

THE PURSUIT OF LANGUAGE APPROPRIATE CARE: REMOTE SIMULTANEOUS  
MEDICAL INTERPRETATION USE

by

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## ABSTRACT

### THE PURSUIT OF LANGUAGE APPROPRIATE CARE: REMOTE SIMULTANEOUS MEDICAL INTERPRETATION USE

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Background. The U.S. government mandates nurses to deliver linguistically appropriate care to hospital patients. It is difficult for nurses to implement the language mandates because there are 6,912 active living languages spoken in the world. Language barriers appear to place limited English proficient (LEP) patients at increased risk for harm when compared to non-LEP patients. Hospitals, a primary nurse employer, are responsible for supplying language services to support accessible, quality care to linguistically diverse populations. This descriptive study explored relationships among the use of remote simultaneous medical interpretation (RSMI) in hospital settings, hospital size as an indicator of organizational resources for cultural care, and clinical practice area.

Review of the literature. The literature supported the need for improving quality of care through managing the impact of language differences. Published comparative studies on language service use were limited in scope. Nurses had reported RSMI was the most available language service, however, they reported not using the service. Evidence emerged in support of RSMI as the interpreting method of choice by patients, nurses and other health care providers. The literature showed an association among language services availability, omission, and commission

as factors important to reducing patient risk for harm and positive health outcomes.

**Methods and Design.** Using two existing de-identified, retrospective databases with data collected over a 12-month period a sample size of 4,502 instances of RSMI use was obtained. RSMI use was compared using chi-square analyses to describe differences among hospital settings, hospital size as an indicator of organizational resources for cultural care, and clinical practice area.

**Results.** RSMI use most frequently occurred during the day shift with the average call lasting less than nine minutes. Spanish was the most frequent RSMI language. Significant differences in RSMI use were found by clinical practice area and hospital size. RSMI use was significantly lower on the intensive care areas in all pairings. In contrast, the mother-baby areas were significantly higher in RSMI use in all pairings. Hospital size comparison revealed that small and medium hospitals had significantly lower RSMI use than large hospitals, while small hospitals had significantly higher RSMI use than medium sized hospitals. Described RSMI use differences may place patients at increased risk for harm.

**Implications.** Nurses need to consider which clinical practice area and hospital size is less or more likely to support delivery of language appropriate care, and adjust practice accordingly to decrease patient risk for harm and improve health outcomes.

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## CHAPTER 1

### THE PURSUIT OF LANGUAGE APPROPRIATE CARE: REMOTE SIMULTANEOUS MEDICAL INTERPRETATION USE

#### 1.1. Introduction

The U.S. government mandates nurses to deliver linguistically appropriate care to hospital patients (Office of Minority Health [OMH], U.S. Department of Health and Human Services, 2001a). It is difficult for nurses to implement the language mandates because there are 6,912 active, living languages spoken in the world (Gordon, 2005). Hospitals, a primary nurse employer, are responsible for supplying language services to support accessible, quality care to linguistically diverse populations (OMH, 2001a). Hospital administrators within the organization are responsible for the provision of organizational resources for culturally and linguistically competent care.

This descriptive study explored relationships among the use of remote simultaneous medical interpretation (RSMI) in hospital settings, hospital size as an indicator of organizational resources for cultural care, and clinical practice area. The significance of language services process in providing safe, high quality, culturally appropriate nursing services is presented in Chapter 1. Included are the study framework, purpose, and research questions. See Appendix A for key terms and definitions.

## 1.2 Background and Significance

Language is a key component to providing culturally appropriate, accessible, quality care. All patients receiving hospital care are at a risk for death related to errors in care regardless of language differences (Divi, Koss, Schmaltz & Loeb, 2007; Institute of Medicine [IOM], 2000). Patient vulnerability exists because patients are dependent on the health care system and nurses for safe care. However, cultural differences between nurses and patients increases the likelihood that accessible, quality care will be compromised (OMH, 2001a; 2001b; Sullivan Commission, 2004). Effective communication between nurses and patients speaking diverse languages is important to support safe, patient centered and culturally competent care (Andrulis & Brach, 2007; Markova & Broome, 2007). Cultural competency is the possession of adequate cultural knowledge, attitude, and skills required to deliver patient care (Calvillo, et al., 2009). Racial, ethnic, and language diversity present in nurses and their patients in the hospital setting may reflect the increasing climate of globalization and mobilization in the United States (Bureau of Labor Statistics, May, 2009; Grieco, 2002; Pope, 2004; U.S. Department of Health and Human Services, 2004, March). Language is a cultural difference recognized by the OMH (2001a) as important to effective cultural care because culture and language are linked. For example, people who speak American English in Alabama have words and cultural practices that differ from people who speak American English in New Jersey. The person from New Jersey may have difficulty understanding that greens are food and that people in Alabama enjoy eating them. Cultural differences in the U.S. population contribute to health disparity and poor health outcomes (Sullivan Commission, 2004). Members of the Sullivan Commission (2004) report 25% of the U.S. population belongs to an American- born racial or ethnic minority. In addition to the American-born minorities, more than 31.1 million foreign-born persons live in the U.S.

making it more difficult to deliver culturally and linguistically appropriate nursing care. Around 44 million people in the U.S. speak a language other than English at home, with over 300 different languages spoken (Greico, 2002; Pope, 2004). Over half of the foreign-born persons in the U.S. come from Latin America, making Spanish the second most common second language. Nurses are essential in the chain of communication where language differences can affect patient risk for harm and poor health outcomes. Therefore, language differences are a concern regarding appropriate care. Central to the concern are the racial, ethnic, and language diversity gaps that exist between the U.S. public and the registered nurse population (American Association of Colleges of Nursing [AACN], 2003; AACN, 2007a; Matherlee, 2004; Sullivan Commission, 2004).

The racial and ethnic diversity gap between the U.S. population and registered nurse population places limited English proficient (LEP) patients at risk for harm and poor health outcomes because receiving health care increases patient vulnerability (American Association of Colleges of Nursing [AACN], 2003; AACN, 2007a; Matherlee, 2004; Sullivan Commission, 2004). Patients are in a position of vulnerability whenever they are unable to provide their own self-care (Orem, 2001). Providing patient care are the 2.5 million licensed registered nurses (R.N.s) who comprise the largest health care workforce group in the U.S. Within this R.N. workforce is a non-minority nurse population that is seven times larger than the population of minority nurses (Greico, 2002; Pope, 2004). Because language and culture are related, the racial and ethnic diversity gap between nurses and their patients implies that a language gap likely exists between nurses and their patients (OMH, 2001a).

U.S. nurses and patients have racial, ethnic and language gaps (American Association of Colleges of Nursing [AACN], 2003; AACN, 2007a; Greico, 2002; Matherlee, 2004; Pope, 2004;

Sullivan Commission, 2004). Furthermore, foreign-educated nurses practicing in the U.S. increase the likelihood for a language gap between them and their patients (National Council of State Boards of Nursing [NCSBN], 2006). Complicating the gaps is the practice of U.S. healthcare corporations importing foreign nurses to relieve the domestic shortage of registered nurses. From 2001 through 2003, 37,865 foreign educated candidates took the NCLEX-RN exam for the first time (Brush, Sochalski, & Berger, 2004). Imported nurses, while racially, ethnically, and linguistically diverse, do not represent the U.S. minority population (Bureau of Labor Statistics, May, 2009; U.S. Department of Health and Human Services, 2004, March). In 2004, over half of foreign-educated nurses came from the Philippines. Half of all Filipino nurses speak English as their second language. In contrast, the most common non-English language need of U.S. patients is Spanish (Hasnain-Wynia, Yonek, Pierce, Kang, & Greising, 2006; U. S. Bureau of Census, 2000). Moreover, only 4.3% of all foreign-educated nurses speak Spanish (U.S. Department of Health and Human Services, 2004, March). Additionally, foreign-educated nurses may have difficulty in distinguishing between their ability to perform specific tasks and their ability to communicate effectively with patients and others to provide linguistically competent care (Bieski, 2007; NCSBN, 2006; Washington State Nurses Association, 2004). This situation increases risk to hospitals organizationally because administrators are responsible for creating a solution to bridge the cultural and linguistic gap for foreign-educated nurse employees while at the same time they must support U.S. academic institutions to bridge the same gap for domestically-educated nurses. Because nurses are not culturally and linguistically homogenous, a single education solution may not be possible. Regardless, federally mandated language standards motivate hospital administrators and all practicing nurses to demonstrate linguistic cultural competency.

