

Working with clients with limited English proficiency:  
Mapping language access in Occupational Therapy

### **Abstract**

Nearly one in ten US residents have difficulty speaking and understanding English and are deemed to have limited English proficiency (LEP). Despite federal mandates for provision of interpreters and other language access services, individuals with LEP experience notable health disparities. Occupational therapists must be prepared to equitably serve this population, however there is a dearth of research evidence and practical recommendations about our profession's readiness to serve this growing population. This paper maps the current healthcare policy environment and existing language access research relevant to occupational therapy. Implications for the future of occupational therapy research, education and practice are discussed.

**Keywords:** diversity, limited English proficiency, language access, cultural competence, healthcare policy, occupational therapy

## Introduction

The US population is becoming increasingly diverse. Language diversity is part of this demographic change. Over 300 languages are spoken in the US, and nearly 20% of US residents speak a language other than English at home (Ryan, 2013). Many of these individuals experience difficulty understanding, reading and expressing themselves in English, and are deemed to have “limited English proficiency” (LEP). In 2013, there were approximately 25 million individuals with LEP in the US, an 80% increase since 1990 (Pandya et al., 2011).

Language barriers contribute to health disparities for individuals with LEP by impeding access to care, adherence to treatment and follow-up, and satisfaction with services received (Karlner et al., 2007). Improving language access within occupational therapy services is critical for promoting client-centered and culturally-responsive practice as emphasized in the American Occupational Therapy Association’s Vision 2025 (AOTA, 2017). However, there is limited discussion in the occupational therapy literature about the field’s readiness to serve the growing population of individuals with LEP. In this paper, we summarize legislation related to language access in healthcare; review available research on this topic in occupational therapy and related disciplines; and discuss implications for occupational therapy practice, research, and education.

### **U.S. Laws and Policies related to Language Access and Healthcare**

**Federal legislation.** The Civil Rights Act of 1964 is the centerpiece legislation assuring language access in healthcare. Title VI of the Act prohibits federally funded programs from discriminating on grounds of race, religion, or national origin (Teitelbaum et al., 2012). While the Act does not specifically mention language, the US Supreme Court, and the US Department of Health and Human Services (HHS) have interpreted the ‘national origin’ clause to include individuals with LEP (Youdelman, 2008).

More recently, the Patient Protection and Affordable Care Act (ACA) of 2010 extended the reach of Title VI to private insurance companies offering plans in health insurance marketplaces. Under the ACA, these companies are required to provide language access to their consumers at every step of the insurance purchasing process. As long as the ACA is preserved under the new federal administration, these measures could increase language access for individuals with LEP. Even if the ACA is repealed, its language access provisions are likely to remain relevant as these are modeled after the Civil Rights Act and the Effective Communication standards promulgated by The Joint Commission as part of its accreditation criteria (Mead, 2016). Table 1 summarizes key federal legislation affecting language access.

**State legislation.** Language access laws and regulations exist in every state and vary in scope and enforcement. With more than 150 laws, California stands out for employing the most comprehensive approach to language access in healthcare (Youdelman, 2008). Examples of state laws include the Dymally-Alatorre Bilingual Services Act, which applies to state agencies whose service recipients include 5% or more individuals with LEP (Youdelman, 2008). Similarly, the Kopp Act applies to acute care hospitals, and includes specific language access standards such as 24-hour availability of interpreters. California is also a pioneering state with regards to stricter enforcement of language access policies. For example, the state hospital licensing board has the authority to enforce compliance with Kopp Act standards (Lo, 2011). Furthermore, under the state's Unruh Civil Rights Act, Californians with LEP have the right to take private action against agencies that receive state or federal funding in cases of both intentional discrimination and discrimination by way of disparate impact (Unruh Civil Rights Act, 1959).

Other states have also enacted language access laws for specific populations. For example, Illinois' Mental Health Hispanic Interpreter Act requires that qualified interpreters be

made available for individuals who are LEP and of Hispanic descent at state-operated mental health and developmental disability facilities where at least 1% of total annual admissions comprises recipients of Hispanic descent (ILGA, 2000). In addition, facilities must pay for interpreters during therapy and communication of treatment-related information. Use of family members is prohibited during these situations (Migration Policy Institute, n.d.). Similar requirements are in place for early intervention services in the state (Migration Policy Institute, n.d.).

