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How language barriers influence provider workload for home health care professionals: A secondary analysis of interview data

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Abstract

Background: Increasingly, patients with limited English proficiency are accessing home health care services in the United States. Few studies have examined how language barriers influence provider role implementation or workload in the home health care setting.

Objectives: To explore home health care professionals' perspectives about how workload changes from managing language barriers influence quality and safety in home health care.

Design: A qualitative secondary data analysis using a summative content analysis approach was used to analyze existing semi-structured interview data.

Setting: A large urban home health care agency located on the East Coast of the United States.

Participants: Thirty five home health care providers [31 registered nurses, 3 physical therapists, 1 occupational therapist].

Results: A total of 142 discrete incidents emerged from the analysis. Overall, home health care providers experienced distinct shifts in how they implemented their roles that added to their workload and time spent with Limited English Proficiency patients and family members. Providers were concerned about interpretation accuracy and perceived it as potentially posing risks to patient safety. Changes in work patterns, therefore, sought to maximize patient safety.

Conclusions: Home health care providers decision-making about how they adapt practice when faced with a language barrier is a sequence of actions based on awareness of the patient's language preference and if they spoke another language. Subsequent choices showed proactive behaviors to manage increased workload shaped by their perceived risk of the threats posed by the quality of interpreter services. Future research should develop quantitative models examining differences in

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Declaration of Competing Interest

None.

workload when caring for limited English proficiency versus English speaking patients as well as the relationship between visit length and patient outcomes to determine optimal quality models.

Keywords

Home care services; Home health nursing; Home care agencies; Language barrier; Physical therapist; Limited English proficiency; Communication barriers; Nurses; Nursing

1. Introduction

With global migration increasing the numbers of immigrants who do not speak the official language of a country, health systems around the world are increasingly challenged with providing health services when a language barrier is present. Studies from around the world have shown how language barriers can affect health services delivery and influence patient outcomes (Ali and Watson, 2018; Burke and Ibrahim, 2018; Garcia et al., 2018; Green et al., 2018; Hyun et al., 2017; Lor et al., 2016; Mengesha et al., 2018; Njeru et al., 2018; Schwei et al., 2017, 2016; Yeheskel and Rawal, 2018). One sector of health care delivery that is less understood in terms of the impact of provider-patient language barriers is home health care (Davitt et al., 2015).

Increasingly, patients with limited English proficiency are accessing home health care services in the United States. Approximately 25 million United States residents have limited English proficiency (Pandya et al., 2011), which is defined by consensus as individuals who cannot understand or have little understanding of health care communication in English (Wilson et al., 2005). According to United States Civil Rights law, these individuals and their family members are required to have an interpreter made available to them in every health care encounter, including home health care (Ku and Flores, 2005). The interpreter can be an in-person, telephone, or video interpreter.

The passage of the 2010 Affordable Care Act [ACA] in the United States has encouraged more health care delivery in the home setting (Goldberg Dey et al., 2011). At the same time, most home health care agencies have fewer resources and less experience providing services for limited English proficiency patients than acute care settings (MEDPAC, 2017). This lack of experience is a concern because section 1557 of the Affordable Care Act, implemented in July of 2016, further strengthened the Civil Rights laws around language access in healthcare (Cyracom, 2016; Squires and Youdelman, 2019). Specifically, children under the age of 18 cannot interpret for their parents unless it is an emergency situation, family members interpreting can only occur with the patient’s consent, and health care staff are prohibited from interpreting unless they have had formal training as interpreters (Cyracom, 2016). Failure to adhere to these rules means health care facilities can be subject to legal action led by patients.

Overall, however, we lack an understanding of how home health care providers adjust their delivery of services to meet the needs of limited English proficiency patients and manage communication barriers whilst still ensuring quality (Squires et al., 2017). Understanding providers’ daily work/work load would further insights about how and where quality and safety issues may emerge from these change to practice patterns and influence outcomes.