Federally recommended and mandated standards for linguistically appropriate care require nurses and hospital administrators to incorporate language-focused care into practice, processes, and resources (Agency for Healthcare Research & Quality [AHRQ], 2006; OMH, 2001a). This is important because limited English proficient (LEP) patients are at risk for decreased care and harm. The OMH created culturally focused standards to address the needs of racial, ethnic, and linguistic population groups, which experience unequal access and quality health services, because issues of safe care exist (OMH, 2001a; Sullivan Commission, 2004). Table 2 in Appendix B includes the complete list of recommended and mandated CLAS standards of care. The four federally mandated CLAS standards focusing on linguistically appropriate care are in bold text.

Mandated linguistically appropriate care is included in the concept of cultural competency as recognized in the CLAS standards. Culturally competent nurses have the capacity to function effectively as individual practitioners and within their practicing organization (OMH, 2001a). Further, nurses practice within the context of their own cultural beliefs, behaviors, and needs as presented by consumers and their communities. Lack of cultural competency within the hospital organization can compromise nurse-patient communication placing patients at risk for harm (Barnes, 2004; Markova & Broome, 2007). Cultural competency training serves to increase awareness, knowledge, and skills with the intention that it will lead to nurse behavior change and improved patient-nurse communication (American Institutes for Research, 2002). Hospital administrators are responsible and accountable for providing cultural care resources to nurses (Betancourt, Green, Carrillo, & Park, 2005). When nurses perform cultural care, they appropriately access language services within their hospital for LEP patients (Andrulis & Brach, 2007). Cultural competency training, as a method to support

cultural care, has mixed results in effectiveness with some evidence that nurses have increased their cultural knowledge and self-efficacy, while other results points to less effectiveness (Brach & Fraser, 2000; Napholz, 1999; Ryan et al., 2002; Shellman, 2006; Smith, 2001). Nurse cultural competency is key to organizational implementation of cultural and linguistic competency (Salimbene, 2004). The literature recognizes the relationship between hospital size and organizational cultural care resource availability (Hasnain-Wynia, Yonek, Pierce, Kang & Greising, 2006). Evidence that a relationship existed between hospital sizes as a factor in nurse use of language services was not found in the literature.

Language service use is important to keeping patients safe and producing positive health outcomes. Language barriers place patients at risk for harm because nurses and patients misunderstand each other (Divi, et al., 2007). Language diversity in the U.S. made the feasibility of all LEP patients having organizational access to providers who speak their language unlikely (Ngo-Metzger, et al., 2007). The three types of interpretation in common use in the healthcare setting are a) on-site services, b) off-site, and c) remote simultaneous medical interpreting (Lehna, 2005). On-site services and off-site interpreting services provide live interpreters. The availability of a broad range of languages was limited with these two services. Both require a delay in nursing or other type of health care in order to meet the language interpreting needs of the patient. The RSMI method incorporates the use of the telephone to connect the patient, the interpreter, and the nurse making interpretation quickly available at the bedside with little delay in care (Gany, et al., 2007b). Evidence emerged in support of RSMI as the interpreting method of choice by patients, nurses and other health care providers. Study results showed RSMI as the fastest method of interpretation for patients and nurses providing care with fewer nurse errors in care (Gany, et al., 2007a; Gany, et al., 2007b).

### 1.3 Purpose

The purpose of this study was to explore the relationships among the use of remote simultaneous medical interpretation in acute care settings, organizational resources for cultural care, and clinical practice area. There was insufficient evidence to guide organizations in supporting nursing or other health care provider practice in the provision of culturally and linguistically appropriate care. Describing the influence of organizational resources for cultural care on RSMI use provides information for future research efforts on language assistance in the areas of impact, cost-related and organizational research. Knowing relationships among organizational characteristics, resources, and the acute care clinical practice area use of RSMI can provide direction for research in organizational cultural care. It is important to know RSMI use in clinical practice areas. For instance, describing whether RSMI is used more or less often on a particular shift and the amount of time it is used during the shift can inform research in the areas of error, cost, and cultural competency. All relationships identified in this study serve to inform the evidence gap between practice, the organization, patient safety, and quality in the provision of culturally and linguistically appropriate care.

### 1.4 Framework

Cultural competency as a concept originated in the field of medical anthropology and sociology (Cortis, 2003). Many theories of cultural competence were developed for specific organizations, health care providers, and specialties, which resulted in narrow scope and limited applicability to general practice (Lucas, Michalopoulou, Falzarano, Menon, & Cunningham, 2008). Some theories of health care provider cultural competence emphasized the influence of training and experience on the cultural competency of the provider (Camphina-Bacote, 1999). Others focused on actions taken by the provider and the organization to ensure culturally



competent care (Berlin & Fowkes, 1983; Wilson-Stronks & Galvez, 2007). Leininger's theory (1991; 2006) described culturally competent care as a way to help patients recover from illness or unfavorable life conditions. None of the theorists addressed the organizational aspects of culturally competent care.

The OMH mandated standards for the competent use of CLAS informs the framework for this study. Integral to the standards is the multidisciplinary cultural developmental continuum conceptualized by Cross, et al. (1989). CLAS development incorporates a continuum to provide a broad framework for implementation of services and organizational structures intended to help health care providers respond to the cultural and linguistic needs of patients (Fortier & Bishop, 2003). It reflects the cultural and linguistic aspects of care within the acute care health care organization. Relationships relevant to remote simultaneous medical interpreting use, organizational resources for cultural care, and clinical practice area in the provision of cultural and linguistically appropriate care are presented in Figure 1. Depicted are concepts reflecting potential relationships within organizational cultural and linguistic competency. The relationship among hospital size, organizational characteristics, commitment to cultural competency, and other cultural care resources provide conceptual context to the provision of cultural and linguistically appropriate care. The clinical practice area and the use of RSMI are influenced by the concepts of organizational characteristics, organizational resources for cultural care with provision of cultural and linguistically appropriate care as the expected outcome.

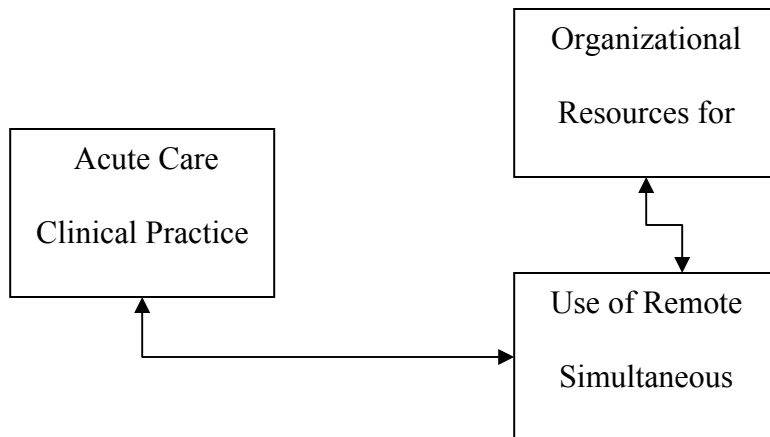


Figure 1. Relationships Relevant to Remote Simultaneous Medical Interpreting Use, Organizational Resources for Cultural Care, and Clinical Practice Area in the Provision of Cultural and Linguistically Appropriate *Care*.

#### Study Question

1. Does RSMI use significantly differ by clinical practice area?
2. Does RSMI use significantly differ by hospital size?

#### Assumptions

1. Hospitals are organizations.
2. Hospitals are unequal in size and have a range of resources available for the provision of culturally competent care.
3. Administrators within hospitals are responsible for establishing and managing the organizational policies and procedures supporting the provision of culturally competent care.
4. Conditions for use of remote medical interpretation services vary across acute care settings within the health care organization.
5. Health care providers, including nurses, have a particular clinical area in the hospital organization.

