

2014

## **An Analysis of Interpreter-Mediated Healthcare Interactions**

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An Analysis of Interpreter-Mediated Healthcare Interactions

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Submitted in Partial Fulfillment of the Requirements

For the Degree of Doctor of Philosophy in

Nursing

College of Nursing

University of South Carolina

2014

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## Dedication

To Sal, Claire, Spencer, Mia and Jack.

You are the reason for everything.

## Acknowledgements

This dissertation would not have been possible without the love, guidance, and good humor of my family and friends through the many years it has taken me to complete this process. Foremost, I would like to thank my committee chair Dr. DeAnne Messias, my mentor, editor, cheerleader, and most importantly, my friend. It is because of her continuous patience and encouragement that I can finally call her “DeAnne”, and I aspire to live up to the example she has set for me.

I would also like to thank my committee members Dr. Bev Baliko, Dr. Stephanie Burgess, and Dr. Jennifer Reynolds for their time, insight, and feedback. Their comments and critiques challenged me to be a better researcher, analyst, and writer. I feel fortunate to have been surrounded and supported by such expertise and experience.

I am blessed to have come from a family with high expectations and goals, and I would like to thank my mom and dad for instilling a desire in me and my siblings to not only learn, but to use our talents to help others. I would like to thank Cassie, Jerry and Brian, as well as their families, for their prayers and for inspiring me to do my best work. I would also like to thank my Granny Rachel for her weekly pep talks, and my Pumpa, Granny Polly and Papa for shaping the person I am today.

Finally, I am thankful for my family. My husband provided integral assistance in the production of this dissertation, along with innumerable foot rubs that made the process much more bearable. I would like to thank my children for understanding my

less than graceful moments and cheering me on anyway. This accomplishment is so much sweeter with them in my life.

## Abstract

The content and quality of communication between nurse practitioners and patients in primary care encounters contributes to diagnostic decision making, the provision of culturally appropriate interventions, and ultimately may impact health outcomes. In caring for patients with limited English proficiency, the addition of language discordance increases the complexity of the interaction and communication processes and the potential for disparate health outcomes. Most prior research on interpreter-mediated healthcare interactions has focused on accuracy, cost, satisfaction, and role enactment, but there is a lack of systematic research examining the actual interaction processes within the context of primary care clinic visits.

The aim of this descriptive, exploratory research was to examine the content and processes of triadic clinical communication encounters between Spanish speaking adult patients with limited English proficiency, primary care nurse practitioners, and language interpreters. Three nurse practitioners, 3 language interpreters, and 5 Spanish speaking adult patients with limited English proficiency participated in the research, conducted at two primary care clinics in a large metropolitan area in the southeast. Data sources included 5 audio-recorded triadic clinical encounters; 5 self-administered post-counter surveys completed by the nurse practitioners; 5 brief post-encounter audio-recorded interviews with the patients, in Spanish; and field notes from observations and interactions with the clinic staff. The analysis of the recorded triadic clinical encounter data incorporated techniques from both conversation and situational analysis. Findings

from the conversational analysis revealed situations in which one or more of the interactants actively identified and responded to communication *trouble spots*, which resulted in facilitated and enhanced triadic communication. In instances where the interactants did not recognize these *trouble spots*, important details that were salient to the diagnostic and decision making process were glossed over or even missed entirely, potentially affecting diagnostic decision-making and health outcomes. The situational analysis revealed the influence of macro-level policies and practices on the communication and decision-making processes. Interactive processes included *knowing how to negotiate relationships, coming to a mutual understanding, and dealing with multiple systems*.

These findings highlighted the complexity of interpreter-mediated healthcare interactions, revealed the influence of larger structural issues on language interactions during clinic visits, and underscored ways in which the use of language may impact individual health outcomes and broader health disparities. Implications for nursing practice include raising awareness of the ways in which broader political, social and economic pressures and constraints may be manifest in healthcare communication encounters and the need for attention and vigilance for communication cues that may indicate the need for further elucidation or exploration. Language interpreters, nurses, and other members of primary healthcare teams need education and training on how to identify and negotiate potential communication problems in real time to facilitate understanding, and incorporate intra-professional collaboration and practice to lessen health disparities for patients with limited English proficiency. Future research should compare and contrast the style and efficacy of interpretation as practiced by triads who



have an ongoing relationship as opposed to those who have had no previous interactions to determine if there are differences in satisfaction and healthcare outcome. An additional area of study would be exploration of non-verbal communication in interpreter-mediated healthcare interactions.

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## Chapter 1

### *Introduction*

#### *Patient-Provider Healthcare Interactions*

Healthcare disparities result from the intersections of patient, provider, and system influences and contributions (Klonoff, 2009) that impact marginalized groups disproportionately (Bent-Goodley, 2006; Daniels, 2006; Easley & Easley Allen, 2007; Krieger, 2003; McGinnis, 2006). At the individual level, a primary focus of research designed to address healthcare disparities is the *interaction between patient and provider*. While a seemingly simple conversation between patient and provider, the healthcare interaction is in reality an intricate interchange of the unique personalities, histories, assumptions, beliefs, cultures, expectations, and knowledge that each person brings to the interaction. Further, *how* the interactants negotiate this interaction holds consequences for diagnostic decision making, the development of interventions, patient satisfaction, and ultimately, healthcare outcome (Bonvicini et al., 2009; Chang et al., 2008; McCormick et al., 2006; Sheppard et al., 2008).

Healthcare interactions take place within institutional structures or systems that involve not only physical structures, such as clinics and hospitals, but also the complex system of healthcare delivery, financing, and policy. Despite the complexity of this multifaceted system there are similarities in the ways in which patients and providers come together to interact. This research focused on healthcare interactions in the context of primary care. Gaining access to a primary care provider requires that the potential patient

identify an appropriate provider, call and make an appointment, arrange transportation to the clinic, arrive with sufficient time to complete the required paperwork, present evidence of health insurance or negotiate payment for services, interact with a nurse who will measure the patient's vital signs and prepare the chart for the primary care provider, and then wait in an examining room until the provider is available for the actual consultation. The communication that occurs during the encounter involves exchanges of information, during which the patient is usually asked to consent to a physical exam and other testing, receives a diagnosis and recommendation for treatment, and then proceeds to checkout to finish the transaction and set up a follow up visit if needed. The occurrence of a patient-provider healthcare interaction also involves myriad other workers, each with distinct roles and responsibilities within the system – from receptionists, insurance and billing personnel, transportation providers, nurses, social workers, and medical and nursing paraprofessionals. At the systems level, managers and administrators are responsible for design and oversight to ensure that this intricate process is completed in as efficient a manner as possible in order to minimize costs, maximize turnover and preserve the timely flow of the schedule. Deviations from the process by any interactant may result in discrimination, stigmatization, or even exclusion from the system. For example, a patient who raises several issues at a clinic visit or who does not follow the provider's recommendation may be may be labeled demanding (Stacy, Henderson, MacArthur, & Dohan, 2009) or noncompliant (Burcher, 2012); the provider who spends extra time may be reprimanded by her peers for inefficiency (DeMaria, 2011). Institutional structures exert power through the perpetuation of structures, expectations, and outcomes that influence how individuals perform and

interact within the system. Thus, healthcare workers may become a conduit of systemic power, perpetuating and transmitting hierarchical and institutional pressures onto patients (Galtung, 1969; Rimal, 2001; Shavers et al., 2012). Because the healthcare worker is socialized within this structure, there may be little overt awareness of the existence of these pressures, much less how these institutional power structures may affect clinical interactions and decision making.

### *Interpreter-Mediated Healthcare Interactions*

For patients with limited English proficiency, *i.e.*, patients whose primary language is not English and who have not developed fluency in speaking and/or reading English (U.S. Department of Health and Human Services, 2012), the healthcare interaction necessitates the involvement of an interpreter to facilitate the process if the provider is not proficient in the patient's native language. An *interpreter* is any third party operating within a healthcare interaction whose role is to facilitate oral language interpretation between the patient and provider (NCIHC, 2001). A *professional interpreter* is an interpreter provided and paid for by the healthcare organization (Karliner, Jacobs, Chen, & Mutha, 2007); while the majority of interpreters are not certified, national level certification has recently become available ("Certification commission for healthcare interpreters," 2014). An *ad hoc interpreter* is an untrained, bilingual person such as a family member, bilingual staff person, or other person that identifies as bilingual who is called on or volunteers to interpret (NCIHC, 2001).

Lack of language concordance and the addition of a language interpreter further complicate this already complex situation within which patients and providers are expected to communicate and perform. With the addition of an interpreter, what was

previously a dyadic (i.e., two person) interaction between the patient and provider becomes much more complex – a triadic, multilingual, interpreter-mediated interaction.

The case of language discordance between patient and provider and the required addition of a language interpreter involve challenges and changes not only at the level of the patient-provider interaction but also throughout the system. Language discordance complicates how institutions provide healthcare as it may be perceived to impact efficiency (Hadziabdic, Heikkilä, Albin, & Hjelm, 2011). Simply understanding what is needed to implement interpreter services at any particular facility may be daunting. The vast majority of hospitals that responded to an initiative to improve language services reported challenges in identifying patients in need of language services (Regenstein, Mead, Muessig, & Huang, 2009). As language issues directly affect the provision of healthcare services, the Office of Minority Health (OMH) in the Department of Health and Human Services recommended the implementation of the National Standards for Culturally and Linguistically Appropriate Services in Health Care, commonly known as the CLAS standards (U.S. Department of Health and Human Services Office of Minority Health, 2001). Among others, the four mandated CLAS standards require facilities receiving federal funding to provide interpreter services at no charge to the patient. However, as regulation is erratic, there are inconsistencies in how interpreter services are implemented individually (Diamond, Wilson-Stronks, & Jacobs, 2010; Kairys & Like, 2006; Youdelman & Perkins, 2005).

In order to better understand and improve healthcare interactions involving patients with limited English proficiency, prior research has focused on key components of the interpreted healthcare interaction. Some researchers have examined the quality of

interpreter services, such as interpretation accuracy (Butow et al., 2011; Esposito, 2001; Jackson, Nguyen, Hu, Harris, & Terasaki.G.S., 2010; Laws, Heckscher, Mayo, Li, & Wilson, 2004; Pham, Thornton, Engelberg, Jackson, & Curtis, 2008), various modes and comparative efficacy of interpreter services (D. Z. Kuo, O'Connor, Flores, & Minkovitz, 2007), as well as issues surrounding ad hoc interpreters (Green, Free, Bhavnani, & Newman, 2005; Hunt & de Voogd, 2007). Others have focused on the impact of interpreter services, including satisfaction (Bagchi et al., 2011), trust issues between patient, provider and interpreter (Hsieh, Ju, & Kong, 2010; Robb & Greenhalgh, 2006), and the impact of interpretation on the quality of the healthcare encounter (Hsieh & Hong, 2010). Yet very few researchers have investigated the processes and mechanics of the actual interaction and the role each interactant performs, and how those individual interactions and performances repeated over time codify the identity of each role. With the increasing numbers of persons with limited English proficiency in the United States, these *repeat performances* have become increasingly more frequent in primary care settings.

As of 2011, an estimated 36.6 percent of the residents of the United States identified with a minority group (U.S. Census Bureau, 2012). Of these minorities, Hispanics make up the largest and fastest growing ethnic group. Currently, there are approximately 50.5 million Hispanics in the United States (Ennis, Rios-Vargas, & Albert, 2011). From 2000 to 2010, the group experienced a growth rate greater than any other ethnic group and accounted for almost half of the 27.3 million population increase (Ennis et al., 2011). Although the U.S. Census Bureau does not collect information on immigration status, it is estimated that just under 11 million Hispanics are undocumented



(Passel, 2005). In 2007 over 55 million people in the United States reported speaking a language other than English in the home (Hasnain-Wynia, Yonek, Pierce, Kang, & Greising, 2006; Shin & Kominski, 2010). Persons with limited English proficiency reported experiences with classism and perceived discrimination (Hausmann et al., 2011; Johnson, Saha, Arbelaez, Beach, & Cooper, 2004), less access to regular healthcare and preventative services (Derose & Baker, 2000; DuBard & Gizlice, 2008), and difficulty with healthcare system navigation (Blewett, Smaida, Fuentes, & Zuehlke, 2003). Linguistic minorities reported worse healthcare than ethnic and racial minorities and among Latinos, those who preferred to speak Spanish reported poorer quality of life (Weech-Maldonado et al., 2003). Thus, the need for interpreter services in healthcare has grown exponentially in the US, especially among Spanish speakers. By addressing the complexity of interpreter-mediated healthcare interactions, this research adds to the existing body of knowledge on effective approaches to ameliorate and eventually eliminate healthcare disparities.

#### *Theoretical and Methodological Framework*

The goal of this research was to examine the situation of interpreter-mediated healthcare interactions, and more specifically, the intricacies of actual interactions. These micro and macro level processes are inextricably interconnected; in other words, each encounter creates and recreates, over time, the larger situation. The larger situation in turn impacts and shapes each individual encounter. Examination of processes in isolation is likely to result in a less complete understanding of the complexity of the situation.

As a feminist research, it was imperative that I situate myself within the context of this research and the implicit and explicit power relations involved in relation to the

phenomenon of interest and the research process. I approached this research from my position as a practicing, primary care pediatric nurse practitioner for over 20 years, informed by my basic fluency in Spanish, experiences of triadic healthcare interactions with my patients and their families, and when needed or available, usually ad hoc interpreters. These countless encounters spurred me to explore the significance of language within my nurse practitioner role, with the aim of better serving patients with limited English proficiency. My doctoral education allowed me to delve into the fields of phenomenology, anthropology, feminism, and linguistics to address these questions. In the course of my studies and examination of my own practice, I identified several theoretical and methodological influences that inform my current understanding of patient-provider healthcare interactions, and more specifically, interpreter-mediated healthcare interactions.

#### *Conceptual and Methodological Approaches*

In the following sections I briefly review several key concepts and the methodological approaches that inform my examination of interpreter-mediated patient-provider interactions: *social identity, performativity, and role; symbolic interactionism and orders of indexicality; conversation analysis, and situational analysis.*

*Social Identity, Performativity, and Role.* Traditionally, *identity* was conceived as located within the mind, and language use as the connection between the inner and outside world (Bucholtz & Hall, 2005). Identity may also refer to personal characteristics such as ethnicity, gender, age and other recognizable attributes. Within the confines of this study, the individual interactants may identify themselves by features such as ethnicity (such as Latino or Mexican) or role (provider or interpreter).

Identity can also be thought of as a process of becoming, one that is never fully completed. Feminist philosopher Judith Butler used phenomenology to explore and elucidate the feminist critique that biology somehow determines and explains the reality of women's social existence (Butler, 2003). In order to expose these hidden constructs, Butler utilized the principle of embodiment as espoused by Merleau-Ponty to develop the concept of *performativity*, in which the body is seen as a *possibility* that is neither predetermined by its biology nor understandable outside of its historical context (Merleau-Ponty, 1962). The process of inhabiting and performing a role within cultural and historical contexts requires re-enactment in each social encounter. For Butler, gender is a state of *becoming*, rather than a *natural* biological state pre-determined by particular physiology. Gender identity is, at its core, a performance within a historical context that is repeated and refined over time. Further, gender is the *effect* of the performance – gender does not *determine* the performance. Butler additionally posited that an individual is rewarded or punished by social approval or disapproval for how well they *do* their gender. Performing the *script* of one's gender well confirms the essential, assumed naturalness of what is expected; failure to follow the script is taboo and must be punished (Narayan, 2004).