States are not required to reimburse providers for the cost of language services, nor are they required to claim these costs to public insurance programs such as Medicaid and the Children's Health Insurance Program (CHIP). However, states may opt to claim reimbursement for language services, either as medical-assistance related expenditures or as administration costs. For states that choose not to claim reimbursement, Medicaid/CHIP providers must still provide language services to recipients with LEP and bear related expenses. For states that choose to claim reimbursement for language services as administrative costs, the standard federal matching rate of 50% applies. Since 2009, states also have the option to claim a higher matching rate (CMS, n.d.). Studies have shown that providers in states with reimbursement are significantly more likely to provide formal language services than those in nonreimbursing states (DeCamp et al., 2013).

Even within states, there is evidence of wide variability in appropriate language services between different healthcare facilities. For example, a 2011 survey involving a national sample of public, non-profit and private hospitals of various sizes showed that only 64% offered language services; those that did were more likely to be non-profit entities located in diverse, urban neighborhoods (Schiaffino et al., 2014). This variability is partly attributed to hospital

location and commitment to diversity, and partly to lack of financial incentives and weak legal enforcement of language access mandates. Variability in language services is further fueled by knowledge gaps related to best practices and costs and benefits of providing language services (Jacobs et al., 2011).

### **Research on Language Access in Healthcare**

Research on appropriate models for providing language services, and related cost-benefit analyses, is limited, especially in practice settings and contexts relevant to occupational therapy. A seminal review of the literature on language barriers in healthcare (Jacobs et al., 2006), including over 150 articles, did not include a single study related to occupational therapy or other rehabilitation services.

**Access to services.** Patients with LEP access primary and specialty healthcare at lower rates than English-speaking patients (Dubard & Gizlice, 2008; Lau et al., 2012; Ohtani et al., 2015). Patients with LEP are also more likely to postpone or forgo needed medical care (Shi et al., 2009) and report lower use of preventive care (Smith, 2010) and vaccinations (Yi et al., 2013). In addition, research shows that patients with LEP use emergency services for non-emergent conditions at a higher rate than English-proficient patients (Njeru et al., 2015) and have a higher likelihood of unplanned revisits for emergency care even after controlling for insurance coverage (Ngai et al., 2016).

A comparable body of research on access to occupational therapy services is lacking. However, a recent cross-sectional study examined access to a broad array of rehabilitation services (e.g., occupational, physical, speech, and cognitive therapies, and mental health) for children with traumatic brain injury. Using a statewide database of rehabilitation providers in Washington State, the study found that less than 20% of providers accepted children with

Medicaid *and* provided language services. Non-English-speaking families also had to travel longer than English-speaking families for the nearest rehabilitation service. Counties with the highest proportion of children in LEP households had the lowest availability of multilingual rehabilitation services (Moore et al., 2016). While there is a need to replicate similar research with other client populations, these findings suggest that language barriers might hinder access to rehabilitation services, including occupational therapy, for individuals and families with LEP.

**Service quality, safety, and satisfaction.** Language barriers are associated with poorer patient adherence with follow-up care and treatment recommendations (Fernandez et al., 2017; Jacobs et al., 2006; Riera et al., 2014). Interventions that require a high degree of communication, such as self-management training, are particularly affected (Chou et al., 2016; Chaufan et al., 2017; Parker et al., 2017). Medical errors are also more common during treatment of individuals with LEP (Karlner et al., 2007), and incidence of adverse events tends to be higher (Divi et al., 2007; Wasserman et al., 2014). Patients are less likely to receive patient-centered care when there are language barriers (Karlner et al., 2011; Martinez & Leland, 2015), and report suboptimal interactions with their providers (Schenker et al., 2010). Providers also report lower satisfaction in language-discordant healthcare encounters (Hernandez et al., 2014).