Therefore, the purpose of this study is to examine how home health care professionals describe changes to their workloads when caring for limited English proficiency patients and identify where threats to the quality of care may arise. Data for this study draws from a parent study that was a mixed-methods analysis of post-acute outcomes in home health care among limited English proficiency patients.

1.1. An overview of home healthcare services organization in the United States

In the United States, home health agencies are the only Medicare-certified providers allowed to provide skilled care for acute, chronic, and rehabilitative conditions in people's homes. Home health care is one of the fastest growing health sectors in the United States. From 2002–2015, Medicare home health care utilization increased by over 60 percent and in 2015, over 12,300 home health agencies participated in Medicare, and about 3.5 million Medicare beneficiaries received services (MEDPAC, 2019).

Agencies in the United States use interdisciplinary clinical teams of skilled and unskilled nursing services coupled with allied health services to provide health care to patients (MEDPAC, 2017). To be eligible for home health care services in the United States, a person must be home-bound, under the care of a physician who certifies they are homebound, and have a need for intermittent skilled care, such as nursing or physical therapy (Landers et al., 2016). The quality of home health care, including assessments of patient safety, are publicly reported via the web-based Home Health Compare (Center for Medicare Services, 2018). Medicare quality-reporting standards require that certified agencies publicly report information on the quality of care patients receive. These publicly reported outcome measures are derived from the Out-comes Assessment Information System [OASIS] instrument (Landers et al., 2016; O'Connor and Davitt, 2012). All certified home health agencies must use OASIS.

1.2. Interpreter services implementation in the United States

Countries with significant immigrant populations or that have multiple official languages will rely on interpreter services to bridge communication barriers. Interpreter services—for both deaf individuals and those who do not speak the providers' language–are classified in four ways: (1) in-person, (2) dual role, (3) telephone, or (4) video. The latter two technology-based interpretation forms are self-explanatory as well as in-person. Dual role interpreters is the term used to describe healthcare providers who have documented fluency in another language and who are trained to serve as interpreters in healthcare situations (Squires, 2017). This role is distinct from a bi- or multi-lingual healthcare provider who may speak the language of a patient fluently but is not trained to interpret. Interpreters working in healthcare settings were not required to be certified in medical interpretation until recently with new regulations that were part of the Affordable Care Act (Cyracom, 2016). No form of online language translation service, such as Google Translate, is considered a legal substitute for the aforementioned interpreter services (Squires and Youdelman, 2019).

Healthcare interpreter services are paid for through general operating costs of the organization and in some states, insurance is required to reimburse for interpreter services (Ku and Flores, 2005). Some facilities may have interpreter services departments if the

demand is high while others will sub-contract with interpreter services companies to provide telephone, video, or in-person interpreting (Jacobs et al., 2011). New York State, the location of this study, is one that requires reimbursement for interpreter services.

Common problems with interpreter services implementation include scheduling in-person interpreters, long wait times for telephone interpreters, and concerns about accuracy of interpretation in healthcare settings (Brisset et al., 2013; Derose et al., 2009; Jacobs et al., 2007; Sleptsova et al., 2014). In the United States, access to interpreter services is a civil right and individuals may take legal action through anti-discrimination lawsuits if language access services were implemented insufficiently to meet their communication needs (Squires and Youdelman, 2019). With demand for interpreter services increasing annually due to demographic changes where now one in five household in the United States speaks a language other than English at home (Ryan, 2013), risks to healthcare organizations for lawsuits will increase unless language access services are implemented more systematically.

1.3. Health disparities and minority health research in home healthcare

Research about home healthcare outcomes in minority populations, including those who do not speak English, is limited to date (Davitt, 2012; Narayan and Scafide, 2017). Outcome disparities associated with race or ethnicity are increasingly captured in home health care research (Ayatollahi et al., 2018; Buurman et al., 2016; Feldman et al., 2016; Fortinsky et al., 2014; Miner et al., 2017; Russell et al., 2011; Towne et al., 2015). Immigrants are also often unfamiliar with how to access home care services in their new country (Suurmond et al., 2016).