## 1.5 Summary

Racial, ethnic, and language diversity is present between patients and nurses in the United States. Language differences between nurses and patients place patients at risk for harm and decreased health outcomes. A U.S. linguistic mandate from the Office of Minority Health requires nurses to provide culturally and linguistically appropriate care for patients despite language differences. The study of RSMI use by clinical practice area and hospital size will support the emerging literature in healthcare language services research.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

A compelling need exists for health care provider cultural competence in the United States (Cohen, Goode, & Dunne, 2003). To increase access and improve care, the U.S. federal government Office of Minority Health (OMH) prepared standards for the competent use of culturally and linguistically appropriate service at every point of care (OMH, 2001). Standards are two tiered with the linguistic standards mandated and the remaining standards recommended. Language barriers appear to place limited English proficient patients at increased risk for harm when compared to non-LEP patients (Wilson-Stronks & Galvez, 2008). To meet the linguistic needs of patients, nurses must have the cultural capacity to function competently and effectively as individual professionals and within organizations to decrease patient risk for harm (Fortier & Bishop, 2003). Described in this study are the differences among clinical practice area and hospital size as influencers of RSMI use in a large metropolitan hospital system.

Relevant literature served to inform the dissertation study, providing direction for methods and procedures intended to describe the relationship among clinical practice area, hospital size, and use of remote simultaneous medical interpretation. The conceptual and sociocultural-political context for the provision of culturally competent care that includes population, health care, legal, regulatory and accreditation changes are presented.

Organizational cultural care resources, including training, and available research on culturally competent care with a specific focus on remote simultaneous interpretation use, are synthesized.

## 2.2 Safety and Culturally and Linguistically Appropriate Care

Culturally and linguistically appropriate nursing care is foundational to patient safety (Markova & Broome, 2007; OMH, 2001a). Evidence supporting increased focus on patient safety was an estimated 98,000 hospitalized patients die each year because of errors in care (IOM, 2004). Connecting the national need for strengthened safe and linguistically appropriate care are private organizations such as the Lucien Leape Institute. The Institute is the think tank at the National Patient Safety Foundation. They have placed a call for action directing healthcare organizations and professionals to address health literacy (Lucien Leape Institute, 2009). The Institute's health literacy definition includes the protection of persons with limited English proficiency. As health care professionals, nurses are responsible and accountable for protecting vulnerable LEP patient's from harm.

Limited English proficiency is a likely contributor to patient vulnerability (Markova & Broome, 2007; OMH, 2001a). Persons with LEP are people who speak English less than very well. The U.S. limited English proficient population increased by 7.4 million between 1990 and 2000 (Youdelman & Perkins, 2002). LEP patients are vulnerable because they are dependent on the nurses providing care in the healthcare system. Nurse action within the healthcare system is critical in keeping vulnerable patients safe (Orem, 2001). A relationship exists between less health education, patient satisfaction, worse interpersonal care, and language barriers (Ngo-Metzger, et al., 2007). Nurses are essential in the chain of communication where language differences can affect patient risk for harm.

Culturally and linguistically appropriate nursing services may keep patients safe from harm at all points of delivery. Nurses provide and coordinate all aspects of patient care and they are responsible and accountable for assisting culturally vulnerable patients in accessing quality care within the healthcare system (Green-Hernandez, Quinn, Deneman-Vitale, Faulkenstern, & Judge-Ellis, 2004; National Council of State Boards of Nursing, 2003). Important in the delivery of safe nursing care is meeting patient language needs during nurse assessment and evaluation. Complicating the delivery of linguistically appropriate nursing care is the globalization and mobility of nursing professionals. Globalization and mobility have increased the likelihood that some nurses in the acute care setting may be functioning as limited English proficient professionals. Evidence supporting nurse ability in providing appropriate linguistic care shows that they have a lack of experience in appropriate communication, accurate diagnoses, and effective interventions that have the potential to place patients at safety risk (Bernal & Froman, 1987, 1993; Geissler, 1991; Goode, Dunne, & Bronheim, 2006; Leininger, 1991; Rooda, 1993). Appropriate use of language services by all nurses, regardless of primary language, is pivotal to managing patient harm.

Language proficiency and patient harm are related (Divi et al., 2007). Divi and colleagues conducted an adverse event study comparing LEP to non-LEP patients. Results show that language barriers appear to place LEP patients at increased risk for harm when compared to non-LEP patients. An important aspect of risk for harm is that non-English speakers have less opportunity to participate in their care and are less able to communicate their needs (Wilson-Stronks & Galvez, 2008). Even more compelling is patients may be less able to respond to complex information. As a result, they may not understand when health is not improving or they are getting worse. Population and language specific studies focusing on the medication choices

of mid-life Latinos provide evidence that language barrier and medication choices influence health (Mutchler, Bacigalupe, Coppin & Gottlieb, 2007). Mutchler, et al. noted medication choices and adherence have a direct relationship to language barriers and treatment for chronic and potentially life-threatening conditions. Patients voiced that understanding, believing and trusting their caregiver was important to medication use. They preferred a same language health care provider. Non-participation in care was described as instances where LEP patients were not included in the choice of language service. Interpretation service choices made by nurses impact errors in care (Gany, et al., 2007a). Language service documentation and data collection need to include adverse event reporting. The purpose of documentation and collection of data is to support evidence-based language service programs designed for decreasing the risk for harm and improve health outcomes.

### 2.3 Regulations and Standards

Regulators, accrediting agencies and non-governmental organizations are producing laws, standards, and frameworks to address safety needs for the culturally vulnerable. Table 1 depicts the recognized cultural competence social groups and linguistic minorities served by healthcare providers (American Institutes for Research, 2004).

Table 1

*Social groups recognized in the definition of cultural competence*

Social Groups	Linguistic Minorities
• Race	• Limited English proficiency
• Ethnicity	• People with low literacy skills
• Religion	• Deaf and hearing impaired
• Gender	
• Sexual orientation	
• Age	
• Disability	
• Socioeconomic status	

*Note:* From the American Institutes for Research (2004).

A comprehensive national framework is under development by non-governmental stakeholders to establish preferred practices for evaluating cultural competency across healthcare settings (National Quality Forum, 2009). The Joint Commission accreditation guidelines for culturally competent patient-centered care are the foundation for the preferred practices evaluation (Joint Commission, 2009, June 08). Joint Commission, a hospital industry stakeholder in quality and safety, has requirements under development to advance effective communication, cultural competence, and patient-centered care, which are expected to launch some time in 2011. Other patient safety stakeholders include the National Health Law Program (2009) and the National Committee for Quality Assurance (2009). The National Health Law



Program introduced a widely endorsed statement of principles that includes the need for language access in health care to affect patient safety. The National Committee for Quality Assurance has evaluative standards under development to improve the provision of CLAS. Within the profession of nursing, collective direction for developing nurse cultural competence to improve patient care is underway (Douglas, et al., 2009; Giger, et al., 2007; Pacquiao, 2007; Siantz & Meleis, 2007). The intent of these initiatives is to stimulate professional discussion on culturally competent care application. Evidence supporting the need for standards is the worldwide shortage of nurses and global migration of both nurses and populations (Bureau of Labor Statistics, May, 2009; Greico, 2002; Pope, 2004; U.S. Department of Health and Human Services, 2004, March). Non-governmental stakeholder input has a synergistic effect for informing nurse cultural competency when combined with governmental stakeholder standards, laws, regulations, and contracts.

Governmental stakeholders are bombarding the nursing profession with direction on how to provide LEP patients with safe care and improve health outcomes. Direct relationships exist among CLAS standards, and key laws, regulations, contracts and other standards used by federal and state agencies (National Center for Cultural Competence, 2001). Selected federal laws and regulations informing standards for culturally and linguistically appropriate care are the Title VI of the Civil Rights Act of 1964, the Hill-Burton Act, the Health Care Financing Administration laws guiding Medicare and Medicaid programs, and the Emergency Medical Treatment and Active Labor Act. Executive Order No. 13166, Improving Access to Services for Persons with Limited English Proficiency, was signed into law in August 2000. Additionally, state initiatives play a role in cultural competency. State legislation mandates language access for LEP individuals seeking health care services (Beamon, Devisetty, Hill, Huang, & Shumate, 2006).

Governmental stakeholders have expectations of hospital administrators and healthcare providers for the conduct of the CLAS linguistic mandates.

