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Barriers Preventing Healthcare Providers from Utilizing Linguistic Services for Limited English Proficiency Patients: Integrative Literature Review

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Abstract

**Background:** Limited English proficiency (LEP) population continues to grow; and healthcare providers now face communication challenges when providing care to LEP patients. Multiple studies show that a rate of interpretive assistance provided remains low and patients with LEP tend to have higher risk for adverse effects when compared to English speakers.

**Objectives:** The purpose of this integrative literature review was to identify the existing barriers contributing to underutilization of interpretive services among medical personnel when providing care to LEP patients, and provide potential suggestions to improve the linguistic competence.

**Method:** An integrative literature review was conducted using the following search engines: PubMed, Cumulative Index to Nursing and Health Literature (CINAHL), and ProQuest Nursing/Allied Health Source. A total of six articles were chosen for a review of the first research question and four articles for a review of the second research question and all articles were published in English and between years of 2007 and 2017.

**Results:** Among the identified barriers that contribute to underutilization of linguistic aids among healthcare professionals, the six most supported barriers were: time constraints, liability concerns, perceived cost, convenience of using *ad hoc* interpreters, clinical complexity and provider’s own language skills. Four major recommendations were identified that addressed these barriers: organizational commitment, training/education of healthcare providers, training of administrative and bilingual staff, and organizational investment.
Conclusion: Ineffective communication remains a major factor contributing to higher rates of health complications. Therefore, addressing the issue of misunderstanding between healthcare providers and LEP patients will contribute to better health outcomes.

Key Words: LEP, non-English speaking (-ers), language, healthcare providers, underutilization, barriers, interpretive services/programs, improvements

Introduction

Background and Significance

According to the U.S. Census Bureau report, 60.5 million people living in the United States speak a language other than English at home, with 13.6 million (22.4%) people not speaking English well or not speaking English at all (Ryan, 2013). These individuals, who report their native language as other than English and have a limited ability to speak, write, read or understand English, are identified as limited in English proficiency (U.S. Department of Health and Human Services, 2013). A federal legislation, commonly referred to as the Civil Rights Act of 1964, Title VI, was passed to protect individuals from discrimination on the basis of race, color or nation of origin from obtaining assistance from organizations that receive federal funding (Chen, Youdelman, & Brooks, 2007). According to this law, healthcare providers are obligated to provide adequate resources, such as language assistance free of charge, to patients with limited English proficiency. However, a current study analyzing interpreter use by healthcare providers found that only 43% of participants were asked if they wanted a professional interpreter present during the healthcare encounter (Schenker, Perez-Stable, Nickleach, & Karliner, 2011). Additionally, 60% reported that an interpretive assistance was provided
during encounters with physicians and only 37% reported using interpretive services with nurses (Schenker, Perez-Stable, Nickleach, & Karliner, 2011).

Healthcare personnel, including physicians and nurses, are now facing a greater challenge to have successful and therapeutic communication when providing care to patients with limited English proficiency. The language barriers that exist between patients and healthcare personnel put patients at a higher risk for adverse effects when seeking or receiving health care. Therefore, an integrative literature review would be of benefit to help identify barriers preventing healthcare providers from usage of interpretive services, thus, improving the health outcomes and experiences of patients with limited English proficiency.

**Problem Statement**

Good communication is an essential part of nursing, ensuring better quality of care and successful patient outcomes (Kourkouta & Papathanasiou, 2014). However, good communication requires understanding of the language by those engaged in it. The language barrier is a growing and significant problem in healthcare as the limited English speaking population continues to grow. Despite federal regulations prohibiting discrimination and various interpretive services/programs being available, adverse events are still more common among patients with limited English proficiency (Divi, Koss, Schmaltz, & Loeb, 2007). Compared to English speakers, patients with limited English proficiency tend to have longer hospital stays, increased likelihood of delayed treatment and a greater chance for readmissions (Lindholm, Hargraves, Ferguson, & Reed, 2012). However, limited studies have been done to identify barriers to improving the
communication among healthcare personnel and patients with limited English proficiency.

**Purpose Statement**

The purpose of this integrative literature review was to examine barriers preventing medical personnel, including physicians and nurses, from utilizing interpretive services/programs when providing care to patients with limited English proficiency. Furthermore, the research findings were reviewed to identify the potential suggestions for improving the linguistic competence among healthcare providers to increase the use of interpretive services, resulting in reduction of healthcare disparities among patients with limited English proficiency.