To date only one study has addressed safety and quality of occupational therapy services involving individuals with LEP. Using a case study design, Martinez and Leland (2015) examined an episode of care involving a Spanish-speaking patient with spinal cord injury. Interviews with the patient, his caregiver, and the primary occupational therapy provider indicated low satisfaction and high frustration among all three parties. Language barriers interfered with the patient's understanding of the role of occupational therapy, therapeutic relationship building, collaborative goal planning, and the clinician's understanding of the

patient's adjustment to life with a spinal cord injury. The case study also highlighted safety risks such as missing the signs for dangerous emergent conditions like autonomic dysreflexia (Martinez & Leland, 2015).

Another study involving qualitative interviews with a small sample of 12 occupational therapy clinicians found similar themes of low satisfaction and high frustration when working with clients with LEP. Clinicians in this study reported using a variety of interpreters ranging from family interpreters and bilingual staff to medically trained professional interpreters. Communication barriers were commonly reported, especially in the absence of professional interpreters, and interfered with clients' understanding of therapy goals and the therapist's role (Wardin, 1996). These findings were also echoed in a qualitative exploration of perspectives of occupational therapists, physical therapists, and speech and language pathologists providing stroke rehabilitation services to patients with LEP. Clinicians across disciplines discussed difficulties adjusting to the presence of interpreters and the perceived unreliability of family interpreters. Subtle and informal communication (e.g. negotiating goals, giving feedback) was especially hindered by language barriers and impeded therapeutic relationships (Taylor & Jones, 2014).

**Effectiveness of interventions for promoting language access.** Studies show that patients with LEP who receive language-concordant care (i.e. care provided in their preferred language by bilingual healthcare providers) report better clinical outcomes (Fernandez et al., 2011; Parker et al., 2017), greater satisfaction with services (Dunlap et al., 2015), better understanding of clinical information (Dunlap et al., 2015), and higher quality of care (Gonzalez et al., 2010) than patients who receive language-discordant services. However, providing language-concordant care to all patients with LEP remains an unrealistic ideal. First, with over

300 languages spoken in the US, it would be impossible for healthcare facilities to hire clinical staff with bilingual proficiency in the primary language of all patients. Second, lack of diversity in the healthcare work force continues to be a challenge. Racial and ethnic diversity remains low within the occupational therapy workforce and also among graduate students (AOTA, 2015). There is no available data on linguistic diversity within the occupational therapy workforce in the US. However, a survey-based study of 1,000 occupational therapists practicing in one of the most diverse provinces (Ontario) in Canada, serves as a close reference. Only 0.5% of clinicians who responded to the survey were able to provide services in languages other than English. Furthermore, when faced with clients with LEP, clinicians in this study employed unsafe and inappropriate practices such as using family members or untrained volunteers as language interpreters (Lum et al., 2004).

While comparable and recent data on US-based occupational therapy practitioners are lacking, a 1996 survey of clinicians working in adult physical rehabilitation settings found that only 16% of the sample reported being functionally bilingual in a language other than English, with the most commonly spoken second language being Spanish (Wardin, 1996). Despite being dated, findings from this study are significant since the survey specifically targeted clinicians working in metropolitan areas with a large proportion of non-English-speaking residents. Moreover, while the linguistic diversity of the US population has increased since this study was published, the racial/ethnic diversity of the occupational therapy workforce has not changed much (AOTA, 2014). Thus, language-concordant care is less likely in our field, thereby necessitating the use of third-party interpreting.

Available evidence on third-party interpreting in healthcare suggests that effectiveness varies based on three factors:

- (1) **Research suggests that trained professional interpreters are more effective than ad hoc interpreters.** Ad hoc interpreters typically include family members, available bilingual volunteers, or bilingual staff members pulled away from other duties. Studies show high likelihood of interpreting errors and related misdiagnosis and inaccurate clinical decisions when ad hoc interpreters are used (Flores et al., 2012; Nápoles et al., 2015). Compared with ad hoc interpreters, use of professional interpreters is associated with higher satisfaction among clinicians and patients (Bagchi et al., 2011; Karliner et al., 2007), and lower disparities in healthcare utilization between English-speaking patients and patients with LEP, specifically for outpatient preventive services, emergency department services, and admission rates from the emergency room (Karliner et al., 2007). The broader evidence in favor of using trained, professional interpreters is reflected in Wardin's (1996) survey of occupational therapy clinicians working with patients with LEP in physical rehabilitation settings. Qualitative interviews revealed a strong preference for trained interpreters who were deemed more effective and unbiased than ad hoc interpreters (Wardin, 1996).
- (2) **Research on different interpreting modes shows mixed evidence related to the comparative effectiveness of in-person versus remote interpreting via phone or video conference.** One randomized trial showed that compared with the gold standard of bilingual providers, telephonic and in-person interpreting resulted in similar concordance between the patient's diagnosis of record and their own understanding of discharge diagnosis (Crossman et al., 2010). A second randomized trial found video interpreting to be superior to phone interpreting in regard to communication lapses and accuracy of families' understanding of the patient's diagnosis (Lion et al., 2015). On the outcome of interpreting quality and patient satisfaction, some studies suggest that patients rate the quality of different interpreting modes

the same (Lion et al., 2015; Locatis et al., 2010), while providers rate in-person interpreting as being of higher quality than phone and video interpreting (Locatis et al., 2010). Other studies indicate that providers rate quality of in-person and video interpreting commensurately higher than ad hoc interpreting, yet their self-assessed cultural competence is higher with in-person interpreting (Nápoles et al., 2010). Conversely, studies have also shown that patient-assessed quality and satisfaction with clinical encounters is lower for in-person interpreting compared with both phone interpreting and bilingual providers (Crossman et al., 2010). The evidence is similarly mixed when comparing phone and video interpreting. A recent study found that switching from phone to video interpreting had minimal impact on clinical outcomes in the emergency department (Jacobs et al., 2012). Another study in an emergency department found that families demonstrated better knowledge of their child's condition and higher consistency of interpreter usage with video interpreting than with phone interpreting (Lion et al., 2015).

Relevant to occupational therapy, one study (Price et al., 2012) examined how professional interpreters rated adequacy of in-person and remote interpreting modes during common clinical scenarios in the hospital and ambulatory care settings. All modes were deemed adequate for basic exchange of information. However, interpreting via phone or videoconferencing was considered less satisfactory than in-person interpreting for interpersonal aspects of communication, such as rapport building. Telephonic interpreting was believed to be least adequate for clinical communication involving educational or psychosocial components. Videoconferencing was rated as a better remote alternative to in-person interpreting in such situations. Notably, neither phone nor videoconference

interpreting was thought to be adequate for facilitating communication during occupational and physical therapy sessions (Price et al., 2012).

**(3) Only few studies have compared simultaneous and consecutive methods of interpreting.**

Consecutive interpreting is when the interpreter translates after the speaker has completed speaking, while simultaneous interpreting is when the interpreter interprets at the same time as the speaker (California Healthcare Interpreters Association, 2002). Typically, this type of interpreting, known as remote simultaneous interpreting (RSMI), is provided by a trained medical interpreter who is located offsite and communicates via wireless headsets with microphones worn by the provider and the patient. Although recent research on this interpreting method is lacking, older studies show that RSMI saves time and is associated with fewer communication errors compared with traditional consecutive interpreting by an in-person interpreter (Gany et al., 2007a). RSMI is also associated with increased satisfaction with provider communication and greater perception of patient privacy, yet patients report less comprehension and satisfaction with RSMI compared to language-concordant encounters (Gany et al., 2007b).

It must be noted that existing evidence in favor of RSMI is confined to primary care clinics, emergency departments, and obstetric services. There is some concern that RSMI might not be appropriate in all settings, and with all patients. Since this interpreting method involves hearing a disembodied voice while interacting with a different person face-to-face, it might be especially unsuitable for patients with cognitive limitations and those with certain mental health conditions (Simon et al., 2010). Since occupational therapists in some settings are more likely to work with patients with those conditions, they must exercise caution when using RSMI for communication.