Only one study focused on non-English speaking patients in home healthcare identified. They found that there were differences in workloads between nurses and physical therapists who spoke a patient's language versus those who did not (Squires et al., 2017). What drives those differences in workload, however, is not well understood.

2. Methods

We conducted a qualitative secondary data analysis of interviews collected between 2016 and 2017 from 35 English-speaking home health care professionals. Twelve participants spoke at least one additional language, four were allied health professionals, and 14 worked in managerial roles. All worked in a large urban home health care setting in the United States that has extensive organizational experience providing services for limited English proficiency patients; therefore, it provided an ideal setting for the parent study. Participants had between one and 24 years of home health care experience and 70% had at least a bachelor's degree. They were recruited for the study via purposive and snowball sampling, with recruiting contact initiated via in-person introductions and email. All interviews were audio recorded, transcribed, and analyzed in English. Institutional Review Board approval occurred via the authors' home institution and the participating agency.

From the aforementioned parent study, the category of "workload" emerged as a significant factor for home health care staff that influenced quality of care. Since qualitative secondary analyses seek to explore, in greater depth, an issue that arose from a parent study (Ruggiano

and Perry, 2017; Ziebland and Hunt, 2014), we opted for this approach to examine how providers saw their workloads affected by patient assignments involving limited English proficiency patients. The analysis fell within the boundaries of the parent study's institutional review board approval (Irwin, 2013; Yardley et al., 2014).

2.1. Data analysis

The data from the parent study were originally coded in Atlas TI 7.3 using an open coding approach after data saturation had been reached. Passages originally coded with the name "Workload" or "Workload – Bilingual Provider" were viewed as "new" data and consolidated into a single, analyzable file. General content analysis then structured the overall approach to analysis, an appropriate strategy for the paper's focus (Elo and Kyngäs, 2008; Hsieh and Shannon, 2005). A section of the interview coded with at least one of the two aforementioned codes was considered a "passage" of data.

The team began by analyzing each discrete passage and coding them using an open coding approach. Two coders [the parent study PI who is a bilingual health care provider and an occupational health expert] conducted the analysis simultaneously and achieved consensus during the in vivo coding process. This strategy helped minimize the risk of coder bias and increased inter-coder reliability. Coding was documented with participant number and transcript passage lines recorded to ensure a transparent and replicable coding process. Coding saturation – where additional codes do not emerge in large numbers (Hennink et al., 2017) – was achieved after 43 passages. The data harmonization process occurred through team consensus to generate categories and themes. We also conducting a matching process between categories, OASIS, and administrative data to identify quantitative variables for future quality focused research.

3. Results

From the parent study, 142 discrete passages focused on workload. Passages consisted of a minimum of 18 words and a high of 246. Five out of 35 participants made no direct or indirect mention of workload. The following themes were solidified from the analysis: Conditions that Contribute to Higher Workloads and Longer Working Days ["Conditions"] when managing language barriers in home health care; Willingness ["Willingness"] of home health care professionals to address language barriers; and Barriers ["Barriers"] contributing to home health care provider workload when managing language barriers.

We present our quotes in aggregate in tables because we felt it was better suited to highlighting the persistence and differences across roles of how language barriers affected professional role implementation. Table 1 provides supporting quotes from each theme. Table 2 takes the qualitative themes and categories and links them to the common data sources in US home health care, thereby illustrating how quality assessments can occur within existing data structures.

3.1. Conditions that contribute to higher workloads and longer working days

"Conditions" consisted of six categories that comprise the overall workload picture for a home health care provider. These included transitions [e.g. weekday vs. weekend admission,

timely notification of limited English proficiency status], caseload, interpreter services usage, visit length, geography, and continuity of care/language concordant visit.