There are several parallels between learning and social identity that are a useful heuristic to illustrate how identity and role are developed. Wortham (2006) drew distinctions between cognition and learning, visualizing “learning” as the outcome of cognitive events accumulated over time. Just as a single cognitive event does not equal learning, a single personal performance does not equal social identity. This “becoming” occurs over time (Lemke, 2001), and as for Butler, subsequent performances *thicken* the

identity in a process that eventually narrows down the possible identities one can perform to the most natural, the validity of which then becomes difficult to challenge (Silverstein, 2003).

The reiterative nature of performativity holds implications for the development of the roles enacted within interpreter-mediated healthcare interactions. These interactions are performed by individuals in different times and contexts; these individual performances over time *create* role expectations. What a patient, provider, or interpreter *does* within the situation of an interaction is a negotiated process confined and shaped by the reactions of the other interactants within that situation. As these interactions are re-enacted by others, the roles become more defined and delineated and what the individual interactants are allowed to do becomes more constrained. As Butler posited, adherence to a socially accepted identity may be seen as normal, but is not necessarily neutral.

*Interpreter as conduit* may be considered more professional than *interpreter as advocate*, but that does not mean there are no repercussions to this form of role conceptualization. Narayan (2004) suggested dissonance and other consequences may result if interactants do not follow the script of their roles as defined by the re-enactments that came before it.

*Symbolic interactionism and orders of indexicality.* Symbolic interactionism is an approach to the study of human behavior credited to George Mead, whose writings were never published, and his student Herbert Blumer (1969) who explicated Mead's theoretical approach to behavior. The theory of symbolic interaction contains three basic premises: 1) humans respond to things based on the meanings they assign to those things, 2) the meaning of these things arises from social interactions, not individual experiences, presupposing a common language, and 3) meaning is modified through an interpretive

process of inner dialogue Mead referred to as *mind*. While individuals have a unique perspective of reality based on meaning they give to physical, social or abstract objects, individuals within the same social world negotiate through mutual indication a commonly understood meaning for a particular object, a process which is emergent and ongoing (Strauss & Corbin, 1998; Tovey & Adams, 2009). Conversely, the same object may hold different meanings for individuals operating in different worlds and different times, which may result in misunderstanding. The potential for confusion and misunderstanding in meaning negotiation is amplified by language discordance and the process of interpretation when the social worlds of the patient, provider and interpreter intersect in the primary care setting (Tovey & Adams, 2009).

Orders of indexicality are helpful in explaining how individuals appropriate widely circulating models of identity categories for use in unique contexts (Silverstein, 2003). Indexical order describes how language use may be linked to social status. For example, the act of speaking Spanish presumes a person who can speak Spanish; this first-order indexical indicates nothing more than linguistic ability. However, depending on socio-political forces within a local context, *speaking Spanish* may come to index something more – for example, an undocumented immigration status. Over time, individuals may infer assumptions about the social status of anyone who speaks Spanish within that context; in other words, semiotic processes are the means by which people imbue sign forms with social meaning. Thus, a metapragmatic model of social identity may be appropriated and modified to fit the unique properties of a local context and timescale. With repeated application, alternate explanatory models for individual

behaviors may be discarded, resulting in a social identification that becomes codified and resistant to contestation.

### *Purpose of the Study and Research Aims*

This research examined how interpreter-mediated healthcare interactions are played out in different contexts, illuminated how the interactants' roles were constructed, understood, and challenged. For this exploratory, descriptive research, I utilized multiple methods to examine interpreter-mediated family practice healthcare interactions between nurse practitioners, and Spanish-speaking adult patients. The study addressed two broad questions:

- 1) How did Spanish speaking adult patients, nurse practitioners, and language interpreters conceptualize and enact their own roles, conceptualize and perceive each others' roles, and respond to the triadic communication interactions and styles within the context of primary care consultations?
- 2) How did structural, cultural, linguistic, and other factors interact and intersect with triadic communication within the context of primary care consultations?

The specific research aims were to:

- 1) Examine communication styles, interactions, and responses enacted among Spanish speaking adult patients, nurse practitioners, and language interpreters in the context of primary care consultations;
- 2) Explore self-representations, perspectives, and personal understandings of Spanish speaking adult patients, nurse practitioners, and language interpreters in the context of primary care consultations; and

- 3) Identify the structural, cultural, linguistic, and other factors that interact and intersect with triadic communication within the context of primary care consultations and explore how these processes occur.

#### *Data Collection and Analysis*

I utilized a multi-method approach to data collection and analysis. Data collection involved situational mapping, audio-taped interactions, and post-interaction surveys and interviews. The data analysis processes combined elements of conversation analysis and situational analysis.

*Conversation analysis.* Conversation analysis, established by sociologist Harvey Sacks (Sacks, Schegloff, & Jefferson, 1974), approaches communication interactions in healthcare settings as naturally occurring, collaborative, co-constructed events. Communication is a process that takes place at all levels of human experience, and includes the transmission and reception of information and ideas, using signs and symbols, between sender and receiver (Finnegan & Viswanath, 2002). This iterative process is characterized by turn-taking negotiated by the interactants. How these processes unfold reveals a great deal about power, structure, and the agency of the participants. The act of *doing language* involves much more than simply word choice and order; how something is said is a component what is said (Drew, Chatwin, & Collins, 2001). What is left unsaid may be as important as the utterance; as with situational analysis, “sites of silence” (Clarke, 2005, p. 85) may reveal previously unidentified areas of influence. These details may be subtle, especially if a way of speaking is commonly shared within a speech community (Hymes, 2005).

Conversational analysts study issues such as utterances as social action, the sequencing of turn-taking, interactional detail such as silences and interruptions, and how participants manage the course of conversation (Maynard & Heritage, 2005). These methods have been used to examine how parents pressure recalcitrant physicians to prescribe antibiotics for their child (Stivers, 2002), how nurses and physician utilize new technology for the care of cardiovascular patients (Pappas & Seale, 2010), how less powerful nurses are silenced during shift change reporting (Buus, 2006), and how nurses and parents collaborate through “small talk” to minimize a child’s discomfort during vaccine administration (Plumridge, Goodyear-Smith, & Ross, 2009).

Integral to conversation analysis are transcription techniques that represent how conversation flows, including the reflection of silences and inflection. Traditional transcription techniques result in an acontextual, readable document that is then coded to reveal themes and processes. This word-by-word transcription glosses over the subtleties of communication and the impact of contextualization cues, leading to possible misinterpretation and a less rigorous analysis of the issue under study. Inherent to this methodological approach to the analysis of conversation structure, embodiment, and context is the notion that it is necessary to deconstruct the interactions involved in order to further understanding of hidden processes driving communication.

*Situational Analysis.* Situational analysis, developed by Clarke (2005), a close collaborator of Anselm Strauss, expands Grounded Theory beyond what Stauss and Glaser originally conceptualized and operationalized (Glaser & Strauss, 1967; Strauss & Corbin, 1998). Situational Analysis is a robust method to address the complexity of social interactions by recognizing the interplay between interactants and non-human elements



that make up the situation under study. The goal of Grounded Theory is the creation of theory through an iterative, concurrent process of data collection and analysis that results in the inductive construction of thematic categories (Charmaz, 2006). Although Situational Analysis does incorporate some of the classic Grounded Theory analytic techniques tools of grounded theory such as memoing and coding, Clarke extended the method, asserting that differences found through research are expected and should be represented rather than reduced and universalized. More forcefully, she rejected the characterization of data variation as negative cases and urged researchers to avoid oversimplification in the representation of commonalities and social processes. Toward this end, she recommended several strategies for “pushing grounded theory around the postmodern turn” (p. 19) by acknowledging the embodiment and situatedness of knowledge producers and focusing the unit of analysis to the broader situation. Further, she suggested researchers abandon the normative for the representation of multiplicities, and recognize theorizing as analytically sufficient to represent emergent phenomena. Finally, the creation of empirical analytic maps should be used to represent the situation of study, and attend to the historical, narrative and visual discourses interwoven through the situation under study.

### *Summary*

In his qualitative, multi-method study of interpreter-mediated healthcare interactions, I employed conversation analysis to examine how individual interactions contributed to the construction and evolution of the larger arena. I also incorporated elements of Situational Analysis, to analyze the broader contexts in which the interactions occurred. The study emerged from my familiarity with the literature

surrounding interpretation and the experience of interpreters in healthcare settings, as well as my personal experience as a healthcare provider whose primary care practice involves the delivery of healthcare to persons with limited English proficiency. In this introductory chapter I provided an overview of the primary concepts guiding this study and identified areas within the intersecting social worlds of patients, providers and interpreters that converge in triadic healthcare interactions, and specifically, interpreter-mediated interactions, that may contribute to health disparities. I employed multiple modes of analysis to explore interpreter-mediated healthcare interactions in primary care settings. Research focusing on a single level of analysis may contribute to lack of attention and recognition of these “sites of silence” (Clarke, 2005, p. 85); I used Situational Analysis to situate the study and recognize the intersection of elements in a complex context. Conversation analysis allowed a critical dissection of the process of language negotiation within interpreter-mediated interactions; situational analysis expanded the scope and complexity of the examination to the broader social and institutional contexts and interactions at play as nurse practitioners, patients with limited English proficiency, and language interpreters perform their roles in interpreter-mediated communication. In Chapters 2 and 3 I review the relevant literature and describe the methodology and implementation plan for the research process. Chapter 4 includes the research findings, organized into two manuscripts. Chapter 5 is discussion.

## Chapter 2

### *Review of Literature*

As I discussed in Chapter 1, embedded meta-pragmatic models may be appropriated in unique contexts to inform behavior and set up role expectations for specific situations, including patient-provider healthcare interactions. Thus, interactants' expectations regarding the typical healthcare interaction may inform expectations for roles and interactions within the context of interpreter-mediated interactions. Further, discrepancies and silences within the bodies of research on healthcare interactions and interpreter-mediated healthcare interactions may offer insights and direction for the current research. In the following sections I present a review of the literature in 4 main areas: patient-provider relationships, satisfaction, decision-making and role implications; research on benefits and costs of healthcare interpretation, interpreter roles; and health outcomes related to interpreter involvement.

#### *Patient-Provider Interactions and Outcomes: Assessing Patient Satisfaction, Decision Making and Role Implications*

Patient satisfaction measures have become increasingly popular as a way to evaluate health care provider communication and perceived competence (Abdulhadi, Al Shafae, Freudenthal, Östenson, & Wahström, 2007; Dutta-Bergman, 2005; Kerr, Smith, Kaplan, & Hayward, 2003; Korhies et al., 2008; Kroll, Beatty, & Bingham, 2003).

Satisfaction measures reflect the framing the patient as a consumer and the services of the provider as a commodity. This economic conceptualization has repercussions for the changing role of the patient within the healthcare system. Rather than acquiescence, patients are now expected to manage their own healthcare through at-home monitoring and personal research into the nature of their infirmity (Herrick, 2005), partner with the provider for problem-solving (Young & Flower, 2001), negotiate relational control within the interaction to minimize competition and dominance that may affect healthcare outcomes (von Friederichs-Fitzwater & Gilgun, 2001), and improve their communication skills to more fully participate in the healthcare encounter (Cortes, Mulvaney-Day, Fortuna, Reinfeld, & Alegría, 2008). Verbal participation in the healthcare interaction is part of the expected role of the patient; when this did not occur as expected, patient satisfaction and healthcare outcome was affected (Street & Millay, 2001) or it affected the provider's subsequent clinical decision making (Chang et al., 2008). Interventions to minimize the negative impact of the interaction on patient satisfaction and ultimately improve outcomes included race concordance (Royak-Schaler et al., 2008; Schoenthaler, Allegrante, Chaplin, & Ogedegbe, 2012) and gender matching (Henderson & Weisman, 2001) of the patient and provider, as well as programs to improve provider (Farrell, La Pean, & Ladouceue, 2005) and patient communication skills (Young & Flower, 2001).

*Assessing Discord, Satisfaction, and Costs of Interpreter-Mediated Healthcare*

In the unique situation of interpreter-mediated healthcare interactions, the expectation that the patient should be an active participant in the interaction requires that language discordance be addressed. There is overwhelming recognition of the safety issues inherent in language discordant interactions and a consensus that professionally

interpreter mediated healthcare interactions are not only preferable, but a civil right (Messias, McDowell, & Estrada, 2009; The Cross Cultural Health Care Program, 2012). Nevertheless, the practical aspects of healthcare provision in a language discordant situation pose challenges for providers and patients alike, and examples of discord and frustration abound.

As would be expected, interactants operating within the healthcare system balked at language interventions that may seem to conflict with the institutional goals of efficiency and cost reduction. Due to time pressures, hospital nurses utilized interpreters less frequently than physicians (Carnevale, Vissandjée, Nyland, & Vinet-Bonin, 2009), choosing instead to “get by” or barely speak at all to their patients with limited English proficiency (Schenker, Péreze-Stable, Nickleach, & Karliner, 2011); other nurses experienced stress in interpreted situations (Barnes, Ball, & Niven, 2011). Training in the appropriate use of interpreters affects utilization. Because nurses serve as “gatekeepers” to interpreter services, those that have training were more likely to access those services; nurses without exposure to interpreter usage were more likely to depend on family members for interpretation rather than advocate for improved services (Gerrish, Chau, Sobowale, & Birks, 2004).

Reliance on ad hoc interpreters, and most often family members, was a common means of dealing with language discordance. Healthcare providers cited matters such as the perceived lack of interpreter availability, increased workload, delays, and time delays to justify why professional interpreters were not used (Hadziabdic et al., 2011). However, unlike clinic visits mediated by ad hoc or telephone-based interpreters, visits accompanied by full-time hospital interpreter were not significantly different in length

from non-interpreted healthcare encounters (Fagan, Diaz, Reinert, Sciamanna, & Fagan, 2003).

Despite obvious benefits, underutilization of interpreters is common, and the cost of providing interpreter services is an area of concern. Although oncology providers identified benefits from utilizing interpreters, the majority reported they rarely or never used them due to accessibility and reimbursement issues (Karlner, Hwang, Nickleach, & Kaplan, 2011). But while healthcare providers seldom reported having any first-hand knowledge of the actual costs of interpretation services (Gadon, Balch, & Jacobs, 2007), the benefits outweighed the costs when juxtaposed with the increased rate of preventive service visits (Jacobs, Leos, Rathouz, & Fu Jr., 2011; Jacobs, Shepard, Suaya, & Stone, 2004) and decreased return visits to the emergency room (Bernstein et al., 2002). Context also impacts cost and utilization. For example, physicians in solo practice and single-specialty groups were found to be less likely to use trained interpreters (D. Z. Kuo et al., 2007; Rose et al., 2010). A study of medical residents indicated they normalized the underuse of interpreters, relying again on “getting by” (p. 256) with more convenient family members or even doing without an interpreter if they felt the time constraint posed by calling a professional interpreter outweighed the importance of communication on diagnostic decision making, even as they recognized their patients with limited English proficiency were receiving inferior service (Diamond, Schenker, Curry, Bradley, & Fernandez, 2008).

There is substantial evidence that the use of professionally trained interpreters increased patient satisfaction among those with limited English proficiency (Bauer & Alegria, 2010; Gany et al., 2007; D. Kuo & Fagan, 1999; Morales, Elliot, Weech-

Maldonado, & Hays, 2006; Moreno & Morales, 2010; Ramirez, 2008; Weech-Maldonado et al., 2003). Karliner and colleagues also found that utilization of professional trained interpreters raised the level of clinical care to that of persons without language barriers (Karliner et al., 2007). However, patients saw the presence of interpreters as a necessary hindrance (Hadziabdic, Heikkilä, Albin, & Hjelm, 2009), and beyond satisfaction measures, which have been shown to be problematic (Kerr et al., 2003), surprisingly little research has been done on the perceptions of the healthcare interaction as experienced by patients with limited English proficiency.