The OMH expects healthcare organizations to conduct their own interpretation of the language mandates. Overall, the expectation is that healthcare organizations will interpret federal, state and accreditation laws, regulations, standards, and guidelines for implementation in their specific environment. Healthcare organizations fear misinterpretation could result in a loss of Medicare and other federal and state funds because of an unintentional violation (OMH, 2006). Every healthcare organization has different characteristics affecting ability to provide linguistically appropriate nursing care.

### *2.1.1 Hospital Characteristics*

Hospital characteristics affect a nurse's ability to provide appropriate linguistic care. A U.S. national survey of language services in 861 hospitals found a relationship between language services and specific hospital characteristics (Hasnain-Wynia, et al., 2006). Differences found included hospital size, hospital location, hospital type, language resource availability, and type of interpretation services. There were no significant differences in language resource availability between hospitals in LEP growth and LEP non-growth states. The most available service for both groups was remote simultaneous interpretation. RSMI was the most frequently cited language service available (92%); however, the most frequently used interpretation method was staff interpreters (82%). Remote simultaneous medical interpreting was most likely to be available in large, not-for-profit, urban, and teaching hospitals. Hospitals in the northeast region of the country and critical access hospitals were more likely to have RSMI available. This snapshot of hospital characteristics affecting care for LEP patients reinforces the need for

accurate data collection and documentation of patient language information for the provision of safe, health outcomes focused care.

Data collection and documentation of patient language information are important to patient care. The Joint Commission accreditation cultural competency standards for hospitals intend to promote, facilitate, and advance culturally competent patient-centered care within organizations (Hasnain-Wynia, et al., 2006; Wilson-Stronks & Galvez, 2007). Within these standards, the Joint Commission plan is to survey hospitals within these domains to identify the presence of a uniform framework to collect data on race, ethnicity, and language. The evaluative process under development focuses on six culture and linguistic research domains, a) leadership, b) quality improvement and data use, c) workforce, d) patient safety and provision of care, e) language services, and f) community engagement. In a related study, a self-assessment tool for cultural and linguistic patient care based on best practices emerged to support hospital administrators preparing for Joint Commission accreditation evaluation (Wilson-Stronks, Cordero, Kopp, & Galvez, 2008). Collecting and using data to improve services for meeting diverse patient needs was an emerging theme. Nurses must practice with an understanding of how non-governmental stakeholder guidelines and resulting data influences their practice of supporting LEP patient care.

#### 2.4 Clinical Practice Area

Insufficient general literature exists on the relationship among clinical practice area, hospital size as factor of organizational resources for cultural care, and RSMI use. This poses a problem for hospital administrators in justifying the cost of cultural care resources for nurses. In the review of the literature, the two practice groups most frequently mentioned in the cultural competency literature are acute care hospital nurses, and community health nurses. Hospital and

community health nurses reported their comfort levels in providing culturally competent care using a self-efficacy tool. The hospital nurses had a higher level of comfort in providing culturally competent care than community health nurses. In a study by Anthonypillai (1993), intensive care nurses reported their inability to communicate effectively with LEP patients might have reduced quality of care. Patient results in this cross-cultural study were inconclusive because questionnaire translation for the Greek speaking population was insufficient. A study of pediatric oncology nurses revealed they resolved transcultural caring relationships in family care by using communication and training as tools to bridge transcultural obstacles (Pergert, Ekblad, Enskar, & Bjork, 2008). The communication tool included non-verbal communication and interpreter use only. Cioffi (2006) conducted a qualitative study on nurse interactions with culturally diverse patients in an acute care setting. The study was inconclusive because the briefness of the encounter made it difficult to determine the relationships between nurses and culturally diverse patients. The lack of literature on clinical practice area, hospital size, and RSMI use reinforces the need for research in this area.

Literature on the use of RSMI and nursing practice focuses on nurses in general or specialized practice rather than clinical practice area. Thom (2008a) conducted a British demonstration-training project in the public health setting with health visitors using RSMI to support LEP patients. Nurse training included a learning module on RSMI use. Results indicate nurses were able to perform the necessary skills to use the RSMI service and successfully worked with the remote interpreters, however, nurse's assessment of the patient's LEP was overestimated. Researchers recommended more nurse training on assessment of RSMI patient needs to increase nurse empowerment with a goal to have them act on objective rather than subjective assessment. Other recommendations were to address differences in clinical practice;

however, the study did not specify whether the differences were in relation to training, use, or both. Thom (2008b) comments that attitude is the reason nurses deliberately choose not to use professional interpreters. The level of confidence that nurses have in their ability to deliver culturally competent care is an important factor in whether cultural care is delivered or not (Coffman, Shellman, & Bernal, 2004; Jones, Cason & Bond, 2004).

The literature describes other reasons for not using RSMI language services as well. Huang and Phillips (2009) describe non-medical staff use of the free Australian Translating and Interpreting Service, a remote simultaneous interpreting service, as largely unused. Not all of the participants in the study were nurses. Twenty five percent of the participants did not know about the service. If they knew of the service, they reported not knowing how to use the service or how to use interpreters in practice. Recommendations were to provide training for medical and non-medical staff to increase non-medical staff empowerment in RSMI use. At this time, the literature on clinical practice area and RSMI is narrow in scope with insufficient evidence to support generalization to acute care practice.

Literature focusing on individual cultures, while informative for serving specific populations, is not general enough to move the nursing profession to a framework of culturally competent care. Examples include the perceptions of rural Filipinos on birth spacing (de Vera, 2007), gender differences in Chinese immigrants as predictors for high blood pressure medication adherence (Li & Froelicher, 2007), and lead screening in Detroit Yemeni families (Taylor & Holtrop, 2007). The nursing profession needs collective direction for developing nurse cultural competence (Giger, et al., 2007; Pacquiao, 2007; Siantz & Meleis, 2007). A preliminary standard for culturally competent nursing practice is under development (Dennis & Small, 2003; Douglas, et al., 2009). The intent of the standards under development is to

stimulate discussion within the profession on how to use culturally competent care in all clinical practice areas.

## 2.5 Cultural Competency Education

Governmental involvement affects the provision of cultural competency education. In 2004, Congress appropriated \$5.4 million for nursing workforce diversity programs (American Colleges of Nursing, 2007a; 2007b; U.S. Department of Health and Human Services, 2004). The dollars appropriated supported Title II, of the Nurse Reinvestment Act 2002, Section 831 that specifies an education priority area identifying the need to develop cultural competency education among all nurses regardless of race or ethnicity (Henderson & Scanlon, 2002; U.S. Library of Congress, 42, U.S.C. 296p). As the need for a diverse nursing workforce has increased, the federal government has responded by increasing funding annually (U.S. Department of Health and Human Services, 2004). This is a strong message to academic nursing education and health care organizations that both should move forward quickly in providing cultural competency education to bridge the cultural and linguistic disconnect present in the workforce.

The review supports the idea that cultural competency education must demonstrate effectiveness in bridging the linguistic disconnect within the domestic, non-domestic nurse workforce, and with patients. The solution to culturally competent care is not merely the presence of a diverse workforce. Training is an organizational resource important to increasing the provision of culturally and linguistically appropriate care in all hospitals (American Institutes for Research, 2004). Inherent to the training component is the definition of cultural competency. Cultural competency is the possession of adequate cultural knowledge, attitude, and skills required to deliver patient care (Calvillo, et al., 2009). Del Bueno (2001) provides an

organizational view of competence stating that it requires evaluation of an employee's ability to meet job expectations and provide subsequent, continuous, effective care for assigned patients. Included in this competency view are improvements in patient health status for positive outcomes and perception of satisfaction with care given. Training effectiveness is an essential component of cultural competency training. Literature is now emerging to describe cultural competency training effectiveness from a patient safety or improved health outcomes standpoint.

There are limited studies providing results on training effectiveness because cultural competency training literature is just now emerging. Cultural competency training results are mixed with some evidence that nurses have increased their cultural knowledge and self-efficacy, while other results points to less effectiveness (Brach & Fraser, 2000; Napholz, 1999; Ryan et al., 2002; Smith, 2001). Overviews of training programs implemented in different clinical practice areas are in the literature; however, few demonstrate generalized practice application (Barnes, 2004). One generalized practice application is an online cultural competency education product designed for the general nursing workforce (U.S. Department of Health and Human Services, n.d.). The accredited modules are located on the Office of Minority Health's Think Cultural Health web site, which provides free professional access. Because the offering is recent, evidence of effectiveness is not available yet. Further, reliable assessments of cultural competency training programs for nurses are not available. There are a few examples of pre and post-curriculum evaluation, however, nothing substantive (Epstein & Hundert, 2002). Common measures of health care cultural competency mastery within the health professions do not exist (American Institute of Research, 2004; Lucas, et al., 2008). Data are unavailable to support the premise that effective cultural competency training is a contributor to decreasing patient harm and improved health outcomes. Limited and mixed

results for cultural competency educational effectiveness in the literature are indicators for increased research to discover best practices.