### **Implications for Occupational Therapy Practice**

Health disparities experienced by individuals with LEP are partly attributable to lack of awareness among healthcare providers and facilities regarding their language access responsibilities (Chen et al., 2007). Occupational therapy practitioners and managers must work to alleviate these disparities and ensure that individuals with LEP receive client-centered services commensurate with English-speaking patients. Other disciplines have employed various strategies in this regard, with varying amounts of success.

One common strategy is using bilingual clinical and administrative staff as dual-role interpreters. While this is an important and feasible strategy, most service settings lack bilingual capacity to serve all language groups. Furthermore, it is critical that English and second language skills of dual-role staff interpreters are rigorously assessed by employers. One study (Moreno et al., 2007) found that one in five dual-role staff interpreters had insufficient language skills to interpret medical information. Other studies have shown that clinical staff members' self-reported proficiency in a second language is not always a reliable predictor of tested ability in that language (Diamond et al., 2014; Lion et al., 2013).

When bilingual staff members take on the interpreter role, it is important that they be specifically trained in the terminology, clinical scenarios, and core values related to occupational therapy. Research suggests that interpreters who are adequate in one medical setting or service might not be able to translate their skills to other services and settings (Mirza et al., 2017). Pre-training and orientation of interpreters might be a good practice regardless of whether dual-role or professional interpreters are being used.

Another strategy often deployed in healthcare facilities is training clinicians in a second language, typically one spoken by the majority of patients with LEP at the facility. However,

training programs that teach clinicians a limited amount of a second language, such as *Medical Spanish* programs, are not supported by evidence. One review of 23 *Medical Spanish* programs found that outcomes reported were often inadequate proxies for desired changes in providers' interactions with Spanish speakers (Hardin & Hardin, 2013). In addition, these short trainings are unlikely to significantly improve language skills, and some clinicians emerge with false confidence about their new language abilities (Diamond & Jacobs, 2010). There is a risk that such trainings reinforce a tendency to 'get by' among clinicians by using low-level language skills in important clinical situations (Diamond et al., 2012).

Thus, limited second language skills among providers are not a substitute for trained professional interpreters. Instead, clinicians should be trained to work efficiently with interpreters and be encouraged to use their second language knowledge to build rapport but not to communicate essential information (Diamond & Jacobs, 2010; Summers et al., 2015). Given client-centered underpinnings of occupational therapy practice, clinicians must be taught to give casual talk and rapport building equal attention in interpreter-mediated encounters as in English-only encounters (Hsieh & Hong, 2010). Even more critical is for clinicians to be aware of language access policies and procedures at their respective facilities. Although dated, Wardin's (1996) survey of occupational therapy clinicians revealed that many were unfamiliar with procedures for procuring interpreter services and also struggled with identifying clients' native languages. Lack of knowledge and information in this area continues to be prevalent. A pilot project with second year occupational therapy students revealed that the majority of students did not know how to access interpretation and translation services at their Level II fieldwork site (Harrison, 2016). Research shows that practical difficulties with organizing interpreter services can lead rehabilitation clinicians to avoid working with patients with LEP (Taylor & Jones,

2014). Therefore, it is important that clinical team leaders and managers include these details during site orientation trainings for new employees.

Clinicians also need to be aware of legal mandates and recommended standards for language access. Table 1 provides an overview of federal mandates and standards. Clinicians and managers interested in identifying state-specific policies and statutes might benefit from the language portal of the Migration Policy Institute (Migration Policy Institute, 2017). This resource includes a searchable online database of policies, guidelines, and regulations that can be filtered by state and service area. Knowledge of legal obligations can empower clinicians to advocate with their employers for better language access for patients with LEP. At the same time, private practice owners can use this information to ensure that their practice is not in violation of clients' legal and civil rights, and more importantly, that their services are client-centered and equitable for clients with LEP. Upholding our clinical and legal obligations to patients is especially important in the current political environment of mistrust and fear among various communities.