*The Role of the Interpreter: Role Expectations and Role Dissonance.*

The unit of study most commonly examined in clinical healthcare communication research is the dyadic encounter – the interaction between patient and provider (Connor, Fletcher, & Salmon, 2009; Fernandez et al., 2004). Indeed, an entire body of research focuses on patient-provider communication (Aikens, Bingham, & Piette, 2005; Beck, Daughtridge, & Sloane, 2001; Ciechanowski, Katon, Russo, & Walker, 2001; Frantsve & Kerns, 2007). When approaching interpreter mediated encounters, a dyadic approach would be appropriate if the presence of the interpreter is conceptualized as a conduit role (Hsieh, 2006). *Interpreter as conduit* was originally modeled on the interpreter role within the legal system, and presumes that the interpreter is an invisible, neutral and efficient party whose core duty is to transmit messages from one language to another (Avery, 2001). Unfortunately, this conceptualization can lead to role conflict and dissonance experienced by the interpreter (Butow et al., 2012; Hsieh, 2006, 2008; McDowell, Messias, & Estrada, 2011; Messias et al., 2009). This dissonance may be explained, in part, by the focus on dyad communication as the natural, integral interaction

in healthcare (Bensing, van Dulmen, & Tates, 2003); however, as Hymes states, “the common dyadic model of speaker-hearer specifies sometimes too many, sometimes too few, sometimes the wrong participants” (2005, p. 10).

*Affect and Effect: Healthcare Outcome and Interpreter Involvement*

Interpreters impact the healthcare interaction. Previous research has shown interpreter affect influenced patient decision making (Preloran, Browner, & Lieber, 2005) and increased appropriate referral rates (Bauer & Alegria, 2010); untrained interpreters' errors in interpretation resulted in more significant negative diagnostic impact (Bauer & Alegria, 2010). The opposing role conceptualizations of *interpreter as conduit* versus *interpreter as advocate* also caused dissonance, as each stance poses unique challenges for the practicing interpreter. The conduit role stipulates the interpreter should be a “neutral” and invisible party through which language is changed and transmitted without addition or omission, a disengaged “robot” (Hsieh, 2008) or “instrument” (Avery, 2001). However, interpreters related challenging situations in which they felt uncomfortable with the content they were called on to interpret as it may be culturally inappropriate or offensive (Hudelson, 2005; Luk, 2008), and may be even more difficult for ad hoc interpreters who have not received training. For family members that serve as interpreters, there may be interests in conflict with the patient which may affect how and if utterances are interpreted (Leanza, Boivin, & Rosenberg, 2010; Seidelman & Bachner, 2010). These examples highlight the constraint and tension interpreters experience and suggest that the conduit role is inadequate when considering the best interests of all the interactants involved in a healthcare interaction (Angelelli, 2004; Avery, 2001; Dysart-Gale, 2005; Hsieh, 2008; McDowell et al., 2011; Messias et al., 2009), yet healthcare



providers often adamantly insist on this model, and may even become angry if they perceive that the interpreter is straying from these guidelines (Hsieh & Hong, 2010).

Ethical issues and communication goals may cause interpreters to deviate from the *interpreter as conduit* model (Rosenberg, Leanza, & Seller, 2007) and “guiltily incorporate other approaches as needed” (Avery, 2001, p. 10). The “interpreter as advocate” conceptualization positions the interpreter as a facilitator and negotiator of both language and culture, and an engaged, visible member of the healthcare team. When interpreters also advocated in addition to interpreting for their patients, there was an increase in preventive screenings (Graham, Jacobs, Kwan-Gett, & Cover, 2008) and diagnostic interventions (Preloran et al., 2005). Interpreters also served as “co-diagnosticians” (Hsieh, 2007 p. 925) with the provider to facilitate appropriate diagnosis, although there was a danger in overstepping boundaries between patient, provider and interpreter that may result in confusion (Hsieh, 2010; White & Barton Laws, 2009). Regardless of how researchers or study participants conceptualized the interpreter role, the majority of studies of healthcare interpreters focused on interview material regarding personal perceptions and self-representations of role, rather than the actual interaction itself (Fatahi, Mattsson, Hasanpoor, & Skott, 2005).

#### *Interpreter-mediated Healthcare Encounters*

The goal of language interpretation in healthcare is to facilitate communication between patients and healthcare providers who do not speak the same language or have a sufficient level of oral fluency to communicate with each other. The provision of language interpretation services is ethically necessary (Messias, McDowell, & Estrada, 2009). However, the addition of the interpreter to the dyadic patient-provider interaction

may create additional barriers to understanding and communication within the context of the resulting three interactant, or triadic, encounter. An alternate approach to the interpreter mediated healthcare interaction is to conceptualize it as a triadic encounter, thus recognizing the contributions of all interactants. Past research on triadic healthcare interactions focused on triads of parent-child-provider (Brody, Scherer, Annett, Turner, & Dalen, 2006; Nova, Vegni, & Moja, 2005; Stivers, 2001; Tannen & Wallat, 1983; Vaknin & Zisk-Rony, 2011; van Staa, 2011) and elderly-caregiver-provider (Ishikawa, Roter, Yamazaki, & Takayama, 2005; Kahana & Kahana, 2003; Karnieli-Miller, Werner, Aharon-Peretz, Sinoff, & Eidelman, 2012; Sakai & Carpenter, 2011). Previous research on interpreter -mediated healthcare communication conceptualized as triadic interaction includes an exploration of the interaction with the interpreter conceptualized as a “neutral bridge” (Fatahi, Hellstrom, Skott, & Mattsson, 2008). However, such research rarely considered the larger context of the setting; the authors of a study whose purpose was to evaluate interpreter mediated healthcare encounters conceptualized as a triadic interaction quickly recognized the limitations of isolating the process from the situation (Greenhalgh, Robb, & Scambler, 2006) and thus refined their conceptual framework midway through their data collection in order to inform their findings.

Three previous studies that utilized conversation analysis to examine interpreter-mediated talk include triadic interactions of patient- speech language pathologist- interpreters in Zulu/English (Friedland & Penn, 2003), patient-physician-interpreter in Russian/English (Bolden, 2000), and patient-physician-interpreter in English/Czech, English/Urdu or English/Mirpuri Punjabi (Li, 2013). To my knowledge, there are no published studies of interpreter-mediated healthcare encounters of nurse practitioners and

Hispanic patients. Furthermore, in nursing research, conversation analysis is an innovative approach that has been underutilized (Jones, 2003).

### *Summary*

In Chapter 2 I provided an overview of selected literature regarding individual components found within the situation of interpreter mediated healthcare interactions. Beyond satisfaction, research is limited on the perceptions of patients with limited English proficiency regarding interpreted healthcare interactions, as well as the actual process of the interaction. The focus of studies on interpreters is primarily on their self-perception of the role or the accuracy of their interpretation, but these studies do not juxtapose this self-perception with how other interactants perceive their performance nor the process of interactions. Finally, there are no studies that incorporate nurse practitioners in interpreted situations. The current research examined these issues through situational analysis and conversation analysis; Chapter 3 contains a detailed description of the research design and process.

## Chapter 3

### *Research Methodology*

The current research examined interpreter-mediated healthcare interactions, using a multi-method approach, exploring how individual role reiterations and interactions contribute to the construction of the social world, and in turn how these interpreter-mediated healthcare interactions are shaped and directed by forces and factors in the larger arena. To explore these issues I collected data from multiple sources and used a combination of analytic approaches to data analysis, including conversation analysis and situational analysis. The research questions guiding the study were:

- 1) Within the context of primary care consultations, how do adult, Spanish-speaking patients with limited English proficiency, nurse practitioners, and language interpreters conceptualize and enact their personal roles, conceptualize and perceive each others' roles, and respond to the triadic communication interactions and styles?
- 2) Within the context of primary care consultations, how do structural, cultural, linguistic, and other factors interact and intersect with triadic communication?

The specific aims of the study were to:

- 1) Examine communication styles, interactions, and responses enacted among adult, Spanish-speaking patients with limited English proficiency, nurse practitioners, and language interpreters in the context of primary care consultations;

- 2) Explore self-representations, perspectives, and personal understandings of adult, Spanish-speaking patients with limited English proficiency, nurse practitioners, and language interpreters in the context of primary care consultations; and
- 3) Identify the structural, cultural, linguistic, and other factors that interact and intersect with triadic communication within the context of primary care consultations and explore how these processes occur.

In this chapter I describe the context and setting of the research and the methods of participant recruitment, data collection and data analysis I utilized for this project. I also report the processes for ensuring required research permission, and identify potential ethical issues.

#### *Research setting and context*

Participant recruitment, enrollment, and data collection occurred at two outpatient clinics that provide primary and acute care to adults, and offered interpreter services to their patients with limited English proficiency. Clinics that employ bilingual providers were not included in the study. The sites were located in the larger Charlotte, NC metropolitan area which has an extensive, diverse Latino population with countries of origin including Mexico, Cuba, Puerto Rico, Dominican Republic, and various Spanish-speaking Central and South American countries. In 2010, 13.1% of the population in Charlotte identified as Hispanic or Latino (U.S. Census Bureau, 2010a), doubling in size from 2000 to 2010 (Pew Research Center, 2012). Further, 18.8% of the general population of over 730,000 reported the language spoken at home was other than English (U.S. Census Bureau, 2010b). The areas surrounding Charlotte have also seen a marked increase in Latinos; the Latino population in Lancaster County, SC, just south of

Charlotte grew 151% from 2000-2007, placing it 25<sup>th</sup> in the counties with the largest Hispanic growth in the United States (Fry, 2008).

#### *Participant recruitment and enrollment procedures*

Research participants were triads of individuals involved in interpreter-mediated healthcare interactions at the selected primary care sites. Specifically, each triad was composed of a limited English proficient patient whose primary language is Spanish, a monolingual (English) nurse practitioner, and a bilingual (English/Spanish) interpreter. I purposefully recruited a sample of participants to represent the diverse make-up of interactants (e.g., age, gender, national origin) in interpreter-mediated healthcare interactions, including the varied ethnic groups for which Spanish is the primary language. I also purposely selected clinics that employed different types of interpreters including paid staff and volunteers. A total of five interactions were ultimately recorded: three at one site and two at the other.

#### *Participant recruitment*

Once I obtained permission from the office managers for the primary care clinics, I then contacted the nurse practitioners on staff via email to gauge their interest in participation in the study. Once they reviewed the study guidelines, all three nurse practitioners that I contacted expressed interest in participation; they each then identified the clinic days in which there would be the greatest number of Spanish speaking patients scheduled and the best opportunity for participant recruitment. They also confirmed with their usual interpreter their willingness to also participate in the study. All three interpreters agreed to participate as well. On the days identified by the nurse practitioner, I and my bilingual, bicultural research assistant went to the clinic. I formally obtained

informed consent from the nurse practitioners (Appendix A) and interpreters (Appendix B). The research assistant then began recruitment of patient participants. He approached potential Spanish speaking patient participants, provided information about the study, extended the invitation to participate, and obtained informed consent as well as a HIPAA Authorization for Research from each patient (Appendix C). Of the six patients he approached, only one declined to participate.

#### *Data collection*

I captured data from multiple sources. These included audio recordings of interpreter-mediated healthcare interactions, self-administered participant surveys of providers and interpreters, audio-recorded qualitative interviews with Spanish speaking patients, structured observations of the primary care setting, and collection of documents.

#### *Audio recording of the interpreter-mediated healthcare interaction*

The actual healthcare interactions were documented with digital audio recordings. The nurse practitioner was responsible for starting the recording device at the beginning of the interaction, and turned it off at the conclusion. I then uploaded the digital files to my password protected computer for transcription.

#### *Self-Administered Follow-Up Surveys*

At the conclusion of the audio recorded interpreter-mediated healthcare interaction, the nurse practitioner and interpreter were asked to participate in a follow-up self-administered survey regarding their experiences and perceptions of the interaction (Appendices D and E) and brief demographic form. This survey included five open ended questions for the provider and six for the interpreter; on average it took five minutes for the participants to complete.

### *Follow-Up Patient Interviews*

Once the patient had completed the clinic check-out procedures, the bilingual research assistant conducted an audio recorded, semi-structured interview. These interviews were held in the exam room once the clinic visit was completed to assure privacy for the participants. Only the research assistant and the patient were in the room during the interviews; the nurse practitioners and interpreters returned to their offices to complete their surveys. The interview guide (Appendix F) allowed for flexibility for both the interviewer and patient to explore the experiences of interpreter-mediated healthcare interactions. The interviews were each five to ten minutes in length. At the beginning of the interview, the interviewer started the digital recorder, and turned it off at the conclusion. The research assistant was also responsible for collecting demographic data from the patient following the conclusion of the follow-up interview (Appendix F).

### *Situational components*

Data collection involved an on-going situational mapping of the human and non-human elements, including textual and visual discourses that were gathered from clinic site visits. Examples of documents that informed the grounded theory analysis of the data included visual and narrative elements such as online representation, signage, pamphlets, employee manuals and clinic décor.

### *Researcher involvement in data collection and analysis*

My level of involvement varied in the different phases of the data collection and analysis. To situate the study, I conducted online searches and clinic site visits to glean information pertinent to the situational mapping. I also had contact with clinic managers and some staff members in order to obtain documents such as employee materials,



pamphlets and charting components. In order to minimize distraction and the admission of another actor in the situation, I was not present during the audio recording of the healthcare interaction. I personally transcribed the five audiotapes and conducted the qualitative analysis. At several points during the analysis I elicited input and assistance from two senior researchers. In the following section I discuss the analysis methods for each section of data.

### *Data Analysis*

The qualitative data analysis of the recorded healthcare interactions the patient post-interaction interviews involved several steps. The first step involved rendering the verbal data into text format. I transcribed the audio recorded data from the healthcare interactions and the patients' post interaction interviews, with the assistance of a trained bilingual interpreter for the Spanish language segments. Because I do not have native-level fluency in Spanish, I engaged a fully bilingual and bicultural assistant to participate in the transcription of the Spanish language portions of the data in order to optimize recognition of possibly subtle utterances and cultural cues. I then re-reviewed the audio recordings with the transcriptions in hand to reconcile the two transcripts, resulting in a final version used for the analysis.

Transcription techniques that are grounded in language as structure/grammar reflect conversation as text, and may then lose the flavor of the interaction as constructed within context upon analysis (Heritage & Clayman, 2010). In recognition of this possibility, I employed transcription devices used in the field of conversation analysis to reflect the complexity inherent in the process of speech construction. Examples of these devices include:

**Bold** indicates stress or emphasis placed by the speaker.

Extension or “stretching” of word by speaker is indicated by hyphenation (a-nd) or repeated vowel (sooo...).

The super/sub script symbol “[” indicates overlap between speakers.

Truncated intonations are indicated with an apostrophe (“an’” for truncated “and”)

“↑” reflects a rising intonation, “.” reflects a terminative pause.

“(.)” indicates pauses in speech; if prolonged, timing is indicated between parentheses - for instance, (0.5) is 0.5 second.

Other audible utterances and descriptions of speech tone will be indicated in parentheses as well; for example: we(hhhh)ll indicates laughter “bubbling through” speech.

### *Data Analysis and Interpretation*

The qualitative data sources included the transcripts of the interpreter-mediated healthcare interactions, the transcripts of the post-interaction patient interviews, and the post-interaction open-ended surveys completed by providers and interpreters. Data analysis and interpretation processes involved looking for situational elements within the various data sources and searching for possible linkages to other elements. I also posited the potential interactions of these discrete interactions and how these elements may influence and shape the interaction, and in turn the situation. For the individual interactions, I incorporated conversation analysis to textually represent the verbal interactions between the interactants, as well as the post interviews with the bilingual interviewer. Throughout the process I recorded analytic memos (e.g. notations regarding the interactions or data), and conducted open and focused-coding and thematic analysis (Strauss & Corbin, 1998). I compared and contrasted codes and themes within individual data sets (e.g. each interpreter-mediated interaction, participant post-interview, and

provider and interpreter post-interaction surveys) with the results from the surveys. During the ongoing situational analysis, I used conversation analysis techniques to augment theoretical sensitivity in the reading and re-reading of the transcribed data.