Critical to the overall workload of the home health care provider was how the first visit went with the limited English proficiency patient, an aspect of scheduling and visit length. The providers' perceived quality of that visit could set the tone for the rest of the professional care provided and influence workload. For example, a "positive" and good quality first visit meant that the provider knew the patient and/or family had a language barrier in advance, was confident in the quality of interpreting services used, and few unanticipated issues arose. The provider did not perceive the visit as significantly different from one with an English speaker, even though all acknowledged that the visit would take longer. The question was: how much longer? None could anticipate in advance, which affected how they planned and managed the rest of their day.

Meanwhile, a "poor quality" start of care was described as one where it was clear the language barrier meant critical information was missed during care transitions from hospital to home or during the initial admission assessment. The next professional conducting the visit had to complete extra work to address the deficits, many of which posed a threat to patient safety in the home. Whilst home health care operations are 24/7, most professionals tend to work Monday to Friday; therefore, the quality of the first visit could be affected by the day of the week when it occurred and the available language access resources [i.e. in-person vs. telephone interpreters]. First visit timing is also a home health care quality indicator in the US (Center for Medicare Services, 2018). Table 1 Quote #1 provides an example of how scheduling and limited English proficiency patient status affected workload due to care transition issues.

The number of limited English proficiency patients in the provider's caseload was also a factor influencing workload. Overall, unless the provider spoke the language of the patient or family, more non-English speaking patients in a provider's caseload was perceived as increasing workload over all. These cases were also viewed as more complex and took more time, in part because of the additional time required to communicate via an interpreter.

When working with in-person interpreters or if the provider spoke the patient's language, participants described that caseload management was similar to those of English speakers, with visits taking slightly longer with in-person interpreters due to the nature of translation. Some language concordant visits could take longer if the provider was "making up time and effort for missed information", as described by a Russian speaking nurse. In-person interpreter access, continuity of care/language concordance, and caseload were closely linked.

Other interpreter services usage and its effects on workload varied depending on modality and patient age. Interpreter phone usage in the home consisted of providers using their cell phones [sometimes agency provided] to access the language line. This presented challenges if the patient was hard of hearing since even at the highest volume, patients often could not hear the interpretation. Providers also expressed mixed levels of trust about the quality of telephone interpreting, where they used a combination of observations of limited English

proficiency patient and family member body language to gauge quality. The inconsistency they had experienced with telephone interpreting quality contributed to perceptions of limited English proficiency patients requiring a higher workload, e.g. more time spent conducting a home health care visit, addressing patient needs, etc.

Finally, geography also affected home health care provider workload. In the study's urban setting, providers are assigned to geographic districts based on client population density of city block areas. As illustrated by Quote #2, these are periodically adjusted based on where service demand emerges. If there was not a language concordant provider available in one district, all bilingual providers reported having gone to see a limited English proficiency patient in another district to meet the service demand—even if it took them far out of their way. This latter example highlights the willingness many home health care providers have for meeting the needs of patients with whom they have a language barrier.

3.2. Willingness to address language barriers

"Willingness" reflected the overall sense of the providers' concerns and triumphs expressed when putting forth the added effort to address communication barriers with limited English proficiency patients and families and ensure quality. Perspectives often varied based on role or if they spoke another language besides English.

A bilingual Spanish speaking nurse spoke with pride about a patient she had seen on a daily basis for nearly three years. With her quote found in Table 1, Quote #3, it is clear that the patient she described was medically complex. She had reported earlier in the interview that he had repeated hospital [re]admissions for poorly managed diabetes and multiple issues with medication safety. The agency and the nurse worked in concert to keep the patient out of the hospital via daily visits, saving money for both the patient and health care system. It is important to note that the nurse did not explicitly state this was a perceived increase in workload, but just accepted that this was what needed to be done from a quality perspective.