**Research Questions**

The following research questions were addressed in this literature review:

1. What are the main barriers among healthcare providers for underutilization of linguistic services/programs when providing care for patients with limited English proficiency?

2. How can healthcare providers’ linguistic competence be improved to increase the use of linguistic services for limited English proficiency patients?

**Conceptual Framework**

The Andersen Behavioral Model was used to describe factors determining behavior for utilization of interpretative services among healthcare providers. (Babitsch, Gohl, & von Lengerke, 2012). As outlined by Figure 1, the three major components of the model are predisposing factors, enabling factors and need factors. The predisposing factors are individual characteristics such as education, occupation, organizational values,
social and cultural norms. The behavior of healthcare providers for utilization of linguistic services when providing care for patients with limited English proficiency is predisposed by many personal factors, such as education. The enabling factors are described as organizational attributes such as availability of interpretive services within the organization or adequate financial support. Therefore, the behavior of healthcare providers is also affected by the external factors of the organization within which they are practicing. Additionally, the need factors are characterized as the perceived and evaluated need to initiate behavior (Babitsch, Gohl, & von Lengerke, 2012). In other words, previous experience and personal opinions are other factors influencing the behavior.

As referenced by the Andersen Behavioral Model, the fundamental concepts in this literature review were analyzed to define the factors influencing the behavior of healthcare professionals when providing care for patients with limited English proficiency.

![Andersen Behavioral Model Diagram](image)

**Figure 1. Andersen Behavioral Model**

**Methods**

**Research Design**

An integrative literature review design was used to examine current and available literature to identify potential barriers among health care providers that cause
underutilization of interpretive services when providing care for patients with limited English proficiency. Additionally, an integrative literature review was applied to analyze and describe plausible interventions for improvement of the linguistic competence of healthcare providers. The integrative literature review implies a comprehensive review of experimental and non-experimental studies and application of significant results and knowledge (Souza, Silva, & Carvalho, 2010).

**Literature Search Strategies**

This integrative literature review was conducted using the following search engines: PubMed, Cumulative Index to Nursing and Health Literature (CINAHL), and ProQuest Nursing/Allied Health Source. Different combinations of the following multiple key words were used when performing all searches: *limited English proficiency, non-English speaking (-ers), language, healthcare providers, health professionals, interpretive services/programs, translation services/programs, underutilization, barriers, suggestions, and improvements*.

**Inclusion and Exclusion Criteria**

The articles were analyzed and the relevance to previously stated research questions was identified. The inclusion criteria used during this search were:

- Articles published between 2007 – 2017
- Articles available in English language
- Of nursing/medical discipline
- Full text available
- Focus on the issues relevant to the research topic
After careful consideration, the articles were analyzed and reviewed. A title review was conducted, and articles that did not have a title that pertained to the topic were excluded. Duplicate articles were also excluded (Figure 2). Only full-text articles that met the inclusion criteria listed above were reviewed.

**Figure 2. Study Selection and Review Process**

**Data Synthesis and Analysis**

A total of six articles that met inclusion criteria were selected for a review of the first research question. Additionally, a total of four articles that met inclusion criteria were selected for a review of the second research question. Studies that did not meet the inclusion criteria and that met the exclusion criteria were eliminated from the review process. A matrix table was constructed with the following category headings: source, title, purpose of the study, sample, study design and findings (Appendices A&B). The construction of the data matrix allowed for thorough documentation, organization and comparison between all studies. The selected articles in the matrix table were analyzed to
identify the barriers for utilization of interpretive services among healthcare professionals when providing care for patients with limited English proficiency. A list of the most commonly identified barriers was compiled to further explain the underutilization of professional interpreters in the medical setting. Through this process, a total of 6 articles that met the inclusion criteria were selected for a review for the first research question.

The articles used to answer the second research question were analyzed to identify possible implementations to improve the competency of healthcare professionals in utilizing interpretative services when providing care for patients with limited English proficiency. The implementations were described in the context of previously identified barriers. A total of 5 articles that met inclusion criteria were selected to address the second research question.