Nursing education and workforce intertwine to create best practices for producing culturally competent nurses capable of providing care to LEP patients. Siantz and Meleis (2007) report some evidence that academic nursing education does not adequately prepare student nurses to provide culturally competent care. Therefore, collaboration with hospital administrators as workforce educators is important to creating best practices (Siantz & Meleis). Ryan, et al (2000) surveyed all NLN schools with baccalaureate and higher nursing degree programs. The survey provides an example of lack of academic and workforce collaboration. The majority of schools incorporated transcultural-nursing definitions into their classes; however, most did not have a formal course on transcultural nursing. Faculty reported feeling unprepared to teach transcultural nursing. Contributing to the cultural competency gap found in academic and workplace education is that gender issues, and underrepresented minority nurses are missing as subjects in nursing textbooks (Curry, 2001). In addition, there is bias in materials used in academic nursing education (Byrne, Weddle, Davis, & McGinnis, 2003). In an effort to address these issues surrounding cultural competency education in academia, the American Association of Colleges of Nursing developed cultural competency curricula for use at the undergraduate level (Calvillo, et al., 2009). The longitudinal design of this project delays evidence availability of curricula effectiveness. This cultural competency curriculum only addresses future nurses that are educated in the United States. It does not solve the cultural competency education needs of the overall nursing workforce and in particular, how practicing nurses use language services in the workplace. Culturally competent organizational care requires a multi-pronged approach. While the academic nursing community is busy trying



to produce programs and provide evidence of their effectiveness for entry to practice nurses, the healthcare workplace is offering training for domestically and non-domestically prepared nurses in their employ to reduce LEP patient risk for harm and produce positive health outcomes.

The health care workplace is making progress in describing language specific services for keeping patients safe and producing positive health outcomes. A national survey focusing on hospital language services for LEP patients identified education for hospital staff as an organizational need (Hasnain-Wynia, et al., 2006). Seventy-nine percent of the hospitals surveyed indicated training on how to respond to patients and family members who do not speak English as important in providing language services. Seventy-seven percent of the respondents valued cultural competency training as a way to serve LEP patients. Over half of the respondents identified important educational tools for them as a) packaged in-service training programs, and b) best practices blueprints for serving LEP patients that had demonstrated results. The importance of hospitals having workers who a) know about, and b) can determine when patients need interpreter services is vital to accurate and appropriate health care communication (Rudy, 2007). Even though the results showed strong support for LEP patient services, many are not ready to adopt services to reduce risk of patient harm and improve health outcomes. It is important to provide the non-adopters with relevant tools and research to support a change in position to adopt policies and processes for the delivery of linguistically appropriate care.

Stakeholders are supporting health care by conducting language services research to support hospital administrators with validation to support the adoption of language services in their organizations. The American Institutes of Research and the Office of Minority Health collaborated to conduct a nurse survey to discover the nature of cultural competency training needed by nurses, how training is currently used in their workplace, and the value nurses placed

on that training (American Institutes of Research, 2004). Reported types of interpreter services within the nurse's organizations included RSMI, staff interpreters, and professional interpreters. Comments were that nurses prefer to use staff interpreters because of long waits for professional interpreters. Nurse concerns about RSMI use included level of patient satisfaction and issues regarding the hearing impaired. Nurses also questioned how much patients could understand over a telephone. When RSMI services were available, nurses stated that they were mostly unused. While nurses prefer to use staff interpreters, the survey reveals hospital administrators are phasing out live interpreter use and adopting RSMI as the language service of choice for the purpose of productivity and efficiency. If nurses do not adopt the use of RSMI, LEP patients are at increased risk for harm and decreased chance for positive health outcomes. Language and communication training was recommended.

Another example of stakeholder support for the workplace is the National Council on Interpreting in Healthcare (2009) work in actively identifying educational interventions aimed at health care including teaching interventions on how to speak a language or how to communicate better with patients who are limited in English proficiency. Included is the ability to work with interpreters as an important asset to achieving good health care outcomes for LEP patients. The efforts by the interpreting organization are self-serving as the interpreters are fighting to retain their livelihood as a viable option for hospital administrators in an environment where the use of RSMI is becoming the organization language service of choice. Regardless of motive, stakeholders are supporting health care by providing services for use in the workplace to support the adoption of language services for LEP patients. In conclusion, stakeholder support provides validation for hospital administrators that have chosen to adopt the use of language services and

have operationalized policies and procedures around the services. That validation may provide peer pressure for hospital administrators that are reluctant to adopt a language services program.

One could argue that the adoption of language services to keep patients safe and improve health outcomes has never been so important. Language services adoption is critical because U.S. hospital administrators import foreign-educated nurses to relieve the domestic shortage. From 2001 through 2003, 37,865 foreign educated, first time candidates took the NCLEX-RN exam (Brush, Sochalski, & Berger, 2004). Evidence is emerging that foreign educated nurses may be unprepared to distinguish between their ability to perform specific tasks and their ability to communicate effectively with patients and others to provide culturally competent care (Bieski, 2007; NCSBN, 2006; Washington State Nurse Association, 2004). In 2004, over 50% of foreign educated nurses came from the Philippines. While nearly 55% of the foreign educated nurses speak English as a second language, 50% percent of them speak the Filipino language as their first language. Only 4.3% of the foreign educated speak Spanish (U.S. Department of Health and Human Services, 2004, March). The most common non-English language need of U.S. patients is Spanish (Hasnain-Wynia, et al., 2006; U. S. Bureau of Census, 2000b). Clearly, a language disconnect exists among non-domestic nurses and the primary language needs of U.S. patients. Effective organizational resources for cultural care serves to bridge the language disconnect, which is a property of worldview and life context of the individual foreign- educated nurse (Pacquiao, 2007). Hospital administrators must address non-domestic nurse cultural care resource needs for the provision of culturally and linguistically appropriate care. Closing this organizational cultural care resource gap for non-domestically educated nurses is important to keeping patients safe and improving health outcomes.

## 2.6 Remote Simultaneous Medical Interpretation and Cost

There are financial barriers for executing CLAS at all levels. A survey of 60 U.S. hospitals found only 3% received reimbursement for language services (Hasnain-Wynia, et al., 2006). Medicaid was the largest source of reimbursement for language services. The most frequent way hospital administrators pay for language services are through per hour charges with retainer or subscription payment. Barriers include the lack of health plan incentives to promote the CLAS language mandate and the American Medical Association points out that costly language services place a burden on the primary care provider (Beckley, 2002; IOM, 2002). Additionally, low payment rates across the industry limit the supply of health care provider services to low-income groups who are more likely to be ethnic minorities. Complicating the adoption of any type of language service are fees that vary widely for the same and different types of interpreter services. The cost of RSMI service charges of \$4.50 per minute compared to professional in-person interpreter fees ranging from \$17 to \$100 per hour (Beckley, 2002). Medicaid provider reimbursement was \$38 to cover language service regardless of type. The Alliance of Community Health Plans reported a cost of \$939.00 cost for three months of RSMI service for more than 750,000 of their insured patients making RSMI their language service of choice (National Association of Health Centers, 2008). Slowing CLAS language mandate adoption is the prohibition of using state funding for language services (National Center for Cultural Competence, 2003). In addition to monetary barriers related to providing language services, there are non-monetary costs factors as well. Non-monetary costs and benefits of CLAS language mandated standards found in the literature are legal, business, and health outcomes related. Hornberger, Itakura & Wilson (1997) found an increased risk of malpractice legal action for primary care providers not meeting the CLAS mandate. Supporting this

assertion is that healthcare providers who communicate well with patients reduce their likelihood of malpractice claims (Beckley, 2002; National Center for Cultural Competence, 2003). A twist to this non-monetary cost is that it may motivate primary care providers to invest in the cost of providing language services because it may be less than the cost of litigation. A study presenting 13 primary care exemplars provided evidence that language services for LEP patients was cost effective, resulted in an increased market share for their practices, reduced outsourcing of language services, and demonstrated more effective patient care (National Center for Cultural Competence, 2003). This approach was cost effective for a Spanish-speaking population; however, the results are not generalizable to a multi-lingual population most often found in acute care hospital systems. Other language service non-monetary costs and benefits address patient health outcomes. An example of health outcome cost is nearly 20% of Spanish-speaking Latinos report not seeking medical care because of language barriers with their health care provider (IOM, 2002). Another health outcome cost results when patients, who lack proficiency in English, do not know they are eligible for benefit programs and health services, nor do they know how to access them. Serious personal and financial consequences in health due to a delay in obtaining important health services can occur because of limited English proficiency and lack of supportive language services. An example of reduced costs for patients is increased patient compliance and understanding of appropriate emergency room use related to language services. Limited literature is available in the area of non-monetary costs and benefits. A clear picture of policies and procedures to address the non-monetary costs and benefits will emerge as the literature expands to support evidence-based language services.