### *Research permission and ethical considerations*

In order to assure the safety of all human research subjects, I adhered to research guidelines outlined by the University of South Carolina (University of South Carolina, 2012a). After this proposal was accepted, I submitted a request for expedited review. This request included:

- 1) purpose and objectives of the research
- 2) research design as the data collection
- 3) research methods and procedures
- 4) participant recruitment
- 5) protection measures
- 6) informed consent

Although this was a non-therapeutic study without identified health or safety hazards, all research carries inherent risk for unexpected and adverse events. I was responsible for continuously monitoring the conduct of the research trial and the identification and reporting of all adverse effects. An adverse event (AE) is defined as “any untoward or unfavorable medical occurrence in a human subject, including any abnormal sign (for example, abnormal physical exam or laboratory finding), symptom, or disease, temporally associated with the subject’s participation in the research, whether or not considered related” to the subject’s participation in the research (University of South Carolina, 2012b).

I was also responsible for monitoring all records pertinent to IRB activities, per university protocol, including copies of research proposals reviewed and evaluations of them, copies of approved consent documents, reports of adverse events, records of continuing review of research, copies of all correspondence between IRB and investigators, a list of IRB members, and statements of significant new findings provided to subjects (University of South Carolina, 2012a).

Anonymity of the project participants was maintained by giving numeric codes to the surveys, as well as assigning pseudonyms to the participants in the transcribed conversations. Study data including all consent forms, surveys, audio files, and transcriptions were maintained in a locked cabinet in my office. The participants were informed the findings from the study will be disseminated, but they would not be able to be identified.

In Chapter 3 I included a detailed description of the study design and methods. Chapter 4 details the findings organized into two manuscripts.

## Chapter 4

### *Findings*

This chapter includes the results from the methods I described in Chapter 3, organized into two manuscripts. The first manuscript, which has been submitted to *Advances in Nursing Science*, explores the themes uncovered by the situational analysis of the audio-recorded data, as well as macro-level structural impacts on the interpreter-mediated healthcare interaction. The second manuscript, which will be submitted to *Research in Nursing and Health*, focuses on the conversation analysis method used to examine micro-level language interactions between the interactants, the *trouble spots* this method reveals, and how clinicians can learn to recognize and negotiate communication issues to facilitate understanding with patients with limited English proficiency.

Manuscript 1

Negotiating Language Differences and Health, and Social-Economic Barriers in  
Interpreter-Mediated Primary Care Encounters<sup>1</sup>

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<sup>1</sup>Estrada, R.D. & Messias, D.K.H. Submitted to *Advances in Nursing Science*, 1/15/2014

## ABSTRACT

The quality of communication within a healthcare interaction has the potential to affect diagnostic decision making, intervention provision, and ultimately healthcare outcomes; when language discordance is added, potential for health disparities increases. To explore how the micro-processes of language use reveals potential barriers for limited English proficient patients, we audio-recorded five triad, interpreter-mediated healthcare encounters with nurse practitioners and adult primary care patients. Knowing how to negotiate relationships, mutual understanding, and multiple systems played roles in successful interactions. Implications for nursing include raising awareness of socio-economic impacting healthcare encounters, as well as intra-professional collaboration and practice to lessen health disparities.

Keywords: health disparities, interpreters, interpreting, limited English proficiency, triad communication, language barriers.

Healthcare disparities result from the intersections of patient, provider, and system influences and contributions<sup>1</sup> that impact marginalized groups disproportionately.<sup>2</sup> In the United States (US), many health disparities are associated with disparate levels of access to care, which, in turn, are embedded in a broader social, economic, and political context of health care. Access to care is also a function of the level, type, and availability of individual resources, including communication resources. An integral component of most individual healthcare encounters is the verbal interchange between the patient and provider; research on healthcare disparities at this level often focuses on communication and interactions *between the patient and healthcare provider*.<sup>3,4</sup> Aspects of the patient-provider interchange include the unique personalities, histories, assumptions, beliefs, cultures, expectations, and knowledge that each person brings to the interaction. Further, *how* patient and provider negotiate this interaction may impact the providers' decisions related to diagnostic and treatment interventions, the patient's understanding and satisfaction with the encounter, and ultimately, eventual health outcomes.<sup>5,6</sup>

For patients whose primary language is not English and who have limited fluency in speaking and/or reading English,<sup>7</sup> language access is a significant contributor to health disparities.<sup>8-10</sup> Prior research indicates persons with limited English proficiency report experiences with classism and perceived discrimination,<sup>11</sup> less access to regular healthcare and preventative services,<sup>12</sup> as well as difficulty with healthcare system navigation. Linguistic minorities reported worse healthcare than ethnic and racial minorities<sup>13</sup> and among Latinos, those that spoke Spanish preferentially reported poorer quality of life.



In 2007 over 55 million people in the United States spoke a language other than English in the home.<sup>14</sup> As of 2011, an estimated 36.6% of US residents identified with a minority group.<sup>15</sup> The need for interpreter services in healthcare is growing exponentially within the US, especially among groups whose primary language is Spanish. Hispanics are the largest and fastest growing ethnic group in the nation, currently estimated at 50.5 million.<sup>16</sup> From 2000 to 2010, Hispanics experienced the highest growth rate among all ethnic groups and accounted for almost half of the 27.3 million increase in national population.<sup>16</sup> Although the US Census Bureau does not inquire about or report immigration status, other than recording place of birth, recent estimates indicate there are over 11.2 million undocumented immigrants in the US, or roughly 3.5% of the total population.<sup>17</sup> Undocumented immigrants include those who enter the country without a valid visa or who overstay the period of a valid visa.<sup>18, 19</sup>

In the US, official recognition of the importance of language access to healthcare quality and outcomes came in 2000 with the publication of the National Standards for Culturally and Linguistically Appropriate Services by the of the Department of Health and Human Services Office of Minority Health.<sup>20</sup> Commonly referred to as the CLAS Standards, these recommendations include required standards for facilities that receive federal funding (i.e., Medicare, Medicaid). Among these is the mandate to provide interpreter services at no charge to the patient. However, as regulation is erratic, there are inconsistencies in how interpreter services are implemented.<sup>21</sup> A language *interpreter* is any third party operating within a healthcare interaction whose role is to facilitate oral language interpretation between the patient and provider.<sup>22</sup> The role of the interpreter is to facilitate communication when there is a lack of language concordance between

providers and patients, i.e., encounters between English speaking providers and patients with limited English proficiency. Lack of language concordance and the addition of a language interpreter further complicate this already complex situation within which patients and providers are expected to communicate and perform. The addition of an interpreter to the patient-provider dyad results in a more complex, triadic,<sup>23</sup> interpreter-mediated interaction, with implications at the level of the patient-provider interaction and throughout the health service system. Language discordance complicates how institutions provide healthcare and may be perceived as negatively impacting efficiency.<sup>24</sup> In a study of hospital representatives responding to an initiative to improve hospital language services, the vast majority of respondents reported challenges in identifying patients in need of these services.<sup>25</sup>

Efforts to better understand and improve healthcare interactions involving patients with limited English proficiency include previous research focused on key components of the interpreted healthcare interaction. In research conducted across a variety of settings, including primary care,<sup>26</sup> pediatrics,<sup>27</sup> intensive care,<sup>28</sup> and emergency medicine,<sup>29</sup> findings indicate wide variation in the degree of interpretation accuracy. More linguistic inaccuracies and ethical conflicts have been identified in situations where staff utilized ad hoc interpreters, i.e. untrained, bilingual persons such as a family member, friend, or bilingual staff person<sup>22</sup> rather than trained healthcare interpreters.<sup>30</sup> Patients with limited English proficiency reported increased satisfaction when receiving interpretation services provided by professionals;<sup>29,31</sup> nevertheless, interpreter services are often underutilized<sup>32</sup> due to concerns such as time management<sup>32</sup> and interpreter competence.<sup>33,</sup>  
<sup>34</sup>However, there is very little research focused on the process and mechanics of the

actual interaction, the roles each interactant performs, and how the broader social, economic and political contexts impact these clinical interactions.

## **METHODS**

The aim of this research was to describe and analyze the content and processes of the linguistic exchanges occurring within clinical encounters involving adult, Spanish-speaking patients with limited English proficiency, nurse practitioners, and language interpreters. In this paper we examine micro-processes of language interaction in interpreter-mediated healthcare encounters, describe what these interactions concurrently reveal about the social world within which they are embedded, and suggest implications for nursing practice based on the results.

## **RESEARCH CONTEXT AND SETTINGS**

We conducted the study in the greater Charlotte, NC metropolitan area, home to a diverse Hispanic population with countries of origin including Mexico, Cuba, Puerto Rico, Dominican Republic, and Central and South American origin. In 2010, 13.1% of the population in Charlotte identified as Hispanic or Latino,<sup>35</sup> a two-fold increase from 2000 to 2010.<sup>36</sup> Further, 18.8% of the general population of over 730,000 reported the language spoken at home was other than English.<sup>37</sup> Similar growth in the Hispanic population has occurred in the surrounding areas. From 2000 to 2007 the Hispanic population in Lancaster County, SC (a rural community just south of Charlotte) grew 151%, placing it 25<sup>th</sup> among counties with the largest Hispanic growth in the United States.<sup>38</sup>

Two primary healthcare clinics served as the research sites. One is a community-funded primary care clinic serving uninsured, low-income residents of Mecklenburg

County. The nurse practitioners are paid employees and the interpreters are unpaid volunteers. New patients undergo an initial financial screening and once eligibility is established may receive acute, episodic and chronic disease care. In addition to physical exams, patients also receive assistance with prescriptions through a non-profit pharmacy program with similar qualifying requirements. The other clinic is part of a larger, for-profit healthcare/hospital system. The nurse practitioners and interpreters are paid employees and patient services are reimbursed through insurance, Medicaid or self-pay. Patients at this clinic may also access the same community, non-profit pharmacy as at the other clinic for assistance in obtaining prescription medications if they meet income eligibility requirements. Both clinics have Spanish-language signage, forms and patient education materials. The interpreters also served as informal systems navigators, a common dual role seen in prior research,<sup>39</sup> helping the patients fill out forms, sign up for education classes or access other resources.

## **STUDY PARTICIPANTS**

A University Institutional Review Board reviewed and approved the research. We initiated participant recruitment following approval of the research by the clinic administration at both sites. To recruit participants, the primary investigator personally contacted the nurse practitioners and interpreters to invite them to participate in the study. Once the providers and interpreters consented to participate, the nurse practitioners identified days in which Spanish speaking patients were scheduled to be seen. On those days, the primary investigator and a trained bilingual research assistant went to the clinic waiting room and approached potential patient participants, provided information about the study, extended the invitation to participate, and obtained informed consent as well as

a HIPAA Authorization for Research from each patient. In scheduling potential data collection encounters, the intent was to purposefully recruit a diverse sample of Spanish speaking patients (i.e., age, gender, national origin). The sample also includes variation in the interpreter participants, given the fact that one site employed interpreters and the other site utilized volunteers. The study participants included 3 nurse practitioners, 3 language interpreters, and five Spanish speaking adult patients with limited English proficiency. The nurse practitioners were female and ranged in age from 41 to 52. All were US born and educated. Two were board certified family nurse practitioners, the other a board certified obstetrics/gynecology nurse practitioner; they had 10 to 17 years of practice experience in their respective fields. Three interpreters participated in the study; two were volunteers and one was paid clinic staff. The interpreter participants were also all female and US born, and ranged in age from 42 to 46. All had extensive Spanish-language experience, having lived in Spanish-speaking cultures (i.e., Puerto Rico, Spain); one had a master's degree in Spanish translation. All had participated in formal training through the local Area Health Education Center (AHEC), a program enacted by Congress in 1971 to recruit, train and retain healthcare professionals working with underserved populations.<sup>40</sup> The five Hispanic patients included four females and one male, ranging in age from 22 to 45. They were from Mexico, El Salvador, and Honduras and reported having lived in the US for 8 to 15 years. All self-reported minimal or no understanding of English, either written or spoken.

## **DATA COLLECTION AND ANALYSIS**

We employed multiple data collection strategies at both sites. These included five audio-taped triad interactions composed of a monolingual (English) nurse practitioner, a

Spanish-speaking adult patient, and a bilingual (Spanish/English) language interpreter; self-administered participant surveys of the participating providers and interpreters, and follow-up audio-recorded interviews with the patients after the provider encounter. We also recorded field observations and field notes on informal conversations with providers and interpreters conducted in the process of participant recruitment and data collection.

The primary investigator transcribed the audio recordings of the patient encounters, using conversation analysis transcription notation.<sup>41</sup> Concurrently, the Spanish language portions of the encounter recordings were transcribed independently by a bilingual and bicultural research assistant; subsequently both transcriptionists reviewed and reconciled the two transcripts and compared the final transcription with the digital recordings to verify completeness and accuracy.

The analysis of the clinical encounter transcriptions combined elements of both conversation analysis and Situational Analysis.<sup>41,42</sup> Transcription techniques that represent how conversation flows, including the reflection of silences and inflection are integral to conversation analysis; further, inherent to this methodological approach to the analysis of conversation structure, embodiment, and context is the notion that it is necessary to deconstruct the interactions involved in order to further understanding of the hidden processes driving communication. Conversation analysis examines issues such as utterances as social action, the sequencing of turn-taking, interactional detail such as silences and interruptions, and how participants manage the course of conversation. Situational Analysis (SA) is a robust method to address the complexity of social interactions by recognizing the interplay between interactants and non-human elements that make up the situation under study. SA incorporates some of the classic tools of

grounded theory (i.e., open and focused coding, theoretical memos) but expands it, asserting that differences found through research are expected and should be represented rather than reduced and universalized.<sup>42</sup> After an initial coding of each individual encounter transcript, we identified codes and themes within each encounter set (i.e., interpreter-mediated interaction, participant post-interview, and provider and interpreter post-interaction surveys); these codes and themes were compared and contrasted using conversation analysis techniques to augment theoretical sensitivity in the reading and re-reading of the transcribed data, then organized using focused-coding and thematic analysis.<sup>43</sup>

## **FINDINGS**

In analyzing the transcripts of the patient-interpreter-provider encounters we identified three modes of collective knowledge generation: *getting to know each other*; *knowing what to say*; and *figuring out how to negotiate multiple systems*. This collective knowledge generation occurred within the context of the larger social, economic, political, and health systems contexts. *Getting to know each other* reflected the collective knowledge generation and work of establishing and maintaining relationships. *Knowing what to say* involved both ensuring that communication was accurate and that mutual understanding occurred. *Figuring out how to negotiate multiple systems* involved knowing the system and devising ways to successfully respond to the economic and political forces that impact the provision of healthcare for the well-being and satisfaction of the patient. Selected salient constructs identified included the physical location of the clinic, how patients pay for their care, the current political climate surrounding healthcare reform and the impact on undocumented immigrants, and new documentation

requirements for healthcare providers that are tied to financial incentive. In the following sections we describe each of these major findings in more detail; when presenting Spanish language data, we present the original language in italics, followed by a translation in brackets.

### **Getting to know each other: Establishing and maintaining relationships**

*We've worked together for thirteen years. I understand Spanish, so sometimes she doesn't interpret some things to save time because I understand.*  
(Nurse Practitioner)

Far from impersonal, solely clinical interactions, the conversations between the interactants revealed a familiarity and ongoing relationship between the nurse practitioners and interpreters, interpreters and patients, and, at times, within the entire triad. The nurse practitioners and interpreters, without exception, referenced their lengthy mutual professional relationships and the respect they had for each other in the surveys, and that this relationship eased the work of providing healthcare with the challenges of language discordance. In all five encounters it was evident that the interpreters also had prior professional relationships with the patients, having provided interpretation at the clinic and in other healthcare settings (i.e., hospital in-patient encounters). In interactions where the nurse practitioner and patient were meeting for the first time, the nurse practitioner often used personal references such as complementing a baby, an outfit, or referencing a place they had in common early in the interaction, such as the nurse practitioner who noted she was from the state where the patient had been working. Engaging in these introductory pleasantries was a way to “break the ice” and make a connection with the patient.