**Results**

Among the six articles reviewed, six major themes were identified as barriers preventing healthcare providers from utilizing linguistic services when providing care to patients with limited English proficiency: time constraints, liability concerns, perceived cost, convenience of using *ad hoc* interpreters, clinical complexity and provider’s own language skills. Each theme was carefully analyzed and evaluated for relevance to the research question.

*Time Constraints*

Time is one of the most valuable assets in the healthcare. There is a common misconception among healthcare providers that working with professional interpreters increases a demand for time (Ramirez, Engel, & Tang, 2008). However, according to the research done by Fagan, Diaz, Reinert, Sciamanna and Fagan (2003), incorporating a
professional hospital interpreter didn’t cause any increase in time in the provider’s schedule compared to the time spent with patients that didn’t require the use of an interpreter, unless telephone or patient-supplied interpreters were used. Additionally, many healthcare providers compared the time they would need to invest when using trained interpreters to anticipated benefit, time of the day, and whether or not they have seen the patient in the past (Diamond, Schenker, Curry, Bradley, & Fernandez, 2009). On the other hand, some healthcare providers believe that time invested in requesting and working with a professional interpreter delays other scheduled patient encounters (Parsons, Baker, Smith-Gorvie, & Hudak, 2014).

**Liability Concerns**

Informed consent is an essential healthcare instrument that is based on moral and legal presumption of patient autonomy. Professional liability was a leading rationale for providers to rely on trained interpreters rather than on *ad hoc* interpreters or their own second language skills (Gadon, Balch, & Jacobs, 2007). Additionally, specialists are more likely to request professional interpreters, as well as include detailed documentation on who was performing interpretation, which may be due to higher liability costs associated with specialties (Gadon et al., 2007). Facility’s guidelines and rules, such a requirement of having a trained interpreter for procedure consents, are another factor that prompted healthcare providers to request a professional interpreter (Hsieh, 2015).

**Perceived Cost**

As suggested by research done by Gadon et al., 2007, most participants, including healthcare providers and managers, have no experience inquiring about the cost of professional interpreters and are unable to estimate its cost. However, the cost remains
one of the top barriers preventing healthcare providers from utilizing professional
interpretive services when their patients are in need of one. Additionally, the perceived
cost of a professional interpreter use is not usually a dilemma for healthcare providers
practicing in larger healthcare systems but rather a concern for smaller practices, such as
individual private practices (Andres, Wynia, Regenstein, & Maul, 2013).

Convenience of using ad hoc Interpreters

Family, friends and untrained bilingual staff are one of the most common forms of
interpreter use in the healthcare (Ramirez, Engel, & Tang, 2008). Healthcare providers
often refer to the general availability and convenience of using ad hoc interpreters with
limited English proficiency patients (Gadon et al. 2007). Family and friends are usually
accompanying patients to their appointments or are at their bedside and therefore, can
instantly provide interpretive assistance (Diamond et al., 2009). While most providers
acknowledge the potential risks of using ad hoc interpreters and the breach of
confidentiality that occurs, they still tend to utilize family and friends because they are
most familiar with patient’s situation and culture and provide emotional support (Hsieh,
2015).

Provider’s Own Language Skills

It is not uncommon to find healthcare providers gesturing, talking slower or
louder, mimicking or using their limited second language skills as they try to
communicate to or gather a health history from a patient with limited English proficiency.
Many healthcare providers refer to this concept at “getting by” (Diamond et al., 2009).
Additionally, healthcare professionals tend to rely on previous information collected by
other providers and don’t deem it necessary to request a trained interpreter during their
encounters with patients (Diamond et al., 2009). Interpretation help is hardly ever requested by providers who feel comfortable with their skills in the language that is spoken by their patient (Andres et al., 2013). While other providers recognize the limitations and associated risks still prefer to withhold the use of trained interpreters, providing an opportunity for them to practice their second language skills (Diamond et al., 2009).

Clinical Complexity

Numerous healthcare encounters include delivering news about patient’s diagnosis, determining the end of life care, explaining the procedures or treatment options. Most decisions made by healthcare providers on whether to seek help from a professional interpreter when interacting with limited English proficiency patients are guided by the clinical complexity or the importance of the conversation they are about to have (Hsieh, 2015). Majority of the healthcare providers emphasized that clinical complexity and the importance of the conversation outweigh the time constraints, the perceived cost and the convenience of using ad hoc interpreters (Hsieh, 2015). In comparisons, some providers identified situations in which patients would present with acute illnesses and therefore, the urgency of the situation usually outweigh the time needed to request and work with a professional interpreter (Parsons et al., 2014).