Costs are often seen as a barrier to implementation of language services despite evidence suggesting cost-savings. For example, interpreter use has been shown to reduce costly medical errors (Flores et al., 2012) and to decrease length of hospitalization (Lindholm et al., 2012) and re-admissions (Lindholm et al., 2012; Karliner et al., 2017). A recent study placed telephone interpretation equipment in every patient room in an inpatient hospital (Karliner et al., 2017). Over an eight month period, readmission rates for patients with LEP significantly decreased, even though readmission rates for English-speaking patients increased (Karliner et al., 2017). Shared networks of telephonic interpreters have been shown to offer a cost-effective option for hospitals, and creative reimbursement strategies have been suggested such as fee-for-

service and brokerage models (Jacobs et al., 2011). Thus, occupational therapy practitioners and managers must consider the costs of interpreter services alongside the possible savings.

### **Implications for Education**

Educational curricula of most healthcare disciplines include training in cultural competence. However, systematic reviews of cultural competence training programs (Chippis et al., 2008; Lie et al., 2011; Renzaho et al., 2013) have shown that training curricula seldom include practical guidance on communicating with patients with LEP. Several states have passed laws that require linguistic competency to be included in cultural competency education for medical students or to be incorporated within continuing education programs for physicians and surgeons (e.g. California, New Jersey, Washington) (Youdelman, 2008).

Many different training programs have proven effective in increasing clinicians' skills (Diamond & Jacobs, 2010; Summers et al., 2015), knowledge, and self-efficacy in working with professional interpreters to communicate with patients with LEP (Ikram et al., 2014; Thompson et al., 2013). Research suggests that even short trainings can be effective in improving clinician's skills but repeated reinforcement of trainings is crucial (Diamond & Jacobs, 2010; Jacobs et al., 2010). Most trainings combine didactic information with case studies, video-based case simulations, and/or role plays. Experts recommend that such trainings be offered especially for early career clinicians and students preparing to go on clinical rotations or fieldwork to avoid dangerous communication errors that may occur when students are providing patient care during their education (Diamond & Jacobs, 2010; Martinez & Leland, 2015).

Drawing upon successful training programs in other healthcare disciplines, an online training was piloted and developed for second-year occupational therapy students who had completed Level II Fieldwork (Harrison, 2016). Training topics included legal mandates and

health disparities, recommendations for assessing clients' language skills and selecting interpreters, practical skills for communicating with clients with LEP, and techniques for using phone interpreters. Results from a pre-test/post-test questionnaire indicated an increase in students' practical skills for working with interpreters (Harrison, 2016). After the training, students were more likely to endorse recommended communication behaviors (e.g. *It is important to slow down and use short sentences*). Students reported feeling well-equipped to see patients with both phone and in-person interpreters. They also improved in knowledge and attitudes related to language access. Results of this training point to encouraging possibilities for improving emerging clinicians' readiness to serve patients with LEP. Training students in this skill set could be included in the next ACOTE standards, currently under review (ACOTE, 2017). For example, standards about effective communication (e.g. Standard B.5.20) could include working with interpreters and non-English speaking clients.

In addition to training and educating occupational therapy professionals, there is also a need to train interpreters. Rehabilitation clinicians who have experience working with interpreters suggest that training interpreters and clinicians to work together can improve delivery of rehabilitation services (Taylor & Jones, 2014). Currently, there are no accreditation standards for training and certification of healthcare interpreters. However, the field of medical interpreting is moving toward greater consistency in interpreter quality and assessment. At the time of this writing, national certification is offered by two non-profit organizations, the Certification Commission for Healthcare Interpreters (CCHI, 2016) and the National Board of Certification for Medical Interpreters (NBCMI, 2016). Both certification exams involve a written and oral component assessing the candidates' knowledge of interpreter roles and ethics and their

competence in medical terminology and specialization knowledge, with occupational therapy included as one of the medical specialties.

While most interpreter trainings cover general interpreting skills and standards, basic medical terminologies, and typical clinical scenarios, these trainings seldom include terminologies and clinical scenarios unique to occupational therapy. Therefore, even trained and certified interpreters might be unfamiliar with occupational therapy jargon such as ‘sensory integration’ and ‘spatiomotor cueing’. Interpreters might also not understand occupational therapy processes that involve specific and precise communication, such as hierarchical cueing. Thus, it is important that site-specific trainings be developed to orient interpreters to terminology and processes most commonly used at that site.