In one encounter, the nurse practitioner did not engage in any type of introductory pleasantries, proceeding directly to the clinical issues. In this interaction, the patient remained minimally interactive until the conversation turned to her unexpected line of work – drywall installation in construction. When the nurse practitioner expressed surprise and delight, the patient in turn became much more verbally interactive for the remainder of the visit.

### **Knowing what to say: Ensuring accuracy and mutual understanding**

Accuracy of the language interaction was a matter for all interactants, not just the interpreters. Finding just the right word to relay meaning and intent was accomplished in a variety of ways. The interpreters identified interpretation accuracy, or what they perceived as a less than accurate interaction, as a concern for which they came prepared. For example, in one encounter when the nurse practitioner was examining the patient’s nasal cavity, she suggested the use of “plain normal saline.” The interpreter clearly was grasping for the correct term in Spanish:

*“puede comprar se llama salin....que si como se llama en español...Sabe es la misma cosa. Salin, salin..Salino.*

[you can buy something called salin...oh, how do you call it in Spanish...you know, it’s the same thing. Salin, Salin, Salino].

To which the patient replied, “*Salino*” [Saline]

In the post-encounter interview, the interpreter noted that during this interaction “*I needed to look up the words ‘gel’ and ‘saline.’ I always carry my dictionary with me in the encounter.*”

This was an example of how the participants worked together to ensure accurate linguistic interpretation. However, ensuring language accuracy was not only the purview of the interpreters. The patients and nurse practitioners were active participants in negotiating meaning during the clinical encounters. Most of the time, the nurse practitioners and patients kept within their respective native languages. However, at times the mono-lingual patients moved out of their designated linguistic space to a negotiated, third space.

In another exchange regarding whether or not a patient could take ibuprofen for pain because of an interaction with his current medication regimen that may have caused prolonged bleeding, the interpreter struggled to find the most appropriate way to interpret the term for blood thinner. While the interpreter rustled papers and engaged in self-talk: “*Sorry, I’m gonna look up one word...I’m forgettin’ the word for thin...Mas liquid [more liquid],*” the patient offered the correct term “*ralo*” that the interpreter did not hear him say. She used the term “*mas liquido [more liquid],*” acknowledging the interpretation was “*not quite it.*” However, the patient confirmed his understanding of the potential danger with the confirmation, “*mmhmm. Liquida si [mmhmm. Liquid yes].*”

The nurse practitioners also demonstrated some grasp of the patient’s language and used this knowledge to work with the interpreter to optimize patient understanding. In an encounter with a pregnant patient, one nurse practitioner specifically asked about the type of diet the nutritionist had recommended at a prior appointment. The implied intent was that the provider wanted to ascertain what the patient understood and how she was implementing the recommended dietary guidelines. When the interpreter asked about “medications” instead, the nurse practitioner rephrased her inquiry, allowing the

interpreter to restate the question and return the discussion to her dietary intake. These incidents provided some evidence that patients and providers drew on their limited exposure and grasp of the others' language in the process of coming to mutual understanding. The process of ensuring understanding was complicated by the fact that there were *multiple languages* in play. In reference to the fact that interpreters were not just negotiating English and Spanish, but healthcare terminology in English and Spanish, one interpreter aptly noted, *"I feel like I'm bilingual in my own language because of the terminology I have to use."*

**Figuring out how to negotiate multiple systems: Successfully responding to social, economic, and political forces that impact patient well-being and satisfaction.**

*"You kind of have to unlearn everything you learned in school."*

(Nurse Practitioner)

Prescription medications, a usual and expected component of clinical encounters, were one example of how nurse practitioners, interpreters, and patients dealt with systems complexities. In each of the 5 encounters, a significant portion of the interaction focused on issues related to prescription medications: determining what to prescribe, taking into consideration how the patient could best obtain and pay for the medications. Both clinics utilized the non-profit pharmacy; patient prescriptions were sent electronically and in some circumstances, the medications were then mailed to the patient's home. For one patient, this was a cause for concern. After a quick comment by the nurse practitioner that the prescriptions would be mailed to his address, she continued with the process of ending the clinic visit. He redirected the conversation back to the issue of receiving the prescriptions by mail; his preference was to buy them directly from a local big box

pharmacy, rather than receive them through the non-profit pharmacy as was usual clinic procedure.

In another interaction, the nurse practitioner devoted approximately a third of the clinic visit in determining how the patient would pay for the medication prescribed. The patient reported she was waiting for her tax refund in order to afford the prescription, and in the course of the discussion, the nurse practitioner realized the patient was overpaying for the medicine. In response, the nurse practitioner directed her to a more affordable alternative: a list of pharmacies with a generic, \$4 option rather than the \$20 she was currently paying. In both cases, in order to best respond to patient preferences and needs, the nurse practitioner did not follow the clinic protocol for e-prescribing, but rather provided a paper prescription for the patients to physically carry to the pharmacy. In another encounter, prescribing issues interrupted the flow of the interaction, at first, seemingly out of nowhere: as the patient recounted eye and nose symptoms, the nurse practitioner interrupted her to start a discussion about her previous qualification status with the non-profit pharmacy. After an extended interchange, the reason for the abrupt transition became apparent – the nurse practitioner was contemplating starting allergy medication and was concerned about the possible cost of the medication for the patient.

## **DISCUSSION AND IMPLICATIONS**

Communication is an essential component of healthcare interactions, with implications not only for the quality of the interaction between the healthcare provider and patient, but also for diagnostic and interventional decision making, patient understanding and compliance, and ultimately, healthcare outcomes and the amelioration of health disparities. This research expands the science of healthcare communication

processes, particularly interpreter-mediated communication, in several ways. Previous research includes self-reports and interviews of what interactants say they do within interpreter-mediated healthcare encounters<sup>8</sup>, but this study adds to the increasing information we have on actual triadic healthcare encounters. The results of this research reveal not only the expected issues surrounding language and interpretation in an interpreter-mediated, triadic interactions, but also the impact of larger social forces on how interactants perform within this encounter.

Social niceties within a healthcare interaction can be more than a “get-to-know-you” device; this social process can be used by interactants to avoid essentialist perceptions that may contribute to vulnerability and healthcare disparities.<sup>44</sup> Although limited by the small sample of encounters, our analysis indicated that when the nurse practitioners acknowledged the patient as an individual more than just as a patient – for instance, as a mother to a beautiful baby – the patients were more engaged, communication and mutual understanding were enhanced, and the patients stated they were very satisfied with the visit. The findings also indicated that even with self-reported limited English comprehension, there is some collaboratively negotiated understanding of the other’s language. The challenge for healthcare providers is to recognize the potential enhancement of language interaction through a collaborative interpretation process and encourage patient participation, but not to overestimate the ability of either party (patient or nurse practitioner) to use the other’s language.<sup>32</sup>

The larger context of these interpreter-mediated healthcare encounters includes political and economic arenas, which may disproportionately affect vulnerable population patients, including the poor, uninsured, and undocumented. Undocumented patients, who

are specifically excluded from buying healthcare insurance under the recently passed Patient Protection and Affordable Care Act are also ineligible for most public forms of insurance and frequently rely on “safety-net” clinics and emergency rooms for episodic, acute, and chronic care,<sup>45</sup> and are much less likely to have access to regular healthcare.<sup>46</sup> Additionally, although the Community Health Center Fund established through the Affordable Care Act allots \$11 billion in funds over five years to operate, expand and construct health centers,<sup>47</sup> access to healthcare is still an issue for vulnerable populations such as those described in this research. New practice and documentation requirements impact healthcare providers, even when they are well intended. In 2004, then President George W. Bush recommended that by 2014, most Americans should have electronic health records in order to streamline healthcare services, reduce waste and costs within the healthcare system, and minimize healthcare errors.<sup>48</sup> In order to facilitate this transition, Medicare and Medicaid electronic health record incentive programs were put into place, giving eligible healthcare providers monetary payment for implementing electronic health records and electronic prescribing.<sup>49</sup> There may be unexpected or unintended consequences for this implementation that will be more likely to affect those who already have barriers to healthcare access.

Several recent studies of the implementation of government regulations surrounding EMR/EHR/e-prescribing focused on issues related to the demands on providers, inconvenience, prescription discrepancies, and clinic upfit costs.<sup>50</sup> Furthermore, these researchers suggest that other consequences may arise as additional healthcare organizations implement computerized records. The results reported here show a potential negative impact of e-prescription on prescription access for certain vulnerable

groups. The nurse practitioners observed in this research demonstrated a need to be one step ahead in thinking about the possible barriers that their patients might encounter, implicitly recognizing that a failure to consider these barriers could ultimately affect the patient's outcome. As healthcare providers, including nurse practitioners, move towards and become accustomed to electronic methods of documentation and prescribing, they should be aware that some patients may have issues that affect their ability to access their medications in this manner (i.e., transient housing situations) and address these possibilities before the end of the visit.

These challenges are not just unique to serving populations with limited English proficiency; patients from a variety of vulnerable situations may be impacted by economic and political forces. While nurse practitioners are well-positioned and adept at serving these patients, as a collaborative team nurse practitioners and interpreters need to be aware the specific challenges patients with limited English proficiency may face to be able to connect them with community resources and creative, alternative avenues when access to services is problematic. There is clearly a need for more extensive research on interpreter-mediated clinical encounters, healthcare decision making, and health outcomes. Concurrently, students and practitioners in nursing, pharmacy, medicine, and other healthcare professions, need better preparation for caring for patients with limited English proficiency through intra-professional collaboration and practice in order to lessen health disparities and disparities in access to care.

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Manuscript 2

Employing Conversation Analysis Techniques to Examine Interactions and Social  
Processes in Interpreter-Mediated Primary Care Encounters<sup>2</sup>

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<sup>2</sup>Estrada, R.D., Reynolds, J.F. & Messias, D.K.H. To be submitted to *Research in Nursing and Health*.

## Abstract

The content and quality of healthcare communication may impact health outcomes. In caring for patients with limited English proficiency, the added level of language discordance to the interaction increases both the complexity of the communication process and the potential for disparate health outcomes. In this research we examined the content and processes of triadic clinical communication encounters between Spanish speaking adult patients, primary care nurse practitioners, and language interpreters. Data collection included 5 audio-recorded triadic clinical encounters; 5 self-administered post-encounter surveys completed by the nurse practitioners; 5 brief post-encounter audio-recorded interviews with the patients, in Spanish; and field notes from observations and interactions with the clinic staff. For the data analysis, we employed a novel, qualitative, multi-method approach to explore both the micro and macro level processes that impact interpreter-mediated healthcare interactions. We utilized conversation analysis transcription notation and techniques to examine the micro-processes of language within the triadic encounter data, drawing on situational analysis to explicate what triadic communication processes revealed about structural and systems influences and impacts on the individual interactions. The conversation analysis revealed *trouble spots* in communication that, when identified and addressed by the interactants, facilitated negotiating relationships, coming to a negotiated mutual understanding, and responding and reacting to multiple systems within these interpreter-mediated interactions. In contrast to previous research, the interpretation process in these healthcare encounters was practiced as a co-constructed, collaborative interaction between all the participants, rather than a conduit process in which the interpreter was solely responsible for language



negotiation. Future research should address how this situation is conceptualized and problematized. An inter and multidisciplinary approach can help bring to light presuppositions and help address policies that may affect health disparities.

Keywords: health disparities, interpreters, interpreting, limited English proficiency, triad communication, language barriers.

Health care encounters are complex interactions in which patients and providers participate in the negotiation of a series of diagnostic processes, negotiated primarily through verbal exchange. Typical components of primary care encounters include identification of a major complaint, history taking, physical exam, diagnostic decision making, and treatment prescription. The form, content and quality of patient-provider communication are essential to these diagnostic processes and decisions, thus contributing ultimately to healthcare outcomes. Over the past several decades, the increasing numbers of patients with limited English proficiency in the United States (US) has added additional layers of complexity to the patient-provider encounter. To address the health disparities patients with limited English proficiency experience, the HHS Office of Minority Health developed the National Standards for Culturally and Linguistically Appropriate Services in Health and Health Services, or the National CLAS Standards, in 2001 (Joint Commission Division of Standards and Survey Methods, 2008). Best practices require the inclusion of a language interpreter within the primary care encounter when there is language discordance between the patient and the provider (Li, Pearson, & Escott, 2010; Putsch, SenGupta, Sampson, & Tervalon, 2003).

The goal of language interpretation in healthcare is to facilitate communication between patients and healthcare providers who do not speak the same language or have a sufficient level of oral fluency to communicate with each other. The provision of language interpretation services is ethically necessary (Messias et al., 2009). However, if the interactants are unprepared or unwilling to address the challenges posed by this transformation of the traditional healthcare interaction, the addition of the interpreter to the dyadic patient-provider interaction may create additional communication barriers

within the context of the resulting three interactant, or triadic, encounter. Previous research on interpreter-mediated health care interactions has focused on the accuracy of the interpretation (Bauer & Alegria, 2010), role conceptualization and role dissonance (Hsieh, 2008; Hsieh & Hong, 2010; McDowell et al., 2011), and cost and utilization (Jacobs et al., 2011; Jacobs et al., 2004; Schenker et al., 2011). The research on triadic health encounters includes examinations of mono-lingual triads, including parent-child-healthcare provider (Brody et al., 2006; Stivers, 2001; van Staa, 2011) and elderly-caregiver-healthcare provider (Karnieli-Miller et al., 2012; Sakai & Carpenter, 2011). Three previous studies that utilized conversation analysis to examine interpreter-mediated talk include triadic interactions of patient- speech language pathologist-interpreters in Zulu/English (Friedland & Penn, 2003), patient-physician-interpreter in Russian/English (Bolden, 2000), and patient-physician-interpreter in English/Czech, English/Urdu or English/Mirpuri Punjabi (Li, 2013). To our knowledge, there are no published studies of interpreter-mediated healthcare encounters of nurse practitioners and Hispanic patients. Furthermore, in nursing research, conversation analysis is an innovative approach that has been underutilized (Jones, 2003).

Language use embedded within broader communicative processes is a critical component of the social interactions between primary care providers and their patients. In this research we employed conversation analysis techniques such as attention to turn taking, sequencing, and recognition of “trouble spots” (Forrester, 2002; ten Have, 1990) in naturally occurring talk in interpreter-mediated primary care encounters between nurse practitioners and Hispanic patients with limited English proficiency. Through exemplars to stimulate thinking about how the process of communication in interpreter-mediated

interactions occurs, we identify what the triadic communication actions and processes reveal about the social organization of primary care encounters, and how talk-in-interaction reveals the influence and impact of social worlds as deemed relevant by the interactions during the encounters.

### **Research context, setting and sample**

We conducted the study in two primary care clinics serving the diverse Hispanic community in Mecklenburg County, NC. This southeastern area has experienced an increasing influx of Hispanic immigrants from Mexico, the Dominican Republic, Puerto Rico and Central and South America over the past two decades. In Mecklenburg County, the Hispanic population increased by 149% from 2000 to 2010 ("Population of Mecklenburg County, North Carolina: census 2010 and 2000 interactive map, demographics, statistics, graphs, quick facts," 2012), and in 2012, 12.5% of the population of Mecklenburg County, identified as Hispanic or Latino (U.S. Census Bureau, 2012).