## 2.7 Remote Simultaneous Medical Interpretation and Other Interpretation Methods

Language services research provides support for the adoption of RSMI in hospital organizations as the language service of choice. Interpreting practices of physicians in the primary and well care setting were studied (Hornberger, Gibson, & Wood, 1996). Both physicians and interpreters preferred remote simultaneous medical interpreting to face-to-face interpretation. Study limitations were the use of Spanish speaking patients only and targeting the needs of a single population. A recent study conducted in the acute care setting revealed, regardless of on-site interpreter services availability, Chinese and Spanish speaking patients were uninformed of the risks associated with care (Schenker, Wang, Selig, Ng, & Fernandez, 2007). The limited English proficiency patients were less likely to have documented informed consent for common invasive procedures when compared to documented informed consent in place for English speaking patients. Because LEP patients were uninformed of the risks associated with their procedures, they were at increased risk for harm and decreased health outcomes. In a different study of LEP women, researchers focused on language needs that affect breast and cervical wellness care (Jacobs, Karavalos, Rathouz, Ferris, & Powell, 2005). Women who did not read or speak English at all, and women with limited English proficiency in both reading and writing, were less likely to receive breast and cervical cancer screening than women of the same race/ethnicity who were able to read and speak English and another language well. When patients do not receive wellness care, they experience an increased risk for harm and decreased chance for positive health outcomes because of their LEP status. In another study, researchers compared insurance status and the language barrier experience of Latino LEP patients and reported that insured Latino patients experienced language barriers affecting care despite the fact that they had health care insurance (Pippins, Alegri, & Haas, 2007). A common theme emerging

in the language services literature is the association among language services omission, commission, and availability as factors important to patient risk for harm and positive health outcomes.

Language services available to patients and for nurse use are sometimes at odds with the interpreting method preferred by the patient. A study of patient interpreter preference conducted with LEP Chinese and Vietnamese-American patients found a preference for professional interpreters (Ngo-Metzger, 2007). Family members also preferred professional interpreters. In addition to professional interpreter preference, Chinese and Vietnamese-American patients preferred same gender interpreters. In contrast, a disease-focused study where a high number of language concordances among patients and physicians occurred, the English-speaking capability of LEP patients was not a factor in glycemic control (Lasater, Davidson, Steiner, & Mehler, 2001). This indicates that it did not matter whether the patient and health care provider spoke the same language in achieving the desired health outcome. A primary care cultural competency study found Spanish-speaking patients did not support the use of same language care (Fernandez, et al., 2004). Another study conducted by the National Association of Community Health Centers (2008, June 16) explored patient language diversity and the feasibility of RSMI as a solution to the diversity. This was a traditional safety net telephonic interpreting project in the Los Angeles service area. The service area covered more than 750,000 people where more than 55 percent of the patients prefer languages other than English, including Spanish, Cantonese, Korean, Mandarin and 27 other languages. Findings were patients initially attempted to use family, friends, and minors to assist them as interpreters during their health care visits. When introduced to the RSMI method, they were receptive to participating in this method. Results were a decrease in the use of gesturing and other ineffective communication methods; decreased

reliance on family, friends, and minors for interpretation; and decreased time in obtaining interpreting services. These studies are mostly descriptive in nature. Robust studies of what the preferred language service is for LEP patients are not available. The preferences of language services by LEP patients may not always be the best choice for keeping them safe and improving their health outcome.

Language service preference and patient satisfaction are closely related (Hornberger, Gibson, & Wood, 1996; Ngo-Metzger, 2007). Patient satisfaction in physician use of RSMI found patients were more likely to think their treatment was respectful as opposed to those patients receiving the usual and customary interpretation service (Gany, et al., 2007b). Exposure to RSMI was significantly associated with increased satisfaction in their overall physician communication and care. Patients who randomized to RMSI and usual and customary interpretation services had less comprehension and satisfaction than patients who experienced care with language-concordant providers. A second study found Spanish-speaking patients using RSMI were as satisfied with their care as patients provided with care by a language concordant physician (Lee, Batal, Maselli, & Kutner, 2002). Language service preference and patient satisfaction may not be compatible concepts. While patients may prefer a specific language service, it may not be the best language service for delivering needed care. Administrators could find that to meet the multi-language service needs of their patients, a trade-off in patient satisfaction may be necessary to keep patients safe from harm and improve health outcomes.

## 2.8 Summary

The literature supported the need for improving quality of care through managing the impact of language differences. Quality of care improvements cited in the literature included



patient satisfaction, interpersonal care, and health education. It is clear that nurse responsibility and accountability for providing language services to vulnerable patients exists from both the legal and professional standpoints. Noted in the literature is the potential for nurses to place patients at risk for harm and decreased outcomes due to inexperience in cultural care behaviors that could affect their ability to provide appropriate linguistic care. Nurse inexperience increases LEP patient vulnerability to poor quality care, while at the same time they are vulnerable to decreased participation in their care because of their language needs. No evidence on language service needs and clinical practice area exists. Recent literature has emerged focusing on next steps to provide nursing with direction on cultural competency development. Descriptive studies have focused on the delivery of care to specific language populations, such as Spanish and Japanese, rather than on providing a broader view of organizational needs of the limited English proficient patients at large. Interventional and health delivery outcomes studies are lacking.

Cultural competency training literature is inconclusive on the effectiveness of training affecting the knowledge and self-efficacy of nurses. The academic education literature relates student nurses as unprepared to provide care to the linguistically diverse. Cultural care organizational resources for specifically supporting foreign-educated nurse cultural competency are absent in the literature. From a language self-efficacy standpoint, the language concordance literature shows some support for health care providers speaking the language of their patient base. U.S. language diversity makes it clear that a language concordance solution to language services is unrealistic and unlikely.

Health care disparity literature focuses on resolving specific health disparities with little emphasis on delivering linguistically appropriate care to patients. There are a limited number of studies supporting the premise that appropriate healthcare can increase patient compliance and

understanding of office and emergency room utilization. The health care disparity literature focuses primarily on health care cost reduction.

Health policy, regulations and standards for supporting the culturally vulnerable is well established and supported in the literature. The literature on provision of language services as mandated is emerging. Best practices are emerging on topics such as services financial barriers, hospital and provider characteristics, and framework design. There are many opportunities for research in these areas.

Published comparative studies on language service use are limited in scope. There is insufficient work to conclude the efficacy of one type of language service over another. RSMI literature focuses on specific languages limiting generalization. RSMI use as a contributor to patient satisfaction and patient safety is limited, however, encouraging. In a national study RSMI was the most available language service, however, nurses report not using the service. Contrary to nurse's lack of RSMI use, administrators indicate RSMI is cost effective, meets a broader range of patient language needs, and is becoming an organization language service of choice.

In conclusion, the lack of evidence on this topic supported a descriptive study of RSMI use in a large health care system. The study compared RSMI across clinical practice areas and hospitals of different sizes as described in subsequent chapters.