Among the four articles reviewed, four major themes were identified as recommended changes to improve the use of linguistic aids when providing care to patients with limited English proficiency: organizational commitment, training/education of healthcare providers, training of administrative and bilingual staff, organizational
investment in readily available interpretative services. Each theme was carefully analyzed and evaluated for relevance to the research question.

**Organizational commitment**

The implementation of change has to begin with an organizational commitment. Many providers specify that they feel more inclined to work with interpreters when it is a norm and part of practicing culture within their organization (Karliner, & Mutha, 2010). A proposed solution that is implemented in various healthcare organizations is to promote the diversity and equity within their organization through written values, mission statements and procedure guidelines (Karliner & Mutha, 2010). Additionally, a proactive advocacy for patient population with limited English proficiency and proper staff training about available resources can help improve patient-provider communication (Attard, McArthur, Riitano, Aromataris, Bollen, & Pearson, 2015).

**Training of healthcare providers**

With increasing limited English proficiency patient population, the emphasis on patient communication and prevention of miscommunication is going to increase as well. Learning how to work with interpreters and patients with limited English proficiency is being incorporated into the curriculum of many medical and nursing programs. However, many providers learn the importance of an interpreter but not the tools of recognizing the situations where an interpreter is appropriate (Diamond et al., 2009). In contrast, those providers that do receive some sort of training either through their work place or medical/nursing schools tend to have higher rates of working with interpreters and feel more comfortable during these interactions (Baurer, Yonek, Cohen, Restuccia, & Hasnain-Wynia, 2014).
Training of administrative and bilingual staff

As mentioned previously, the use of ad hoc interpreters is very common among healthcare providers with limited English proficiency patients and most often a family member or a friend serves the role of ad hoc interpreter. However, bilingual staff can often be involved serving these interpretative roles but still lack the proper training and certification to accurately provide information. Additionally, healthcare providers do not feel comfortable especially if there is a concern that some information is being lost in the translation (Baurer, 2014). Organizations that provide proper training and certification to their bilingual staff to serve as interpreters have higher rates of confidence among their providers that information translated is more precise and therefore, increased rates of interpreter use (Baurer, 2014). Another proposed solution implemented by healthcare organizations is to improve training among administrative staff regarding interpretative services and working with limited English proficiency population. As evidenced by research, organizations that provide training to their administrative staff have early recognition of patients that require linguistic aid and tend to have higher interpreter usage rates (Tschurtz, Koss, Kupka, & Williams, 2011).

Organizational investment

With any proposed change, there is always a financial and timely investment involved. Some of the barriers to utilization of linguistic aids mentioned above are time considerations and limitation to available resources. Therefore, implementing technological innovations such as telephonic or video translations could be a potential solution to these issues (Baurer, 2014). These resources are usually of lesser-cost burden to the organization and are readily accessible to healthcare providers. Additionally, those
organizations that are already implementing these technological resources have higher success and usage rates when adequate training to all staff is provided (Baurer, 2014).

Discussion

As non-English speaking population continues to grow in the United States, more and more healthcare providers are faced with language barriers when working with patients who are not proficient in English. Language became an obstacle preventing patients from accessing healthcare and getting good quality medical treatment. This study further explained some of the most common barriers preventing healthcare providers from utilizing linguistic aids when providing care to patients with limited English proficiency.

As evident by the results, there is a lack of adequate training among healthcare providers when it comes to working with professional interpreters. When healthcare providers, whether it’s a physician or a nurse, decide to “get by” using their own language skills or mimic through their conversation with limited English proficiency patients, the interaction becomes provider-centered. The provider assumes this paternalistic role on what’s important leaving little to no room for patients to express themselves. However, lately there has been a great shift in the healthcare system advocating for patient-centered care, which should begin with a patient-provider communication. Therefore, there is an increased need for development of educational support and training for multidisciplinary healthcare providers on timely recognition of language barriers. With timely recognition and early initiation of linguistic aids, such as professional interpreter whether face-to-face or via telephonic conference, healthcare providers would empower their patients to make informed decisions regarding their care.
minimizing the risk for adverse effects common to miscommunication. Additionally, there is a need for organizational support to provide resources and commitment necessary for successful implementation of high quality care for diverse patient population. Healthcare providers and other administrative staff working in healthcare need to be encouraged and supported by their organizations to provide adequate resources that are available within their agencies for their patients throughout their care.