Following review and approval by a University Institutional Review Board, we began participant recruitment at clinic sites. We approached office managers at two primary care clinics to obtain permission to recruit research participants. Both agreed, and once granted permission, we contacted the nurse practitioners on staff via email, explaining the research and inviting them to participate in the study. The three nurse practitioners that we contacted consented to participate in the research; each then identified days and times when there would likely be a number of Spanish-speaking patients with limited English proficiency scheduled and the best opportunity for participant recruitment and provided contact information for their usual language

interpreters on those clinic days. We then invited the language interpreters at each clinic to participate in the research; they also consented to participate.

The data collection team consisted of the first author, a researcher who is also an advanced practice nurse with an active primary care practice, and a bilingual, bicultural research assistant. To recruit Spanish-speaking patients with limited English proficiency, the data collection team visited clinics on days suggested by the nurse practitioners. At each clinic, after obtaining written informed consent from the nurse practitioner and interpreter, the bilingual research assistant began recruitment of Spanish speaking patient participants in the waiting room. He approached potential participants, provided information about the study in Spanish, and extended the invitation to participate. Of the six patients invited to participate, five agreed, provided obtained informed consent, and signed a HIPAA Authorization for Research. Data collection consisted of audio recordings of the triadic clinical encounters between the monolingual (English) nurse practitioner, monolingual (Spanish) adult patient, and bilingual interpreter. The participants included three monolingual (English) female nurse practitioners. Two were board certified family nurse practitioners, the other was a board certified obstetrics/gynecology nurse practitioner; all were born and educated in the US. Three female interpreters also participated, two volunteers, and one paid staff. All interpreters had education and training in interpretation, two had lived for a time in Spanish-speaking countries (Puerto Rico and Spain). The five Hispanic patients were from a variety of Spanish-speaking countries including Mexico, Honduras and El Salvador. The four females and one male ranged in ages from 22 to 45, and had lived in the US for 8 to 15 years.

Naturally occurring conversations between patients with limited English proficiency, interpreters, and nurse practitioners were audio-recorded using a digital recorder that was controlled during the clinic visit by the nurse practitioner. After the completion of the healthcare encounter, the nurse practitioners and interpreters filled out surveys with open-ended questions regarding their impressions of the clinic visit and their role perceptions.

### **Conversation Analysis**

Conversation analysis focuses on the interactional detail of naturally occurring conversation, but is also used in the analysis of institutional talk within formal contexts such as courtroom proceedings (Matoesian, 1993). In conversation analysis, the *use* of language is an action. Language situated within unique sociocultural and historical contexts is a form of social action. Approaching language as a social action goes beyond words and meanings to also focus on contexts, actions and processes, including attention to sequencing and turn-taking. *How* and *when* something is said within discourse practices becomes as critically important as *what* is said. For example, verbal stress or tone may indicate emphasis or sarcasm in an otherwise straightforward statement. Affecting an accent, or a pattern of speech connected to a social identity (Agha, 2007), may indicate familiarity with an interactant, or an attempt to contrive that type of relationship. Deviation from socially accepted structures of conversation such as the basic analytic unit of adjacency pairs (two-part turn-taking) that is the backbone of conversation analysis, may indicate the existence of a power differential between participants or be used to justify being socially ostracized for rude behavior. Institutional talk can be used to manipulate, transform and subjugate the experiences of interlocutors

(Matoesian, 1993). Repairs, mitigation of speech, and physicality may be used to align interactants toward constructing a common understanding (Schegloff, 1992), or to maintain social face between participants on differing rungs of a hierarchical ladder (Holtgraves, 2002).

Examining what is *not* said is as important in understanding social context as what *is* said. Silence may indicate acquiescence to the status quo, or a form of resistance that challenges hegemonic discourse by refusing to engage with the dominant structure. Pauses may indicate an expectation that the conversational turn should be “picked up” by another in order to advance the dialogue (Goodwin, 1979), and if missed or ignored, may indicate something about the status of the interactants. Therefore, the transcription reflects speech characteristics such as intonation, inflection and emphasis, as well as pauses and silences that occur as the interactants manage the sequencing of their utterances (see Table 1 for examples of conversation analysis transcription notations from the research data).

### **Application of Conversation Analysis**

The data analysis process began with the transcription of the digital recordings of the clinical interactions, using the conversation analysis transcription process as a “noticing device” (Forrester, 2002, p. 13). This process required the analyst to focus on details and subtleties that may otherwise go unnoticed by the average interactant or listener. After the first author transcribed the entire encounter recording, the bilingual/bicultural research assistant transcribed the Spanish language sections separately, and the two transcripts were then reconciled into one document by both

transcriptionists. The final step was to compare the transcription to the audio-recordings to assure that the written accounts represented the conversations as accurately as possible.

The next step involved applying a conversation analysis approach to the transcribed interpreter-mediated encounter data. This process included various iterations of data review, during which we asked the question “why that utterance now” (Forrester, 2002, p. 15) to examine turn-taking and sequential ordering. In addition, the process of conversation analysis involved the close examination of conversation in interpreter-mediated healthcare interactions to identify ways in which language was used to negotiate “errors” and difficulties in the conversation, and what these repair strategies (how interactants deal with *trouble spots* during their conversation) may tell us about the social world of the interpreter-mediated health care interaction. Typically, the person who makes a problematic utterance should be the one to repair it, as they have access to their experiences and thoughts and are best able to clarify misunderstandings as they arise in conversation (Schegloff, 1992). However, in some cases of language asymmetries, other participants may have the opportunity and ability to initiate repair in order to further the conversation (Bolden, 2012), which becomes relevant in considering the interpretation process as collaborative, rather than conduit in nature.

### **Findings**

We present the findings in five exemplars: *referencing others to signal being a “good patient; colloquialisms as signaling potential for trouble; repairing a mis-statement; turn taking and failure to take your turn; and challenging the interpreter role of conduit*. In each, we give an overview of the interactants, the main reason for the clinic visit, and an extract of conversation to demonstrate turn design and speech devices employed by the



interactants. Finally, we use the exemplars to illustrate how the process of communication in interpreter-mediated interactions plays out, and give suggestions for healthcare providers to aid recognition of *trouble spots* as they occur in real conversation in order to improve the communication process in their own clinical interactions.

### Referencing others to signal being a “good patient”

In the following example, an adult male, Spanish-speaking patient complaining of hematuria references instructions given to him by others within the course of earlier healthcare encounters.

- 1 NP: What did they say, was wrong, when you were in the hospital.  
 2 I: Y...que..y le dijeron que fue el problema  
 3 P: Si...bueno...me dijeron de que como ( ) le explique  
 4 I: [Like I was telling you  
 5 earlier, they told or...telling...interpreter earlier  
 6 P: [de que.....me me...( )la medicina me estaba  
 7 tomando, me estaba tomando una un día y la mitad otro día pero=  
 8 I: =so the  
 9 medicine that I **was** taking, I was taking one one day, then a half the next day  
 10 P: [y luego viene aquí a una cita que  
 11 me checaran la sangre  
 12 I: [then I came here to the appointment  
 13 P: [y a mi  
 14 hermano, pues, el le hablaron por que a el casi le saben hablar  
 15 verda..yo le dije.=  
 16 I: =pero hablo con...con su hermano↑  
 17 P: Yeah.(1.0) Entonces el  
 18 I: [so..I spoke with my brother  
 19 P: [yeah...yeah Anna le hablo y le  
 20 dijo que me tomara la medicina, que me tomara dos, dos pastillas un día  
 21 I: [they said  
 22 I would take...**two** (bit), **two** pills one day(...)and  
 23 P: y (...) una otro día.  
 24 I: Ok (...) **one** the next day

In this situation, the patient referenced three different people in order to emphasize how he was attempting to follow healthcare recommendations given to him prior to this visit,

which resulted in an untoward side medication side effect (prolonged bleeding) and the purpose of this clinic visit. First he referenced “they” in the hospital. However, the interpreter then miscommunicated the fact that he brought his brother (line 14) to the following visit in order to assure his understanding of the healthcare instructions. Instead, she said, “I spoke with my brother” (line 18) and glosses over the third person he spoke with - Anna (line 19) - as he gave no further information as to who she is, she may have been known to all the participants, possibly a clinic staff member. At lines 4-5, the interpreter utilized format tying, or rephrasing and reusing the structure of the previous turn-at-talk in order to achieve conversational cohesion (Goodwin & Goodwin, 1987). When she continues the interpretation, however, she initiates a self-repair that infers that “they” includes or is the interpreter as she does not ask the patient to clarify who “they” is. Thus the interpreter and nurse practitioner miss the patient’s attempt to underscore how he is conforming to the expectation that patients should be engaged participants in the healthcare interaction in order to optimize health outcomes (Greene & Hibbard, 2012).

### **Colloquialisms – potential for trouble**

A common practice in primary care encounters is simplification or the use of colloquial language by a provider, with the intent of making healthcare and technical terms more accessible and understandable for the patient. However, the following *trouble spot* highlights how that practice may actually cause more confusion in the context of an interpreted encounter.

- |   |     |   |
|---|-----|---|
| 1 | NP: | This is the one, this is the blood thinner, though (..) these pills right |
| 2 |     | here, how many of these are you taking.                                   |
| 3 | I:  | Cuantos de esas, por que esas, lo que hace la sangre (..) lo mas          |
| 4 |     | fácilmente=   |

- 5 P: =me estoy tomando
- (then later within the same encounter)
- 1 NP: The problem with ibuprofen, is (2.0) it can react with the medicine  
 2 I: [E]  
 3 problema con ibuprofen, es  
 4 NP: [that makes your blood thinner and I we have  
 5 to be very careful  
 6 I: Puede reaccionar con la medicina(..)que es ah para hacer el el la  
 7 sangre(...) mas (...) ah  
 8 P: [mmhmm mas ralo, mas  
 9 I: mas (exhale, rustling papers) sorry I'm gonna look up one word  
 10 (6.0)  
 11 I: I'm forgettin' the word for thin. (1.0) Mas liquido.  
 12 P: mmhmm.  
 13 I: Mas liquida.  
 14 P: mmhmm. Liquida si.  
 15 I: That's not quite it.

While “blood thinner” (line 1 first excerpt) is a common colloquial synonym for anticoagulant in English healthcare encounters, the interpreter wrestles with how to express this informal term appropriately in Spanish. This is first seen in the first example with a brief hesitancy between “sangre” (blood) at line 3 in the first excerpt and the following phrase, then by longer silences in the second example at lines 6-10. Hesitancy can be a clue for providers in real time conversation that there may be an interpretation issue that can be addressed immediately within the context, thus optimizing understanding between the interactants. Had the nurse practitioner actually used the more accurate technical term in English (i.e., anticoagulant), the Spanish cognate (i.e., *anticoagulante*) would have been more readily recognized and translated by this Spanish-speaking interactant.

Additionally, because the interpreter is so concerned with providing an accurate translation, she misses how the patient has been tracking her trouble and provides the best

translation, “mas ralo” (line 8). He continues to align with her – accepting her problematic translation – by signaling to her that he thinks he understands (lines 12-14), even though her substitution of “mas liquida” is less than technical.

### **Repairing a mis-statement**

The following excerpt taken from an interpreter-mediated encounter between a female Spanish-speaking obstetric patient and nurse practitioner demonstrates how the interactants manage an interpretation error.

- 1 NP: ok. Alright, so can she describe to me when she went to see the  
2 nutritionist, ahm, a couple of weeks ago, wha what the nutritionist told  
3 her as far as her blood sugar as far as her diet goes.  
4 I: Que si usted puede compartir con, eh, con Evelyn (the nurse practitioner)  
5 hoy día cuando fue a su cita con la nutricionista, en cuanto, ah, ah, todo  
6 relacionado con diabetes en cuanto a medicina, ungüentos.  
7 P: Mmmedicina, no, no me, medicina  
8 NP: Yeah, she’s on a diet, but I mean she’s not on a medicine but as far as the  
9 diet goes=  
10 I: =creo que  
11 NP: [can she tell me what kind of diet that, the nutritionist told  
12 her↑  
13 I: Creo que no está tomando medicina pero en cuanto la dieta, la dieta que  
14 debe seguir, le puede dar detalles

Rather than asking about diet (lines 4-6), the interpreter asks about medicine and ointments. In response at line 7, the patient elongates the “m” in *medicina* (medicine), signaling her confusion. Although she is not fluent in Spanish, the NP recognizes this cognate and is able to initiate a repair. The subsequent redirection allows the interpreter space to re-orient the conversation.

### **Turn taking and failure to take your turn**

From these examples, there is evidence of standard conversation patterns that providers and patients tend to follow within primary care encounters, including interpreter-mediated encounters. Deviation from expected sequencing may represent a

*trouble spot* that indicates a communication issue. In the following example, the patient expresses concern that a medication she has used in the past may affect her unborn child. Prior to the below interchange, the patient adamantly stated she did not have asthma, yet used some type of medication that she bought as needed during the pollen season. The nurse practitioner says “albuterol” (a prescription asthma medication), and offers a prescription several times.

- 1 NP: So does she need a prescription for one.  
 2 I: Así que necesita receta para una nueva medicina  
 3 NP: [hahaha  
 4 P: Nnnn **no**. (1.0) solo quería estar segura que no...  
 5 I: No. She just wanna make sure that it won't harm the baby.  
 6 NP: It won't harm the **baby**, but I, you know, just want ta make sure, you  
 7 know, she needs one she needs one.  
 8 NP: (clears throat)  
 9 I: Que no le va a hacer daño al bebe, pero ella quiere estar segura de que,  
 10 tenga esa medicina cuando la necesite.  
 11 NP: I would rather give her a prescription, than she have to go to the ER for a  
 12 breathing treatment.  
 13 I: Ella prefiere darle la **receta**, de ante mano que usted termine yendo a la  
 14 sala de emergencias en el hospital porque tiene problemas respirantes.  
 15 P: Ok  
 16 I: Está bien, is ok  
 17 NP: ok, can I prescribe it↑  
 18 NP: hahaha  
 19 (2.0)  
 20 NP: I will go ahead and also **send** in the prescription for the Flonase, if she  
 21 doesn't want to pick it up that's fine. But \*beep beep\* (monitor noise) I  
 22 would rather have the prescription **there** for her than for her to have to try  
 23 and call back in, and go through our phone system to try and get ahold of  
 24 somebody. \*beep beep\*

Just prior to the patient's marked use of “no” in line 4, the NP laughs. It is unclear the purpose of this laughter, but the patient's usage of the elongated “no” in line 4 followed by silence indicates a heightened affect, a trouble source, or perhaps both. Laughter can be used by interlocutors to affiliate – or laugh with – but if there is a lack of agreement between parties, laughter may also disaffiliate (Glenn, 2010). In this case, the

patient's adamant "no" with a prolonged pause is an attempt by the patient to underscore the seriousness of her question, indicating that she understands the NPs laughter to mean that she is not being taken seriously. Her lack of response to what should have been her turn in conversation after line 10 causes discomfort, as shown by the NP's laughter and subsequent taking up of the conversation with an expanded explanation after the silence at line 19. The impetus behind how this conversation is managed may have more to do with preventing greater costs, such as the possibility of an emergency room visit, or liability management than it has to do with providing preventative care for the patient. Although consent seems to have been conversationally secured by the patient's acquiescent "ok" at line 15, the continued silence does still reveal that the repair has probably not mended, and that the patient's original concern has not been addressed. Silences at a point where an interactant should be expected to pick up the conversation should signal the healthcare provider and interpreter that there may be a problem that should be addressed before closing the interaction.

### **Challenging the interpreter role of conduit**

The dissonance between what the interpreters felt their role *should* be in the healthcare interaction and their actual actions reflected previous literature of self-reported conflicts with working in a conduit-style (as opposed to advocacy) mode of interpretation, and was starkly apparent in the differences between how the interpreters completed survey questions and how they actually performed within the healthcare interactions. When asked to complete the phrase: *the role of a language interpreter in a healthcare encounter is...* one interpreter responded: "to make the communication

between the health care provider and the patient as easy as possible and as accurate as possible – as though the interpreter weren't even present.”