## CHAPTER 3

### METHODS AND PROCEDURES

#### 3.1 Introduction

Both nurses and hospitalized patients bring cultural differences to the healthcare delivery arena. Despite their own cultural differences, nurses are legally and ethically responsible to provide healthcare care that patients can understand. Cultural barriers affect the quality and accuracy of care (Green-Hernandez, Quinn, Denman-Vitale, Faulkenstern, & Judge-Ellis, 2004). The Institute of Medicine (IOM, 2004), Patient Safety Report estimates that as many as 98,000 hospitalized patients die each year because of errors in care. Patient vulnerability exists because patients are dependent on the healthcare system and their providers for safe care (Orem, 2001). Nurse action is the key to keeping patients safe. To provide safe care, nurses must ensure that communication is effective, which may necessitate the use of RSMI for patients with limited English proficiency. Presented are the research design, setting, procedure, ethical considerations, data analyses, and limitations of the study conducted to describe RSMI use in a large hospital system. Finally, a chapter summary of methods and procedures is presented.

#### 3.2 Research Design

A descriptive research design used available secondary data for this study. Differences in the use of RSMI by clinical practice area and hospital size were evaluated.

### 3.3 Setting

The hospital system setting was a regional, private, not-for-profit, non-teaching hospital system in the West South Central United States. This system included 13 wholly owned, acute care hospitals geographically located in a metropolitan area. A hospital system letter of permission was provided for use of the databases and any subsequent publication of findings from their use. Preliminary meetings with database administrators provided database samples and an informal agreement to provide access to the databases.

### 3.4 Procedure

#### *3.1.1 Available Data*

The convenience sample of secondary data consisted of two databases. Selected variables from the databases were merged into the study database. One database consisted of incidents of remote simultaneous medical interpretation use with hospital, hospital cost center, language of the patient, time of day, and length of the episode of interpretation. The second database contained the number of admissions by clinical practice area and hospital size. The hospital admissions database provided the expected number of patients eligible for RSMI use for comparison purposes in computing the Chi-square statistic.

Table 2 illustrates data elements within the RSMI database. Table 3 depicts the data elements within the hospital admissions database.

Table 2

*RSMI Database Data Elements*

Data Elements	Definition	Type of Data
Hospital	Hospital number identifying specific hospital in system	Nominal
Hospital Cost Center	Cost center within the hospital where the RSMI call originated	Nominal
Language	Identified language interpreted through RSMI encounter	Nominal
Time of Day	Time of day call occurred by shift	Nominal
Call Length	Length of time per episode of interpretation	Ratio

Table 3

*Hospital Admissions Database Data Elements*

Data Elements	Definition	Type of Data
Hospital Admissions	Number of hospital admissions by hospital and by month.	Ratio

*3.1.2 Data Coding and Extraction*

The databases were de-identified for use into a compatible format for export to the Statistical Package for Social Science (SPSS) computer software (SPSS, 2006). A letter of permission from the hospital system to access the databases was secured prior to exporting the

databases to SPSS for analysis. Only data representing study variables were utilized. The de-identified data were secured on a computer drive protected by a password accessible only by the investigator. The investigator will retain all data for 36 months after the completion of the study, after which time any electronic data will be deleted from any computer hardware.

The study database included two independent variables, a) clinical practice area, and b) hospital size. RSMI and hospital admissions data were coded electronically in a computer database to identify clinical practice area and hospital size. The cost centers by which cases of RSMI were identified were recoded into clinical practice areas. The clinical practice areas included a) medical-surgical, b) intensive care, c) emergency services, and d) mother-baby. Cases of RSMI that did not occur in these clinical practice areas were excluded from the database.

Hospital size was described as small, medium, or large according to the number of licensed beds in each using the modified definition provided in the American Hospital Association's national survey of hospital language services for patients with limited English proficiency (Hasnain-Wynia, et al, 2006). See Table 4 for hospital size categories.

Power analyses indicated that 485 total incidences of RSMI use were required to address the primary research objective using chi-square analysis of the primary study variable, RSMI use. This sample size estimation was based on a small anticipated effect size ( $W=.15$ ), a study alpha of .05, and a beta of .20. At least 12 consecutive months of data were retained in the study database, with an expected sample exceeding 485 cases.

Table 4

*System Hospitals by American Hospital Association Modified Hospital Size Criteria*

Hospital Size		Number of Hospitals in
Description	Number of Licensed Beds	System by Size
Small	0 to 99	5
Medium	100 to 299	4
Large	300 or more	4

3.5 Ethical Considerations

This study was presented to and approved by the IRB as exempt research based on the criteria set forth by federal regulations and the ethical principles discussed in the Belmont report (U.S. Department of Health and Human Services, 2009). See Appendix C for IRB approval materials. The investigator recorded data so that cases of RSMI represented by the data were not identifiable, directly or indirectly to the person or organization. Hospitals were coded to de-identify them by using descriptive characteristics only. Reporting identified the hospitals by descriptive characteristics only.

Anticipated benefits to the study were organizational benefits of increased knowledge that maybe used for process improvement to increase the effectiveness of cultural and linguistically appropriate care. Selections of secondary data were equitable through the established sampling procedure. Appropriate monitoring of collected data to ensure the safety of data was described. Findings of the study were reported to the IRB based on IRB specific requirements.

### *3.1.3 Sample Description*

The cases of RSMI were described by their length, time of day, and patient language. The number per clinical practice area and by hospital size were reported.

### *3.1.4 Analyses to Answer Research Questions*

The chi-square test was computed to test the differences among the independent variable by comparing observed and expected frequencies (Burns & Grove, 2005; Grove, 2007; Zar, 1999). The one-way chi-square compared different levels of the independent variable to one dependent variable (Grove, 2007). A one-way chi-square test was computed for each of the two questions. The first one-way chi-square test examined if clinical practice areas differed in RSMI use. The second one-way chi-square test examined RSMI use and hospital size for significant difference. Data from a minimum of 485 RSMI use encounters were analyzed as to the extent the use of RSMI differs by clinical practice area and hospital size.

## 3.6 Summary

The methods and procedures of this study began with an introduction of the overall purpose of the study. The descriptive design used available secondary data to explore whether RSMI use significantly differed by clinical practice area and hospital size. The related study organizational characteristics were presented to provide geographic and demographic context to the setting description. The sample and sample procedure was described with a minimum sample size of 485 set. The secondary administrative databases for measurement were identified in this chapter with their relationship to the study variables described. The procedure for conducting the study included application for exempt status to the IRB governing research at the hospital system. Procedures to protect data were described as well. Ethical considerations were discussed specifying institutional review board requirements and the process followed to conduct



this study. A Chi-square test was computed to analyze the data. Unpredictability of data quality was a limitation to the study that is common to secondary databases (Burns & Grove, 2005). Further, caution should be exercised in generalizing the study because the study databases were geographically and demographically obtained from a specific hospital system in a specific region of the U.S. Despite the limitations, this study bridges a gap in the literature by describing relationships among RSMI use, hospital size as an indicator of cultural care organizational resources, and clinical practice area for decreasing the LEP patient risk for harm.

## CHAPTER 4

### FINDINGS

#### 4.1 Introduction

Nurses have a mandate to deliver linguistically appropriate care to hospital patients (OMH, U.S. Department of Health and Humans Services, 2001a), but this is difficult to achieve when there are 6,912 active, living languages spoken in the world (Gordon, 2005). Hospitals, a primary nurse employer, are responsible for supplying language services to support accessible, quality care to linguistically diverse populations (OMH, 2001a). Hospital administrators within the organization are responsible for the provision of organizational resources for culturally and linguistically competent care. The purpose of this descriptive study was to examine the use of remote simultaneous medical interpretation (RSMI) in a large hospital system. The study setting was a regional, private, not-for-profit, non-teaching hospital system in the West South Central United States. This system included 13, wholly owned, acute care hospitals geographically located in a metropolitan area. This study used two de-identified, retrospective databases collected over a 12-month period to examine the study research questions a) does RSMI use significantly differ by clinical practice, area and b) does RSMI use significantly differ by hospital size?

The RSMI and admissions databases were combined to create the study database. The RSMI database consisted of 4,502 incidents of remote simultaneous medical interpretation (RSMI) use with hospital, hospital cost center, language of the patient, time of day, and length of the episode of interpretation descriptors. The admissions database contained the number of

admissions by clinical practice area and hospital size. The investigator completed data element analysis for practice area and hospital size. The investigator coded each instance of RSMI by hospital size, practice area, and time of day to prepare it for statistical analyses.