Another nurse described the work she completed with an Arabic speaking patient, to whom she was not assigned but was drawn into providing care for him. Her efforts to communicate are illustrated in Table 1, Quote #4. The quote illustrates the challenges staff face just when trying to leave a message for a limited English proficiency patient via the interpreter phone and highlights the potential risks for miscommunication during the process. A poorly managed communication effort could have potentially resulted in the patient never receiving or receiving poor quality services had the nurse not been so diligent with follow up.

3.3. Barriers contributing to workload when addressing language barriers in home health care

"Barriers" consisted of policy, organizational, patient, and provider level factors that contributed to increasing workload in home health care in ways that lengthened the workday and potentially detracted from care for English speaking clients. Participants viewed these barriers differently based on their home health care role.

Overall, providers perceived working with limited English proficiency patients as more complex when compared to working with English speaking clients and their families. The

perceived complexity, they believed, affected their workload. The following two exemplars describe how complex tasks are affected by telephone interpretation modalities and contribute to workload. The fifth quote in Table 1 is from a nurse who described the multiple challenges of trying to teach wound care with a phone [dialed into interpreter services] between herself and a limited English proficiency patient. She also noted the infection control challenges of trying to place the phone strategically in a location where both the patient and provider can hear the interpretation while doing wound care teaching. Other participants noted the problems with telephone interpreters not understanding "wound care vocabulary" that further added time to their workload.

For the second exemplar, a physical therapist expressed his frustration with what he perceived as the inevitable circumstance of concluding a conversation and hanging up the phone, then only to realize he needed to ask more questions. In quote #6 in Table 1, when considering his overall workload and the telephone interpreter services contributions to it he offers an excellent reflection of how interpreter phones affect service implementation and where threats to safety could arise. His last part of the statement, that he preferred an in-person interpreter overall, was echoed by all providers in the study.

Table 1 has two additional exemplars from Manager and Care Coordination roles in home health care. Quote #7 highlights how bilingual managers often need to use their language skills to gain entrée into patients' homes, to establish the trusting relationship necessary to deliver services. Her quote illustrates the challenges family members can present if they have no experience with home health care services.

By contrast, Quote #8 comes from a Care Coordinator who manages referrals from hospital to home. Her example illustrates how other home health care staff may exhibit bias against non-English speaking patients in light of the added workload the patients require. This subsequently creates more work for the Care Coordinator because additional, unplanned follow-up is required to address when referral instructions were not followed.

3.4. Potential links to patient outcomes data

As stated previously, Table 2 illustrates where the themes link to the current outcomes dataset for home health care in the United States. Using the electronic health record's data dictionary as a guide, we linked workload related categories that emerged from the analysis to the best pairing of potential variables for quantitative analyses that would specifically examine workload in relation to patient outcomes in the home healthcare setting. The table highlights how qualitative data can be used to identify and select variables from existing electronic health records to plan future patient-centered outcomes research. Home health organizations outside the United States may have similar variables in their electronic health records and could conduct a similar matching exercise for country or organizationally specific analyses.

4. Discussion

This is one of the first interprofessional studies to provide important details about home health care providers who work with patients with whom they have a language barrier and

the potential threats to quality those pose in the home health context. The findings may prove useful in any country facing similar challenges around health system access and utilization for immigrants.