In the following interchange, the three interactants discuss osteoporosis, a possible diagnosis for the patient if her osteopenia was not appropriately treated.

- 1 I: What what is the risk, the danger of this, illness.  
2 NP: Well, it's not an **illness**, its its  
3 I: [no es una enfermedad  
4 NP: [yeah, it's as we progress  
5 in age our bone, changes  
6 I: [es como progresamos con la edad, como  
7 NP: [yeah (...).our,  
8 bone structure changes  
9 I: [los huesos se cambian, la estructura de los huesos se  
10 cambian  
11 P: y...  
12 NP: Because of the lack of calcium and vitamin d.  
13 I: por falta...de  
14 NP: [and estrogen  
15 I: [de calcio,  
16 P: [vitamina d  
17 I: [vitamina d...y, estrogina.  
18 NP: ok. So, it's called osteoporosis is **softening** of your bones  
19 I: es...osteoporosis, y es cuando los huesos se ensuavisa

The communication interchange in this encounter revealed a very engaged, active participation on the part of the interpreters, a collaborative co-constructive process between all interactants and facilitated by the interpreter, resulting in mutual understanding. In contrast with a style of interpretation in which the interactants pause, wait for the interpretation, and then proceed to the next phrase, some interactions seemed almost a musical round, with the participants echoing each other as they created the idea to be expressed.

## Discussion

This study employed conversation analysis, an underutilized method for examining naturally occurring conversation in nursing research. It is significant in that it adds to the very limited research on the use of conversation analysis in interpreter-mediated healthcare interactions. The analysis of the triadic verbal exchanges within these clinical encounters attests to the utility of parsing out the intricacies of conversation. In applying conversation analysis, analysts may use the methodology to expose the process of social action within institutions, and apply this information to problems with the goal of developing interventions to effect change (Antaki, 2011, Lamerichs, J., & te Molder, 2011). These findings may assist healthcare providers and interpreters identify potential *trouble spots* in the use of language that can be addressed in real time in order to enhance understanding between interactants.

When it occurs, training of healthcare providers in the use of healthcare interpreters tends to promote the role of the interpreter as a conduit; that is, the interpreter renders the messages between interlocutors into the target language exactly as expressed by each participant (*NCIHC National Standards of Practice for Interpreters in Health Care*, 2005). The results of this research reveal that although this role expectation is generally well accepted, the role of the interpreter often was not one of conduit, but rather as one of collaborator and co-constructor of communication. Interpreted healthcare interactions, as performed within these contexts, can be collaborative, co-constructive communications through which the participants come to a mutual understanding. The interpreter did not necessarily interpret phrases word by word, but collaborated with the healthcare provider and patient to confirm an understanding of the idea to be interpreted,



then interpreted the *idea* into the target language. Once mutual understanding was attained, the participants moved on to the next topic. The nurse practitioners participated in and facilitated this process, as did the patients. Contrary to previous findings (Hsieh, 2010), they did not demonstrate any resistance or animosity towards this approach. While this approach may be more susceptible to errors due to issues such as overtalk, in some circumstances and contexts (such as primary care, where there is an ongoing relationship between the interactants) it may be a preferable method of interpretation, leading to better understanding, greater advocacy, and increased satisfaction between all participants.

As seen in previous research, the interpreters who participated in this study experienced dissonance in negotiating how they understood they should perform their role as opposed to the demands of the actual interaction. These interpreters, as others have reported in the literature (Hsieh, 2008), were trained to articulate their roles as non-intrusive and as conduit in nature as possible. Their definitions of interpreter role reflects this training and national standards. While this standard style is at times appropriate and demonstrated within these findings, there are other styles of interpreter interaction besides a conduit-type that are practiced, appreciated, and, we would argue, necessary to establish relationship, assure mutual understanding between participants, and facilitate patient empowerment. The seeming incongruence between role description/expectations and clinical reality may instead be reframed as a need to officially recognize the potential benefits of multiple ways of interpreter practice: interpretation as a thoughtful, intuitive, and cooperative act brokered by the interpreter, who is able to negotiate a fluid idea of how the interpretation process should be performed based on the changing requirements of the interaction as the visit progresses.

Hadziabic and colleagues (2010) reported communication was improved when the provider and interpreter had worked together in previous encounters. Nurse practitioners practicing in primary care settings have more of an opportunity to establish relationships with consistent professional colleagues, as well as with patients over time. Ongoing relationships and interactions prior to the current clinic visit may hold the potential to uncover useful, pertinent information that may have implications for decision making and the ultimate healthcare outcome. Future research should compare and contrast the style and efficacy of interpretation as practiced by triads who have an ongoing relationship as opposed to those who have had no previous interactions to determine if there are differences in satisfaction and healthcare outcome. An additional area of study would be exploration of non-verbal communication that accompanies verbal exchanges in interpreter-mediated healthcare interactions. Conversation analysis is a powerful tool that allows the nursing researcher to closely examine the process and impact of communication within healthcare interactions, to make practice recommendations to improve patient care, and ultimately healthcare outcomes.

Table 4.1 Conversation analysis transcription notation

All names used within the transcripts are pseudonyms.

**Bold** indicates stress or emphasis placed by the speaker.

Extension or “stretching” of word by speaker is indicated by hyphenation (a-nd) or repeated vowel (sooo...).

( ) indicates that the transcriptionist was unable to parse the speech

The super/sub script symbol “[” indicates overlap between speakers.

Truncated intonations are indicated with an apostrophe (“an’” for truncated “and”).

“↑” reflects a rising intonation, “↓” falling intonation, “,” indicates continuing intonation, “.” reflects a terminative pause.

“=” indicates latching, or no discernible pause between turns.

“(.)” indicates pauses in speech; if prolonged, timing is indicated between parentheses - for instance, (0.5) is 0.5 second.

Other audible utterances, descriptions of speech tone, and comments by the analyst are indicated in parentheses as well; for example: we(hhhh)ll indicates laughter “bubbling through” speech.

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## Chapter 5

### **Discussion**

This study examined interpreter-mediated healthcare interactions in the context of primary care. The interactants included adult, Spanish-speaking patients with limited English proficiency, nurse practitioners, and language interpreters. This study adds to the research on the actual processes of language interactions within triadic healthcare encounters, and especially the limited research on bilingual healthcare encounters. It also identifies the impact of macro-level structural effects as revealed by conversations within the context of the healthcare encounter.

This study sought to explore two broad research questions: within the context of primary care consultations, how do adult, Spanish-speaking patients with limited English proficiency, nurse practitioners, and language interpreters conceptualize and enact their personal roles, conceptualize and perceive each others' roles, and respond to the triadic communication interactions and styles? Additionally, how do structural, cultural, linguistic, and other factors interact and intersect with triadic communication? In order to examine these questions, I specifically identified and investigated

- 1) communication styles, interactions, and responses enacted among adult patients with limited English proficiency, monolingual nurse practitioners, and language interpreters in the context of primary care consultations;

- 2) self-representations, perspectives, and personal understandings of adult, Spanish-speaking patients with limited English proficiency, nurse practitioners, and language interpreters in the context of primary care consultations; and
- 3) structural, cultural, linguistic, and other factors that interact and intersect with triadic communication within the context of primary care consultations and explore how these processes occur.

This study utilized Situational Analysis (SA), a robust method to address the complexity of social interactions by recognizing the interplay between interactants and non-human elements that make up the situation under study. SA incorporates some of the classic tools of grounded theory (i.e., open and focused coding, theoretical memos) but expands it, asserting that differences found through research are expected and should be represented rather than reduced and universalized. This study also employed conversation analysis, a method for examining naturally occurring conversation that is underutilized in nursing research. While it may seem on the surface that these two methods are incongruent with simultaneous usage, the study results demonstrate their utility in identifying issues that impact the interpreter-mediated healthcare interaction. For the conversation analyst, *context* in a naturally occurring conversation is the preceding utterance. However, *context* is also a subjective construct that may be indexed within the course of conversation and is discoverable not only by the interactants, but by the analyst as well (van Dijk, 2007). Situational Analysis allows the analyst to explore the relevant context as indexed by the interactants within the course of conversation, thus uncovering “sites of silence” (Clarke, 2005, p. 85) that may have previously been unknown.

The novel approach of combining situational analysis and conversation analysis may at first seem counter-intuitive as situational analysis approaches a problem from a macro-level point of view, while conversation analysis examines the micro-processes of language in action. However, using both methods to explore an under-researched phenomenon, I feel, makes the findings more robust. For example, at the beginning of this project, I identified possible influences on the situation of interpreter-mediated healthcare interactions through situational mapping (appendix G). I knew from my experience as a practicing nurse practitioner that there would be access issues and political impacts and included them on my map. During the process of conversation analysis of the transcribed conversations, the participants continually referenced issues surrounding prescriptions and prescribing practices. How the interactants managed these issues compelled me to revisit the situational map and look for explanations for these disruptions. As a result I identified an unintended consequence of the Patient Care and Affordable Health Care Act. This mandate requires healthcare providers to e-prescribe or e-fax prescriptions in order to streamline care and reduce medication errors. However, the interactants within this study experienced this requirement not as an improvement in efficacy, but as a barrier to medication access that they were required to negotiate. This example highlights the strength of this approach, and it may identify other areas of concern that may impact healthcare delivery and disparities.

Communication is an essential component of healthcare interactions, with implications not only for the quality of the interaction between the healthcare provider and patient, but also for diagnostic and interventional decision making, patient understanding and compliance, and ultimately, healthcare outcomes and health

disparities. This research expands the science of healthcare communication processes, particularly interpreter-mediated communication, in several ways. Previous research includes self-reports and interviews of what interactants say they do within interpreter-mediated healthcare encounters, but this study adds to the increasing information we have on actual triadic healthcare encounters. Although interpretive work embedded to context may be difficult to extract, the results of this research reveal not only the expected issues surrounding language and interpretation in an interpreter-mediated, triadic interactions, but also the impact of larger social forces on how interactants perform within this encounter.

Providers, when they have had training in working with interpreters (the vast majority have not), are taught to approach this process as conduit in nature; that is, messages between interlocutors should be rendered into the target language exactly as expressed by each participant (*NCIHC National Standards of Practice for Interpreters in Health Care*, 2005). However, the results of this research reveal that although this role expectation is well understood, this is not necessarily what occurs in actual practice. Interpreted healthcare interactions, as performed within these contexts, can be collaborative, co-constructive communications through which the participants come to a mutual understanding. The interpreter did not necessarily interpret phrases word by word, but collaborated with the healthcare provider and patient to confirm an understanding of the idea to be interpreted, then interpreted the *idea* into the target language. Once mutual understanding was attained, the participants moved on to the next topic. This original finding demonstrated that the nurse practitioners participated in and facilitated this process, and contrary to previous findings (Hsieh, 2010), did not demonstrate any

resistance or animosity towards this approach. While this approach may be susceptible to missed messages, in some circumstances and contexts (such as primary care, where there is an ongoing relationship between the interactants) it may be a preferable method of interpretation, leading to better understanding, greater advocacy, and increased satisfaction between all participants.

As seen in previous research, the interpreters in this study experienced dissonance in negotiating how they understood they should perform their role as opposed to the demands of the actual interaction. These interpreters, as others have reported in the literature (Hsieh, 2008), were trained to articulate their roles as non-intrusive and as conduit in nature as possible. Their definitions of interpreter role reflects this training and national standards. While this standard style is at times appropriate and demonstrated within these findings, there are other styles of interpreter interaction besides a conduit-type that are practiced, appreciated, and, we would argue, necessary to establish relationship, assure mutual understanding between participants, and facilitate patient empowerment. The seeming incongruence between role description/expectations and clinical reality may instead be reframed as a need to officially recognize the potential benefits of multiple ways of interpreter practice: interpretation as a thoughtful, intuitive, and cooperative act brokered by the interpreter, who is able to negotiate a fluid idea of how the interpretation process should be performed based on the changing requirements of the interaction as the visit progresses. This work also reveals the active participation of the patients who are capable interactants in this brokering process, regardless of language asymmetries, which should be recognized and encouraged by all participants in the process.

Hadziabdic and colleagues (2010) reported communication was improved when the provider and interpreter had worked together in previous encounters. Nurse practitioners practicing in primary care settings have more of an opportunity to establish relationships with consistent professional colleagues, as well as with patients over time. Ongoing relationships and interactions prior to the current clinic visit may hold the potential to uncover useful, pertinent information that may hold implications for decision making and the ultimate healthcare outcome.

Examination of the data at the micro-level by using conversation analysis also yielded promising information for the clinician to improve communication within the context of interpreter-mediated interactions. *Trouble spots*, or deviations from expected conversational structuring such as prolonged silences or sequencing, reveal potential communication breakdown and the effects of structural issues, power differentials, and the agency of the participants.

### **Implications for practice**

These results do not hold implications solely for interpreter-mediated healthcare interactions. Communication is *the* integral part of a healthcare interaction, without which healthcare delivery cannot take place. The issues uncovered and explored within this research have the potential to affect any healthcare interaction, but are particularly relevant to persons from vulnerable populations. Additionally, the majority of communication research within healthcare has focused on dyad interactions, ignoring the fact that many interactions involve additional interactants such as family members or friends that influence the process of communication. Finally, the interaction takes place within a multi-factoral context which has real impact on how the interaction is negotiated

by the interactants. For nurses and nurse practitioners, simply understanding the complexity of the processes involved and the impact of the communication process on healthcare delivery is important. Nursing education should include raising awareness of the political, social and economic pressures and constraints on healthcare encounters, and how to address their potential impact on healthcare delivery. Education for nurses and interpreters should include how to identify and negotiate potential communication problems in real time to facilitate understanding, and incorporate intra-professional collaboration and practice to lessen health disparities for patients with limited English proficiency. The rules of conversation are implicit; we all recognize the structure of conversation and when there are deviations from that structure, even if it is a vague, uncomfortable feeling. We may have an intuitive sense how to approach breakdowns in communication; indeed, those practitioners who are naturally better at negotiating trouble spots may be more positively perceived by the patient, thereby increasing patient satisfaction. Practicing conversation analysis in the nursing educational setting may be a novel approach to stimulate thinking as to how communication occurs, recognize deviations from expected conversational patterns, and learn to address those issues within the course of the clinical encounter.

### **Study strengths**

This study is significant in that it adds to the limited research on triad healthcare interactions, and to the very limited research on the use of conversation analysis in interpreter-mediated healthcare interactions. Additionally, the exemplars included in the second manuscript validate its utility in parsing out the intricacies of conversation, and

demonstrate to the healthcare provider potential *trouble spots* in the use of language that can be addressed in real time in order to enhance understanding between interactants.

The results did confirm the role dissonance experienced by interpreters in previous research. However, interpretation practiced as a collaborative, co-constructed process was not seen negatively by the participants, which is contrary to previous findings.

### **Limitations**

There are some potential limitations to this study. It was based on a limited sample of interactions within one healthcare specialty area, making it possible to “overgeneralize from a special case, treating a contingent configuration of cross-timescale processes as the natural way” (Wortham, 2006, p. 275) context, interactions and social processes develop. The data are constrained by the manner in which they are obtained; the actual process of data collection through audio recording most certainly affected the performance of the interactants. Audio-recordings also miss subtle physical cues and non-verbal communication that may have affected the tenor of the interaction. At the conclusion of each interaction, the interactants participated in either a reflective survey or an interview. The interview and survey process itself directs what is addressed and what is ignored, and may affect the outcomes of the research. How interactants respond to the process of research is also impacted by the presence of the researcher; the authority granted by this role is understood by the researched and the ubiquity of the interview in modern US media all but guarantees that interviewees may have shaped their responses to be interpreted by future social and political audiences (Briggs, 2007a). Finally, the researcher inhabits not only the timescale of the interview itself, but future



timescales as the story is repackaged and distributed as a specific representation of a common experience (Briggs, 2007b). As analysis and coding were ongoing, there was a potential for researcher bias and shaping the path of inquiry for future dissemination.