### **Implications for Research**

There is a critical need for research on language barriers and interventions specific to occupational therapy practice settings and outcomes. While this paper has integrated available research from other disciplines and contexts, occupational therapy clinicians, managers, and insurers need specific empirical evidence to guide allocation of resources for appropriate language access interventions. Therefore AOTA, the American Occupational Therapy Foundation, and other leadership organizations must prioritize research funding to produce more knowledge on this topic. To this end, we recommend four areas for future research.

First, we need research that investigates what language access interventions work during occupational therapy encounters, and under what circumstances. For example, research in other healthcare disciplines suggests that phone and video interpreting might be an efficient and cost-effective alternative to in-person interpreting (Masland et al., 2010). However, these interpreting modes might create significant barriers in occupational therapy settings. For

instance, telephone and video interpreting units are sometimes not mobile enough to allow for clinical interventions such as shower transfers and other forms of contextual ADL training. Furthermore, as noted, these remote interpreting modes could be confusing for patients typically seen in occupational therapy (e.g., families of children with disabilities, individuals with cognitive and hearing impairments). Similarly, simultaneous interpreting might not work well during interventions such as cognitive rehabilitation and psychosocial groups. Therefore, research comparing the pros and cons of different modes and methods of interpreting during various occupational therapy clinical scenarios is much needed.

A second area where research can fill knowledge gaps relates to how language barriers and appropriate language access affect client outcomes such as role participation, daily living skills, and occupational engagement. In addition to outcomes research, there is also a need for process-oriented research. Specifically, there is a lack of information on how language discordance between clients and occupational therapy providers affects core tenets such as client-centeredness, goal setting, and therapeutic use of self. On a related note, it is equally important to understand how interpreters facilitate or hinder use of clinical goal setting measures, such as the Canadian Occupational Performance Measure (Law et al., 1990) and Goal Attainment Scaling (Kiresuk & Sherman, 1968).

Also needed is research that can inform clinical decision-making during high-risk and complex clinical scenarios. Consider as an example, an elderly inpatient with severe cognitive impairment who needs to be evaluated within 24 hours per hospital guidelines, but speaks a rare dialect for which an in-person interpreter cannot be arranged for in a timely manner. In such situations, evidence-based guidelines are inapplicable or unfeasible, as empirical evidence is often based on 'usual' cases rather than 'outliers'. Instead of relying on clinician discretion,

decision-making in such situations can be informed by alternative research techniques such as the Delphi method and scenario planning. The Delphi method offers a structured method for gathering input from a panel of experts until a consensus is reached (Green et al., 1999). Similarly, scenario planning offers a structured process for stakeholders to consider specific clinical problems, evaluate alternative solutions, and reflect on possible outcomes of each alternative (Vollmar et al., 2015). Both methods can be used to generate expert-informed guidelines to aid decision-making in complex clinical scenarios.

Finally, even with the best available evidence, linguistically accessible services can only be provided insofar as clinicians are empowered to avail of language access supports in their respective service settings. Therefore, there is a need for research on institutional, programmatic, and workflow barriers that prevent clinicians from identifying language-related needs of patients, and procuring available language supports. To this end, AOTA can join forces with other professional organizations such as the American Physical Therapy Association and the American Speech-Language-Hearing Association to commission nationwide surveys of rehabilitation clinicians and facility administrators on implementation of language services, and related barriers and facilitators.

### **Conclusion**

Although many federal and state laws mandate language access in healthcare, gaps in language services persist. While a large body of research documents the health disparities experienced by clients with LEP, there is a dearth of information about language access within occupational therapy services. Improving language access is critical for ensuring client-centeredness, patient safety and patient satisfaction. The field of occupational therapy has begun to recognize the growing population of clients with LEP. However, there is a need for

appropriate professional education to ensure practitioners are familiar with state and federal language access policies and best practices in serving clients with LEP. There is also a need for professional advocacy to ensure implementation of language services within occupational therapy practice settings. Finally, additional research is necessary to evaluate what language access strategies work best in different practice settings.

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