personalized and that they could understand better when they could see the interpreter in front of them [48]. Patient satisfaction is heavily correlated with an interpreter being present at the appointment, whether it is due to the ability to understand or the fact that in-person interpreters are more likely to assume an advocacy role for their patients.

How do we proceed? Suggestions for improving the system

1. Hire Spanish-speaking physicians [10, 23, 53]

The obvious solution to improving care to LEP Spanish-speaking patients is to increase access to providers who speak their language. This, as opposed to the use of ad hoc or untrained interpreters, has been shown to improve the quality of their care [46]. It is important to note that these physicians must be screened for fluency in medical Spanish, just as any interpreter [5, 54]. Being fluent in another language should be incentivized and prioritized when hiring new physicians, and courses in medical Spanish should be available to physicians in order to improve their ability to communicate with their patients.

2. Hire more interpreters [5]

When asked for improvement suggestions for the healthcare system, LEP patients consistently urged the hospitals to hire more interpreters [4]. If bilingual physicians are not available, an interpreter should always be available in reasonable time. The standard of care should include easy access to "linguistically appropriate resources" for all patients who need them [41]. In situations with budgetary restrictions, hiring more staff interpreters may not be feasible. When this is the case, the shift schedule should be adjusted to provide interpreters during peak service times and patients should be scheduled accordingly [39]. If access to

interpreters can be improved, even slightly, this would decrease the disparities that result from language barriers.

3. Create a national certification exam for interpreters

To minimize the risk associated with interpretation errors, interpreters should be screened for fluency in medical Spanish, ability to translate in real time, and knowledge of the healthcare system. A certification exam that is standardized across the country that focuses on the ability to translate in clinical settings greatly improve the overall quality of interpretation services [51]. The goal of this exam would be to eliminate bilingual interpreters who are not trained in medically terminology or ethics.

4. Standardize interpreter training

Perhaps the most significant problem with interpretation services is the lack of training required for professionals. This is, in part, due to a lack of available courses for medical interpretation and the fact that they are not regulated. Higher learning institutions should develop degree programs geared towards medical interpretation, providing credentialed certification programs [23]. These programs should include concepts such as maintaining accuracy, confidentiality, and impartiality, as well as address the tendency for omission errors [20, 21]. Transparency of translation should also be a focus of the program, emphasizing that everything spoken by either the physician or patient should be interpreted, regardless of how the interpreter may feel about them [12, 45]. The program should provide guidelines for interpreter roles, perhaps giving a number of clearly articulated roles that can be utilized depending on the situation and the ethical implications of each [55]. After the program is completed, an interpreter should be required to either shadow an interpreter as experience or interpret medical calls as practice before entering a clinical setting alone [51]. An inexperienced interpreter makes 2.78x more errors than an interpreter who has some degree of experience with medical interpretation [52].

5. Train physicians

First and foremost, physicians should understand logistically how to utilize the interpretation services provided at their clinic or hospital and to plan for longer appointment times when interpreters may be utilized [8, 20]. This includes understanding when interpreters should be used and the importance of using one when necessary [25, 42]. Physicians need to understand that patients have a legal right to language services and the risks/challenges

associated with caring for a patient who does not speak their language [8, 42, 3], There should be an emphasis on how belief systems and cultural practices influence a patient's decision making and understanding of healthcare [5]. In addition, physicians who do utilize interpreter services need to know how to work efficiently with interpreters. The physician and interpreter should be a team, and physicians need to know how to best use their resources [45]. This includes asking interpreters to verify answers to questions, summarizing the main points, and encouraging patient talk-back to confirm understanding [6, 20, 45]. Physicians also need to know techniques to improve the accuracy of interpretation. These techniques are things like, speaking in shorter sentences, using lay language, and speaking in the first person [20, 21, 31, 52]. Because it is ultimately a physician's decision to use an interpreter, it is also the physician who needs to be educated on the importance of and access to these services.

6. Have a method in place for evaluating access to language services [8]

Without a mechanism for evaluating the available language services, no healthcare provider will be able to understand what is needed in their system. Access to interpretation should be monitored, especially in hospital settings. Every hospitalized patient should have a conversation in their preferred language with a healthcare provider every day during their stay [42]. Every clinic patient who needs an interpreter should be offered one and have access to that service. Patients should be surveyed at the end of an appointment to assess their needs and how the clinic met those needs.

7. Improve the technology available [30, 39]

A combination of modalities should be available to increase access to interpretation services. In urgent situations, there are applications available to provide physicians with a quick way to translate medical terminology and important phrases [36]. Although this does not meet the standards for quality care, it would help avoid clinical mistakes and allow a physician to compile a medical history in a dire situation. There are also video interpreting solutions that are available to connect to within minutes [19]. As an improvement to telephonic interpretation, hospitals could subscribe to a service like this for quick, easily accessible language services.

8. Publicize the right to language services.

One complication with increasing access to interpreters is that patients do not understand that they have the right to request language assistance. The rights of the patient, specifically the availability of free interpreters, should be publicized in the hospital or clinic's top languages. All

healthcare staff should understand how to offer interpretation services. Communication aid booklets would help physicians and staff better cater to LEP patients, and could include phrases like “Where is the bathroom?” so that if the patient needs anything before the interpreter arrives, their needs could be met [8].

9. Know in advance when a patient needs language assistance

An important aspect of providing additional services is knowing when a patient requires those services. Patients should be screened for preferred language, and this information should be noted in the patient’s chart for future reference [8]. Computer programs could then automatically schedule interpreters for their appointments, ensuring timely access with no delays [39, 42]. Additionally, clinics and hospitals should understand the needs of the community and the people in their service area. This would allow the hospital to make realistic decisions on interpretation services and create more personalized plans for accessible care [8].

10. Determine a funding source to create budget space for interpreters

The largest issue when securing access to interpretation is the available budget to hire professionals. In order to make language services more readily available, the hospital or clinic should have funds specific for providing these services. Generally, the main source of funding for a healthcare provider is the insurance company. Both public and private insurers should be responsible for the cost, at least in part, of hiring professional interpreters [23]. Two options are available for this type of money flow – either the insurance company reimburses the cost (hourly or by visit) of providing an interpreter, or the insurer can contract with interpretation services to allow access to interpretation with direct billing to the insurance company [50]. Regardless of the logistics, it should not be a direct expense of the healthcare provider to ensure access to interpreters for their patients.

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