**Limitations**

There were some limitations in this study. Some of the articles used in the following research had a relatively small sample size (about 12-40 healthcare providers) and other articles focused only on specific healthcare areas, such as primary care settings or emergency department limiting the ability of the results to be generalized to all areas of practice. Furthermore, most articles focused on physicians’ experiences with limited English proficiency patients and only a few included other healthcare specialties, such as nursing. Thus, it reduces the relevance of the results to be considered for other healthcare specialties.

**Nursing Implications**

The identification of the barriers to language competence among healthcare providers will prepare the nursing staff to be better equipped to recognize the limitations to providing good quality of care to patients with limited English proficiency. Nurses will also be able to address these issues in daily interactions with their patients and provide the necessary tools and resources for effective healthcare communication. By utilizing resources and acknowledging the barriers, nurses can build a better rapport with their patients and increase the patient’s satisfaction with the care provided.
Directions for future research

Future research is needed to further evaluate the effectiveness of proposed changes to improve linguistic competence of healthcare providers when interacting with limited English proficiency patients. Using the proposed implementations and recommended improvements identified in this review, a new program focusing on reducing language barriers and providing adequate assistance can be developed to help reduce the healthcare disparities experienced by patients with limited English proficiency.

Conclusion

This literature review identified six barriers contributing to underuse of linguistic aids among healthcare professionals when providing care to patients with limited English proficiency. Those included provider’s time constraints, liability concerns, perceived cost, convenience of using ad hoc interpreters, clinical complexity, and provider’s own language skills. Additionally, four potential suggestions were identified addressing one or more barriers and these included organizational commitment, training/education of healthcare providers, training of bilingual staff, and organizational investment. While the healthcare disparities common to patient population with limited English proficiency are well studied and discussed, there are limited studies acknowledging lack of experience and expertise among healthcare professionals working with this population. There is an increased need to provide adequate education to multidisciplinary healthcare professionals on how to recognize the language limitations of their patients and how to work with professional interprets to minimize the miscommunication.
References


reports: U.S. Census Bureau (Retrieved from https://www.census.gov/content/dam/Census/library/publications/2013/acs/acs-22.pdf)


# Appendix A

**Table 1. Summary of Studies on Factors Influencing Healthcare Providers Usage of Interpretive Services when Caring for Patients with Limited English Proficiency**