Significance in the findings was the consensus among the participants that non-English speaking patients in their caseload means longer visits and working days, which ultimately increases their workload and may pose a threat to the quality of care received by patients. The same phenomenon could occur in other countries when providers and patients face language barriers with their communication. The challenges identified around telephone interpretation and concerns about accuracy of interpretation in general were reinforced by this study as ongoing issues in twenty-first century healthcare practice, as found in multiple research studies (Brisset et al., 2013; Garcia et al., 2018; Genoff et al., 2016; Narayan and Scafide, 2017; Njeru et al., 2018; Rocque and Leanza, 2015; Teruya and Bazargan-Hejazi, 2013). Increased workload of home health care professionals caring for limited English proficiency patients also has occupational health implications. Researchers have documented work stressors and job dissatisfaction associated with home health care nursing (Hoppe et al., 2015; Neal-Bolyan, 2006; Thaweeboon et al., 2011). We found similarities with previous research that nurses can feel overwhelmed when trying to manage multiple complex patients without appropriate organizational resources in this study. A heavy caseload involving a majority of limited English proficiency patients, in combination with the additional workload, is a potential contributor to work stress. Additional research is needed to disentangle the factors contributing to work stress in home health care providers and how a patient's inability to communicate may add to it. Determining associations and mitigating threats to the quality of home healthcare services would also be useful. For any home health care agency, regardless of country, systematically addressing how to support individual clinicians caring for patients who do not speak the provider's language and recognizing the extra care burden they assume with them might be a better strategy to improve outcomes and quality of care. Our findings further illustrate the potential healthcare quality problems resulting from a lack of reimbursement for the use of interpreter services in home health care—a common issue in the United States. Without policies that specifically reimburse for the additional work required to complete safe, quality services for limited English proficiency patients, there is a significant risk to home health care service quality. In the case of countries with universal health coverage, integration of language access services across all points of service delivery will increase system costs; yet not adding language access services also increases costs because of the increased risk for errors related to communication problems. Strategic language planning may help to efficiently address these issues (Cooper, 1989; Mac Donnacha and HEireann-Gaillimh, 2000; Thomas and Lee, 2010).

Finally, our results suggest that home health care agencies serving large populations of patients who do not speak the national or dominant language may want to consider patient assignment making policies that considers language preference. Research currently under review from the parent study suggests the participating agency does undertake such practices, but it is not known how common this practice is across home health agencies nationally in the United States. Research with additional organizations will help determine organizational strategies for managing language barriers between home health care providers and patients.

4.1. Limitations

There are several limitations that need to be acknowledged in the context of this work. First, we used data from one agency, albeit a large, geographically diverse agency with multiple offices. In addition, our qualitative study design means that we cannot generalize these findings across all home health care settings despite the broader implications of the findings. More research involving other home health care agencies is needed to evaluate the persistence of the themes across care delivery contexts. Furthermore, as home health care grows and evolves, it is possible that some of the barriers identified in our sample may change or disappear. Finally, as with all qualitative secondary analyses, we were unable to return to our original participants for further clarification about statements made during the interviews (Wilson, 2014; Yardley et al., 2014; Ziebland and Hunt, 2014).

4.2. Conclusion

This study provides a foundation for examining the intersections of how language barriers may affect quality of care in home health care and the relationship to provider workloads. Countries experiencing similar increases in immigrant populations where language barriers will pose a threat to patient safety related outcomes may find the results useful to inform contextually specific research, especially since the organization of home health care services varies widely internationally. Further replication of the study through new primary qualitative data collection specifically focused on examining the intersections of workload and language barriers in home health care will also help determine the persistence of the themes across other agencies and contexts, as well as the consistency or variation of the study's findings in terms of clinical practice. This will be an important step toward differentiating generalizable and non-generalizable findings related to home healthcare professionals' workloads in relation to patients with language barriers.

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What is already known about the topic?

- Patients with language barriers experience problems accessing health care services.
- Providers who work with patients with language barriers find interpreter services cumbersome.
- Home health care is increasingly used by immigrant clients.

What this paper adds

- Home health care workers spend more time working with patients who do not speak their same language.
- Language access services are not designed to accommodate the unique care delivery context of the home.
- Home health care providers will alter working patterns based on the patient's language preference.

Table 1

Exemplar quotes illustrating core themes.