### **Implications for Future Research**

This study identifies areas for further exploration. As conversation analysis is an underutilized method in nursing research, future studies could incorporate this methodology to expand on this study by researching interpreter-mediated healthcare interactions in other contexts such as specialty interactions (ie. pediatrics, cardiology, surgery).

The participants in this study were very familiar with each other – the nurse practitioners and interpreters had ongoing professional relationships, and some of the patients had prior interactions with the interpreter-NP team. Future research should compare and contrast the style and efficacy of interpretation as practiced by triads who have an ongoing relationship as opposed to those who have had no previous interactions to determine if there are differences in satisfaction and healthcare outcome.

This study utilized audio-recorded data, which limits the analyst to only spoken communication. However, communication also includes non-verbal, mostly visual interactions such as gestures, positioning, eye contact and touch which cannot be represented by audio-taping. An additional area of study would be exploration of the non-verbal communication in interpreter-mediated healthcare interactions and how it affects the encounter.

One of the thoughtful comments I received regarding this dissertation is in regards to how we conceptualize the interpreter-mediated healthcare interaction. This situation

has been problematized within the context of healthcare delivery – the language we use to describe the situation and interactants includes terms like “language discordance” and “limited English proficient”, implying that monolingual English interactions are the norm, and other types of interactions, including multilingual interactions, are deviant in some way. This position is also reflected in research and in the systems within which these interactions occur. The actors within these systems (such as nurse practitioners in a work place) may not only be blinded to these constructs, but can perpetuate the potential harm they can cause for patients from vulnerable populations. An inter and multidisciplinary approach such as I used for this study can help bring to light the presuppositions we hold within our discipline, and help us address policies that may affect health disparities. This goes beyond simply changing terminology, but approaching the situation from a different vantage point in order to develop novel and interdisciplinary ways to effect change. Future research should challenge these conceptualizations and disseminate alternate understandings of what can be considered “good” and evidence-based practice when caring for patients from vulnerable populations.

### **Conclusions**

These findings emphasize the complexity of interpreter-mediated healthcare interactions, reveal the influence of larger structural issues on language interactions during clinic visits, and underscore ways in which the use of language may impact individual health outcomes and broader health disparities. Nurse practitioners and interpreters are at the forefront in ameliorating health disparities suffered by patients with limited English proficiency. Patients will benefit from research-driven interventions that address communication issues within healthcare delivery at all levels.

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## Appendix A

### **Informed Consent Form Nurse Practitioners**

#### **Study information**

Robin Dawson Estrada, a doctoral student in the College of Nursing at the University of South Carolina, is conducting a study on interpreter-mediated healthcare encounters. Your participation in this study is voluntary. You are being asked to participate because you provide care to patients with limited English proficiency. Your participation in this study is voluntary, and you may withdraw at any time, without penalty. The information obtained up to that point would then be destroyed. You may also refuse to answer any question in the study.

#### **Your contribution**

If you choose to participate, you will be asked to identify interpreters and patients appropriate for this study. The interactions between you, your patient and the interpreter will be audio taped for further analysis. You will be asked to start the audio recorder at the beginning of the interaction with your patient, and stop it at the end. You will also be asked to complete a survey regarding your perceptions of the healthcare encounter. This survey will take less than 10 minutes to complete.

#### **Confidentiality**

The audiotapes and survey are confidential. We will not include your name or personal information on any information that you give us. Your answers cannot be connected to you individually, as your privacy and identity is very important. A number instead of your name will be used to identify the surveys. The researcher will keep a card with your name, contact information, and identification number in a separate locked box. Information will only be available to those directly involved in this study. Any publications that result from this study will be written so that the participants cannot be identified. All completed questionnaires will be kept in a locked file cabinet in the office of Robin Dawson Estrada, and after the study is complete, the link to your name will be destroyed.

#### **Potential risks and benefits**

We do not anticipate any risks to you as a result of your participation in this study, other than the inconvenience of your time. You may benefit from the satisfaction of participating in furthering the understanding of this problem. While you may not benefit personally from your participation, it is hoped that valuable information will be obtained about interpreter-mediated healthcare interactions that will be of future benefit to society.

You are asked to sign this consent form, and you will be given a copy for your records. If

you have any questions about the survey, you may ask them before you sign this form. The signed forms will be kept in a locked file cabinet separate from the surveys and identification cards in the office of Ms Estrada. If you have any questions about the study, you may contact her or her dissertation chair:

Robin Dawson Estrada  
(803) 577-2125  
Dr. DeAnne Hilfinger Messias  
College of Nursing  
University of South Carolina  
Columbia, S.C. 29208  
(803) 777-8423

If you have any questions or complaints about your treatment as a participant in this study, you may contact:

Thomas Coggins  
Office of Research Compliance  
University of South Carolina  
Columbia, S.C. 29208  
(803) 777-7095

Your signature indicates that you agree to participate in this study, that the researcher has explained the study to you and has answered all your questions, that your rights as a human subject have been explained, and that you have been given a copy of this consent form.

\_\_\_\_\_ (participant)  
\_\_\_\_\_ (date)

\_\_\_\_\_ (researcher)  
\_\_\_\_\_ (date)

## Appendix B

### **Informed Consent Form Interpreters**

#### **Study information**

Robin Dawson Estrada, a doctoral student in the College of Nursing at the University of South Carolina, is conducting a study on interpreter-mediated healthcare encounters. Your participation in this study is voluntary. You are being asked to participate because you provide care to patients with limited English proficiency. Your participation in this study is voluntary, and you may withdraw at any time, without penalty. The information obtained up to that point would then be destroyed. You may also refuse to answer any question in the study.

#### **Your contribution**

If you choose to participate, interactions between you, your patient and the nurse practitioner will be audio taped for further analysis..You will also be asked to complete a survey regarding your perceptions of the healthcare encounter. This survey will take less than 10 minutes to complete.

#### **Confidentiality**

The audiotapes and survey are confidential. We will not include your name or personal information on any information that you give us. Your answers cannot be connected to you individually, as your privacy and identity is very important. A number instead of your name will be used to identify the surveys. The researcher will keep a card with your name, contact information, and identification number in a separate locked box. Information will only be available to those directly involved in this study. Any publications that result from this study will be written so that the participants cannot be identified. All completed questionnaires will be kept in a locked file cabinet in the office of Robin Dawson Estrada, and after the study is complete, the link to your name will be destroyed.

#### **Potential risks and benefits**

We do not anticipate any risks to you as a result of your participation in this study, other than the inconvenience of your time. You may benefit from the satisfaction of participating in furthering the understanding of this problem. While you may not benefit personally from your participation, it is hoped that valuable information will be obtained about interpreter-mediated healthcare interactions that will be of future benefit to society.

You are asked to sign this consent form, and you will be given a copy for your records. If you have any questions about the survey, you may ask them before you sign this form. The signed forms will be kept in a locked file cabinet separate from the surveys and identification cards in the office of Ms Estrada. If you have any questions about the study,

you may contact her or her dissertation chair:

Robin Dawson Estrada  
(803) 577-2125  
Dr. DeAnne Hilfinger Messias  
College of Nursing  
University of South Carolina  
Columbia, S.C. 29208  
(803) 777-8423

If you have any questions or complaints about your treatment as a participant in this study, you may contact:

Thomas Coggins  
Office of Research Compliance  
University of South Carolina  
Columbia, S.C. 29208  
(803) 777-7095

Your signature indicates that you agree to participate in this study, that the researcher has explained the study to you and has answered all your questions, that your rights as a human subject have been explained, and that you have been given a copy of this consent form.

\_\_\_\_\_ (participant)  
\_\_\_\_\_ (date)

\_\_\_\_\_ (researcher)  
\_\_\_\_\_ (date)

## Appendix C

### **Informed Consent Form Patients (English)**

#### **Study information**

Robin Dawson Estrada, a doctoral student in the College of Nursing at the University of South Carolina, is conducting a study on interpreter-mediated healthcare encounters. Your participation in this study is voluntary. You are being asked to participate because you provide care to patients with limited English proficiency. Your participation in this study is voluntary, and you may withdraw at any time, without penalty. The information obtained up to that point would then be destroyed. You may also refuse to answer any question in the study.

#### **Your contribution**

If you choose to participate, interactions between you and your patient will be audiotaped for further analysis. You will also be asked to participate in a brief interview about your experiences with interpreted healthcare encounters with a bilingual research team member after your clinic visit. This interview will take approximately fifteen minutes.

#### **Confidentiality**

The audiotapes and interview are confidential. We will not include your name or personal information on any information that you give us. Your answers cannot be connected to you individually, as your privacy and identity is very important. A number instead of your name will be used to identify the surveys. The researcher will keep a card with your name, contact information, and identification number in a separate locked box. Information will only be available to those directly involved in this study. Any publications that result from this study will be written so that the participants cannot be identified. All completed questionnaires will be kept in a locked file cabinet in the office of Robin Dawson Estrada, and after the study is complete, the link to your name will be destroyed.

#### **Potential risks and benefits**

We do not anticipate any risks to you as a result of your participation in this study, other than the inconvenience of your time. You may benefit from the satisfaction of participating in furthering the understanding of this problem. While you may not benefit personally from your participation, it is hoped that valuable information will be obtained about interpreter-mediated healthcare interactions that will be of future benefit to society.

You are asked to sign this consent form, and you will be given a copy for your records. If you have any questions about the survey, you may ask them before you sign this form.

The signed forms will be kept in a locked file cabinet separate from the surveys and identification cards in the office of Ms Estrada. If you have any questions about the study, you may contact her or her dissertation chair:

Robin Dawson Estrada  
(803) 577-2125  
Dr. DeAnne Hilfinger Messias  
College of Nursing  
University of South Carolina  
Columbia, S.C. 29208  
(803) 777-8423

If you have any questions or complaints about your treatment as a participant in this study, you may contact:

Thomas Coggins  
Office of Research Compliance  
University of South Carolina  
Columbia, S.C. 29208  
(803) 777-7095

Your signature indicates that you agree to participate in this study, that the researcher has explained the study to you and has answered all your questions, that your rights as a human subject have been explained, and that you have been given a copy of this consent form.

\_\_\_\_\_ (participant)  
\_\_\_\_\_ (date)

\_\_\_\_\_ (researcher)  
\_\_\_\_\_ (date)

Appendix D

**Provider Demographic Form and Post-Interaction Survey**

Encounter code: \_\_\_\_\_

Participant code: \_\_\_\_\_

Clinic code: \_\_\_\_\_

Demographics:

Please circle: M/F

age\_\_\_\_\_

years in practice\_\_\_\_\_

native language \_\_\_\_\_

race/ethnicity\_\_\_\_\_



**Provider survey**

Encounter code: \_\_\_\_\_

Participant code: \_\_\_\_\_

Clinic code: \_\_\_\_\_

What was the patient's reason for making an appointment?

What do you expect the patient to do after this visit?

How did the interaction with this patient compare to other interactions with limited English proficient patients?

Assess the interpreter's performance in this interaction.

Identify any concerns or problems related to language or communication in this interaction.

Appendix E

**Interpreter Demographic Form and Post-Interaction Survey**

Encounter code: \_\_\_\_\_

Participant code: \_\_\_\_\_

Clinic code: \_\_\_\_\_

Demographics:

Please circle: M/F

age \_\_\_\_\_

years in practice \_\_\_\_\_

native language \_\_\_\_\_

race/ethnicity \_\_\_\_\_

country of origin \_\_\_\_\_

What kind of training/certification do you have in interpretation?

What is your primary job description in this clinic?

### **Interpreter Post-Interaction Survey**

Encounter code: \_\_\_\_\_

Participant code: \_\_\_\_\_

Clinic code: \_\_\_\_\_

What was the patient's reason for making an appointment?

What do you expect the patient to do after this visit?

How did the interaction with this patient compare to other interactions with limited English proficient patients?

Describe your role as an interpreter.

How did your performance in this interaction compare to other interactions?

Identify any concerns or problems related to language or communication in this interaction.

Appendix F

**Patient Demographic Form and Post-Interaction Interview guide**

Encounter code: \_\_\_\_\_

Participant code: \_\_\_\_\_

Clinic code: \_\_\_\_\_

Demographics:

Please circle: M/F

age\_\_\_\_\_

native language \_\_\_\_\_

race/ethnicity\_\_\_\_\_

country of origin\_\_\_\_\_

How long in the US\_\_\_\_\_

Educational level\_\_\_\_\_

How well do you think you speak English?

## **Patient Post-Interaction Interview Guide**

Encounter code: \_\_\_\_\_

Participant code: \_\_\_\_\_

Clinic code: \_\_\_\_\_

Thank you for participating...I'm going to ask you a few questions about your visit with the nurse practitioner today.

Why did you make an appointment today?

What did the nurse practitioner advise you to?

Probing questions may include: Are you supposed to take medication? What was your diagnosis? What are you supposed to do now?

How did you feel about having an interpreter during this interaction?

Probing questions may include: Have you gone to providers without an interpreter before? What was that experience like? Is this experience similar to previous interpreted interactions?

Identify any concerns or problems related to language or communication in this interaction.

Is there anything that you expected or wanted out of this interaction that you didn't get?

Would you recommend this clinic to your friends or family? If so, why? If not, why?

Appendix G: Abstract Situational Map (working/messy version)

**productivity**

**Malpractice**

**telephone**

**administration**

**access issues**

**signage**

**Patient satisfaction**

**physical location**

**computers**

**website**

**CLAS standards**

**fear**

**Transportation**

**respect**

**office employees**

**Insurance**

**patient working/time off**

**documentation**

**accuracy of diagnosis**

**compliance**

**Stereotypes**

**power**

**political issues**

**time**

**friends**

**family**

**Community**

**performance/role**

**dress/appearance**

**ethnicity**

**religion**

**race**

**Gender**

**sexuality**

**patients**

**nurse practitioners**

**interpreters**

## Glossary of Terms

CLAS standards – common name for the National Culturally and Linguistically Appropriate Standards in Health and Health Care. These 15 standards are designed to guide healthcare providers to “provide effective, equitable, understandable and respectful quality care and services that are responsive to diverse cultural health beliefs and practices, preferred languages, health literacy and other communication needs” (Office of Minority Health, 2013).

Conversation analysis - Conversation analysis (CA) is a method for investigating the structure and process of social interaction between humans. It focuses primarily on talk, but integrates also the nonverbal aspects of interaction.

Dyadic interaction – interaction between two people

Interpreter as conduit – conceptualization of interpreter role as a neutral, invisible, machine-like translator of messages from one language to another.

Interpreter as advocate – conceptualization of interpreter role as an informed communication facilitator that can advocate on behalf of the patient in order to support the well-being of the patient.

Interpreter-mediated healthcare interactions - and interaction between patient and healthcare provider in which communication is brokered by a bilingual interpreter.

Interactant – one that interacts

LEP – limited English proficiency

Metapragmatic – a reflexive typification of language in context which can in some cases index social identity.

Orders of indexicality – a concept that explains how individuals appropriate widely circulating models of identity categories for use in unique contexts, how language use may be linked to social status.

Situational Analysis – form of grounded theory that utilizes situational mapping and reflexive thinking to identify human and non-human elements that comprise the situation under study.

Symbolic interactionism – also called symbolic interaction theory, is a sociological theory that examines the subjective and symbolic meanings given to behaviors, events, and objects by people in the course of social interaction and negotiation within a context.

Triadic interaction – interaction between three people