<table>
<thead>
<tr>
<th>Source</th>
<th>Title</th>
<th>Purpose</th>
<th>Sample</th>
<th>Design</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andres, E., Wynia, M., Regenstein, M., &amp; Maul, L. (2013)</td>
<td>Should I call an interpreter? – How do physicians with second language skills decide?</td>
<td>To identify the factors most relevant to physicians’ decision-making related to interpreter usage</td>
<td>25 physicians in different practice settings</td>
<td>An exploratory study, in depth, semi-structured telephone interview</td>
<td>Provider’s own language skills, practice setting, “getting by”, clinical risk or complexity, time constraints, cost, convenience of ad hoc interpreters,</td>
</tr>
<tr>
<td>Diamond, L. C., Schenker, Y., Curry, L., Bradley, E. H., &amp; Fernandez, A. (2009)</td>
<td>Getting By: Underuse of Interpreters by Resident Physicians</td>
<td>To understand the decision-making process of resident physicians when communicating with patients with limited English proficiency (LEP).</td>
<td>20 Internal Medicine Resident Physicians</td>
<td>Qualitative study using in-depth interview, recruiting from two teaching hospitals, one on the East Coast and one on the West Coast</td>
<td>“Getting by”, time constraints, convenience of using family members, using own second language skills, normalized underuse of professional interpreters,</td>
</tr>
<tr>
<td>Gadon, M., Balch, G. I., &amp; Jacobs, E. A. (2007)</td>
<td>Caring for patients with limited English proficiency: the perspectives of small group practitioners.</td>
<td>To learn about current approaches when communicating with limited English proficient patients</td>
<td>9 Focus groups: 3 groups of primary care physicians, 3 groups of specialists, and 3 groups of practice managers</td>
<td>90-minute telephone focus groups, recruited from AMA Master file, offices located in 15 states that scored highest on interpreting services, perceived cost, liability concerns, limited knowledge</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Abstract</td>
<td>Setting</td>
<td>Methodology</td>
<td>Challenges</td>
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<tr>
<td>Hsieh, E. (2015)</td>
<td>Not just “getting by”: factors influencing providers’ choice of interpreters.</td>
<td>To understand the variety of considerations and parameters that influence providers’ decisions regarding interpreters.</td>
<td>39 Healthcare professionals (i.e., nursing, mental health, emergency medicine, oncology, and obstetrics-gynecology)</td>
<td>A qualitative, semi-structured interview</td>
<td>Time constraints, clinical complexity and urgency, liability, resource limitations, ethical consideration</td>
</tr>
<tr>
<td>Parsons, J. A., Baker, N. A., Smith-Gorvie, T., &amp; Hudak, P. L. (2014)</td>
<td>To ‘Get by’ or ‘get help’? A qualitative study of physicians’ challenges and dilemmas when patients have limited English proficiency.</td>
<td>To explore physicians’ experiences of care provision in situations of language discordance</td>
<td>22 physicians from the emergency and internal medicine departments</td>
<td>Qualitative study based on individual semi-structured interviews</td>
<td>Time constraints, acuity of situation, ease of use or availability of translation aids, “getting by”, liability concerns</td>
</tr>
<tr>
<td>Ramirez, D., Engel, K. G., &amp; Tang, T. S. (2008)</td>
<td>Language interpreter utilization in the emergency department setting: a clinical review.</td>
<td>To review language interpreter utilization in the ED setting</td>
<td>12 ED specific research articles from 1966-2006 focusing on ED setting</td>
<td>Integrative Literature Review</td>
<td>Reliance on ad hoc interpreters, perceived time and labor, perceived cost</td>
</tr>
</tbody>
</table>
**Appendix B**

**Table 2. Summary of Studies on Improvement Strategies to Increase the Usage of Interpretative Services by Healthcare Providers**

<table>
<thead>
<tr>
<th>Author, year</th>
<th>Title</th>
<th>Purpose</th>
<th>Sample</th>
<th>Design</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attard, M., McArthur, A., Riitano, D., Aromataris, E., Bollen, C., &amp; Pearson, A. (2015)</td>
<td>Improving communication between health-care professionals and patients with limited English proficiency in the general practice setting.</td>
<td>To identify effective practices for improving communication between clinical staff in general practice and patients with limited English proficiency</td>
<td>18 general practitioners and practice nurses</td>
<td>Mutli-method study including literature review, planned focus group discussions, and development and evaluation of evidence-based practice guidelines</td>
<td>Use of a qualified medical interpreter should be promoted, practices should have a standardized procedure for accessing interpreter services</td>
</tr>
<tr>
<td>Baurer, D., Yonek, J. C., Cohen, A. B., Restuccia, J. D., &amp; Hasnain-Wynia, R. (2014)</td>
<td>System-level factors affecting clinicians’ perceptions and use of interpreter services in California public hospitals.</td>
<td>Examine factors shaping clinicians’ use of professional interpreters</td>
<td>12 California public hospitals</td>
<td>Exploratory qualitative study based on in-person interviews</td>
<td>Organization commitment to improving language access, organization investment in remote interpreters, training clinicians, hospital support for bilingual staff, organizational investment in telephonic interpretation</td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Methodology</td>
<td>Setting</td>
<td>Conclusion</td>
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<tr>
<td>Karliner, L. S., &amp; Mutha, S. (2010)</td>
<td>Achieving quality in health care through language access services: lessons from a California public hospital</td>
<td>To develop recommendations to create effective language service programs</td>
<td>1 California Public Hospital</td>
<td>Organizational commitment, technology involvement, attention to clinical needs, active engagement of stakeholders, coordination of project management</td>
<td></td>
</tr>
<tr>
<td>Tschurtz, B. A., Koss, R. G., Kupka, N. J., &amp; Williams, S. C. (2011)</td>
<td>Language services in hospitals: discordance in availability and staff use.</td>
<td>To evaluate the use of available interpreting services</td>
<td>14 hospitals in Florida</td>
<td>Address the practice of using ad hoc interpreters, effectively distribute information to hospital staff regarding how and when to access available resources, evaluate patient population</td>
<td></td>
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</tbody>
</table>