Theme 1: Conditions that Contribute to Higher Workloads & Longer Working Days **Quote 1 [language concordance and scheduling] –** *Speaker is a Bilingual RN*: It's like you're decreasing their number of visits that you have to do for the people, for the patient because you can do—you can pick up any kind of problem more quickly. You don't have to see a patient ten times during the span that she needs some kind of written order, some special equipment or whatever because she doesn't like, she doesn't want, or she is not able to use that one, and she changes her mind. **Quote 2 [geography] –** *Speaker is a Manager*: I would say as an agency we need more Spanish speaking, Creole speaking, but what we do if I have patients who speak predominantly just Spanish, I try to give it to my Spanish speaking nurses. I don't have like—I have two who are working' on my team. In some areas that's a large population, like in [the northern part of the city], on that team there are more Spanish speaking nurses I must say. The agencies look at the demographics and the population there. A lot of our nurses in Chinatown, predominantly those nurses are Chinese speaking or Korean speaking there in that area, so we kind of like worked it like that, you know, and if we have any difficulties, we call one of those nurses, "Can you kind of have some oversight of this particular case because I think you can, you know, work better with this case with more clarity." Stuff like that, yeah we do.
Theme 2: Willingness to Address Language Barriers **Quote 3 –** *Speaker is a Bilingual RN*: Since three years ago, I've adopted his case, he has never once been hospitalized. We've been managing his medications very well. I'm able to teach him how to manage his diabetes, his diet, dietary changes, following with the doctor. Yeah, and things like that. This is a pretty good success for us. **Quote 4 –** *Speaker is a Monolingual RN*: I spent a long time with this Arabic patient. Let me see. I actually never saw this patient, but it was a case that was opened, and he was in and out of the hospital because of abdominal pain. When I called the son, I had to use the language line to call him. I have to first call the language line, say that, they're gonna ask you, is this a—are you there already with the patient, or do we have to make a telephone call for you? Then I say, "You have to make a telephone call." First, I gotta tell the operator, "This is what I want to convey. In case the son doesn't answer, this is the message that you gotta leave for the son," 'cuz then, if the son doesn't pick up, then I'm not gonna be able to tell the interpreter sentence by sentence what he wants to leave as a message. I gotta spend at least five minutes telling him what I want to say, and then if he doesn't answer, this is what message you're gonna leave. Then, when the son calls me back, they have to call the language line back because they can't—the son can't call me back directly because I'm not gonna understand what the son is saying. Then, I gotta get the language line to call me. Sometimes, when I'm in between patients, I really can't—if I'm doing a wound care when the language line's calling me back, I really can't pick up the phone call. Then, we play phone tag. I spent so much time coordinating this case over the phone for this son and his father, even though I actually didn't see the patient, it took back and forth, back and forth, multiple phone calls, and calling the doctor, reporting what's happening. I think it took me a good 45 minutes to an hour coordinating this case over the telephone because I had to use the language line.
Theme 3: Barriers Contributing to Workload **Quote 5 –** *Speaker is a monolingual nurse who is a wound care expert:* Like, say for example, we're doing something like teaching wound care. It's very hard to describe to someone over the phone what you want the person you're trying to teach to do, but if the interpreter was in the house physically, I would perform the wound care, I would say the instructions and she would translate right then and there, so the patient's family or patients get a more step-by-step approach kind of like if she was watching a video. She would see exactly what I'm doing as the interpreter is interpreting it. **Quote 6** – *Speaker is a Physical Therapist talking about the challenges with using interpreter phones in the home:* "It's not really efficient because sometimes you feel like you finished already, and you say thank you, goodbye, you hang up, and you realize that it's another problem, and another problem, and you still have, again, to phone the service, and it takes three to five minutes to get someone for the correct interpreter. It's a pain in the neck, actually. If you have someone with you that's much better." **Quote 7** – *Speaker is a Chinese speaking Home health care Manager:* Sometimes the patient does not speak [English], for example, we have a majority of Chinese patients [in our area]. Majority of them, the patient might not speak any English or understand English … That's not really a problem if our clinician is not Chinese-speaking. Sometimes the patient's not English-speaking, family is not, totally nobody speaks English. Then, really the patient and the family really hesitate to get—to have someone other than Chinese staff to go in and they—at one point, just for example, they have a non-speaking clinician. They sometimes don't even open the door for them. They pretend they are not home. When I call them and they are home, so I explain to them who is coming to visit and why, you know, I understand this—we need to have a clinician to open the case, so we will assign someone to come. If it's on a weekend, to open the case, there's no Chinese-speaking nurse. [I have to explain to them] that we let them come to see you and assess you, what you need, and then on the weekdays we will assign your nurse. After I explain to them, they will—mostly they will accept, or they will say, I don't need to be seen today, you can send the Chinese nurse or a Spanish nurse on the following day. Something like that. They feel like—I don't know why, exactly. It's not just the language. Sometimes they feel closer [if you speak the language], but, you know, the similar culture. They may be able to talk to you more when you are the same culture, I believe. **Quote 8:** *Speaker is a Care Coordinator who manages hospital to HOME HEALTH CARE referrals:* I'll tell you that I have seen it pop in where—here. I'll just tell you a story. There was one patient. This is probably a year and a half ago now. A patient that was being discharged from the hospital with a new ostomy, and, it was really important to the family that they receive a Korean-speaking nurse. I explained to them up front that we make every effort to satisfy that need, but, if it's just not possible due to staffing limitations, then we'll be using a translator phone on speakerphone. They were okay with that when I explained that to them at the bedside, and, I did use a translator. The whole assessment was then probably taking about 40 minutes, which is pretty long for one of my assessments to be done, but, I do make every effort to treat patients in the language that they speak. I did deliver that message. I wanted to make it very clear to them there was no guarantees on my end but that we would try our very best. What ended up happening was, I got a phone call from one of our visiting nurses the next day. I got a phone call from one of our visiting nurses the next day being, "Oh, I can't get in touch with the patient." I was, "What are you talking about? I confirmed all the information." Whenever something like that happens, I get a little irritated because I do spend time doing my assessment. I said, "What are you talking about? I confirmed all the information. There's numbers for this person's family. I got 8 million backup numbers for you to call in case you couldn't reach the patient." While

that nurse was on the phone, I said, "You know what? Hold on for one second." I picked up my other phone. I called up the patient using a translator phone, and they answered the phone. It was, "What?" I was just irritated because I feel that nurse didn't make the effort once they saw that the patient didn't speak English. That is a complete assumption on my part. I could be totally wrong about that. It could be very well that they called all the numbers and nobody picked up and, then, I called, and then they picked up, but, my hunch was that the patient didn't get a fair shot because it was documented on my end that they didn't speak English.

Table 2

Quantifiable dimensions of workload drawn from the qualitative analysis and linked to existing electronic health record data points.

Qualitative Dimension	Measurable Variables in the EHR	Data Source	Type of Variable
Caseload	Number of new admissions Number of limited English proficiency patients Number of non- limited English proficiency patients	Agency Administrative Data	Continuous Continuous Continuous
Interpreter services usage	Telephone interpreter In-person interpreter Dual role interpreter [another staff member] Family member	Narrative note section OASIS	Dichotomous [Y/N] Dichotomous [Y/N] Dichotomous [Y/N] Dichotomous [Y/N]
Visit Length	Length of time of visit [start to finish] Time outside visit completing work	OASIS Agency Administrative Data	Continuous Continuous
Geography	Patient location in service area Patient location outside service area	OASIS	Dichotomous [Y/N] Dichotomous [Y/N]
Continuity of Care/Language Concordance	Continuity of Care – Same provider completes visits % of visits with Language Concordant provider	Agency Administrative Data	Dichotomous [Y/N Continuous
Visit Schedule	Days to first visit following admission visit intensity	OASIS	Continuous Continuous