#### 4.2 Sample Description

The 4,502 cases of RSMI of the sample were described by specific categories of call length, time of day, language, clinical practice area, and hospital size. The mean call length was 8.49 minutes with a range of less than one minute to 82 minutes. The Emergency Department unit in a large hospital had the longest RSMI call occurring on the evening shift. Time of day instances was coded as 12-hour shifts. Day shift was coded as RSMI instances occurring from 0700 to 1859 hours, and night shift from 1900 to 0659 hours. Nearly 3% (n=126) of the RSMI were one minute or less in duration and occurred during both shifts at all hospital sizes. Remote simultaneous medical interpretation occurred twice as frequently during the day shift as during the night shift. See Table 5 for call length and time of day description.

Table 5

*Call Length Description of 4,502 Cases of RSMI that Occurred During a 12-Month Period in a Large Hospital System*

Variables	Sub-category	Results
Call Length		$\bar{X} = 8.5$ (SD=7.6)
Time of Day	0700-1859 hours	2997 (66.6%)
	1900-0659 hours	1505 (33.4%)

There were 45 different languages interpreted remotely (Table 6). Overall, Spanish, 77.7% (n=3499), was the most frequently interpreted non-English European language. Spanish

was interpreted remotely more often at large (n=2997) and small (n=329) hospitals. French was infrequently interpreted with only 0.7% (n= 33) of all RSMI cases and occurring only at large hospitals. Over 80.1% (n=3605) of the languages requiring RSMI were non-English European languages. Slightly over 15% (n=684) of the interpreted languages were from the Asian

Table 6

*Language Description of 4,502 Cases of RSMI that Occurred During a 12-Month Period in a Large Hospital System*

RSMI	Actual n (%)
Spanish	3499 (77.7%)
Burmese	237 (5.3%)
Swahili	117 (2.6%)
Arabic	106 (2.4%)
Vietnamese	106 (2.4%)
Other, African Home Continent	56 (1.2%)
Other, Asian Home Continent	337 (8.0%)
Other, Australian Home Continent	3 (0.1%)
Other, European Home Continent	106 (2.4%)

continent. Asian continent languages were the second most common languages requiring RSMI. The largest group of RSMI Asian continent languages was Burmese with 5.3% (n=237) of the interpretations. The remainder of spoken languages by home continent as percentages were diverse ranging from 0.1% (n=1) - 2.6% (n=117).

### 4.3 Analysis to Answer the Research Question

#### 4.1.1 Research Question

A one-way chi-square of clinical practice was computed on the RSMI limited data set to discover if clinical practice areas differed in RSMI use. RSMI use was significantly different by clinical practice area,  $\chi^2(3) = 2632.7$ ,  $p < 0.05$ . See Table 7 for one-way chi-square on clinical practice results.

Table 7

*One-way Chi-square of Clinical Practice Area on Remote Simultaneous Medical Interpretation Frequency*

Clinical Practice Area	Actual n (%)	Expected n (%)
Mother-baby	1694 (37.6%)	749.1 (16.6%)
Emergency department	1682 (37.4%)	1252.5 (27.8%)
Medical/Surgical	1038 (23.0%)	2109.2 (46.8%)
Intensive Care	88 (2.0%)	390.8 (8.6%)

The clinical practice areas were subsequently isolated in pairs with the expected admission proportions adjusted. RSMI was used significantly more on the mother-baby areas than on the emergency department areas,  $\chi^2(1) = 234.1$ ,  $p < 0.05$ . RSMI was used significantly more on the emergency department area than on the medical-surgical areas,  $\chi^2(1) = 754.7$ ,  $p < 0.05$ . RSMI was used significantly more on the medical-surgical areas than on the intensive care areas,  $\chi^2(1) = 52.0$ ,  $p < 0.05$ . RSMI was used significantly more on the mother-baby areas than on the medical-surgical areas,  $\chi^2(1) = 1809.5$ ,  $p < 0.05$ . RSMI was used significantly more on the mother-baby areas than on the intensive care areas,  $\chi^2(1) = 503.5$ ,  $p < 0.05$ . RSMI was used

significantly more on the emergency department area than on the intensive care areas,  $\chi^2(1) = 344.3$ ,  $p < 0.05$ . Table 8 illustrates the one-way chi-square of clinical practice area comparisons.

Table 8

*One-way Chi-square of Clinical Practice Area Comparisons on Remote Simultaneous Medical Interpretation Frequency*

RSMI	Actual n (%)	Expected n (%)
Mother-baby Practice Area	1694 (50.2%)	1263.6 (37.4%)
Emergency Department Practice Area	1682 (49.8%)	2112.2 (62.5%)
Emergency Department Practice Area	1682 (61.8%)	1011.8 (37.3%)
Medical-surgical Practice Area	1038 (38.1%)	1705.4 (62.7%)
Medical-surgical Practice Area	1038 (92.1%)	949.2 (84.3%)
Intensive Care Practice Area	88 (7.8%)	175.7 (15.6%)
Mother-baby Practice Area	1694 (62.0%)	715.8 (26.2%)
Medical-surgical Practice Area	1038 (37.9%)	213.5 (73.7%)
Mother-baby Practice Area	1694 (95.0%)	1170.8 (65.7%)
Intensive Care Practice Area	88 (4.9%)	609.4 (34.3%)
Emergency Department Practice Area	1682 (95.0%)	1348.7 (76.2%)
Intensive Care Practice Area	88 (4.9%)	419.5 (23.7%)

A one-way chi-square of hospital size was computed on the RSMI limited data set to examine RSMI use and hospital size for significant difference. RSMI use was significantly different by hospital size,  $\chi^2(3) = 337.5$ ,  $p < 0.05$ . Table 9 shows results for the one-way chi-square of hospital size.

Table 9

*One-way Chi-square of Hospital Size on Remote Simultaneous Medical Interpretation Frequency*

Hospital Size	Actual n (%)	Expected n (%)
Small	345 (7.6%)	422.7 (9.4%)
Medium	193 (4.2%)	872.0 (19.4%)
Large	3964 (88.0%)	3206.8 (71.2%)

The hospital sizes were subsequently isolated in pairs with the expected admission proportions adjusted. See Table 10. RSMI was used significantly more at small hospitals than at medium hospitals,  $\chi^2(1) = 76.6$ ,  $p < 0.05$ . RSMI was used significantly less at small hospitals than in large hospitals,  $\chi^2(1) = 3895.3$ ,  $p < 0.05$ . RSMI was used significantly less at medium hospitals than at large hospitals,  $\chi^2(1) = 180.4$ ,  $p < 0.05$ .

Table 10

*One-way Chi-square of Hospital Size Comparisons on Remote Simultaneous Medical Interpretation Frequency*

RSMI	Actual n (%)	Expected n (%)
Small Hospital	345 (64.1%)	243.7 (45.3%)
Medium Hospital	193 (35.8%)	293.8 (54.6%)
Small Hospital	345 (8.0%)	409.4 (9.5%)
Large Hospital	3964 (91.9%)	3895.3 (90.4%)
Medium Hospital	193 (4.6%)	65.6 (11.2%)
Large Hospital	3964 (95.3%)	3687.3 (88.8%)

#### 4.4 Summary

The typical call occurred on the day shift, and lasted for less than nine minutes. Spanish was the most frequent remotely interpreted language; however, 45 languages were interpreted throughout the system. RSMI use significantly differed by clinical practice area. Further, all clinical practice areas differed when compared for RSMI use. RSMI use was significantly lower on the intensive care areas when compared to other practice areas. In contrast, the mother-baby areas were significantly higher in RSMI use compared to the other areas. Hospital size RSMI use was significantly different by hospital size. Hospital size comparison revealed that small and medium hospitals had significantly lower RSMI use than large hospitals while small hospitals had significantly higher RSMI use than medium sized hospitals. Overall, results show significant differences in RSMI use by clinical practice area and hospital size.



## DISCUSSION

### 5.1 Introduction

The Office of Minority Health has mandated that nurses and other caregivers deliver linguistically appropriate care to hospital patients. Nurses are primarily employed by hospitals and are responsible and accountable for safe, linguistically appropriate care (Agency for Healthcare Research & Quality, 2006; Orem, 2001). Hospital administrators are responsible for supplying language resources to address the needs of patients who speak diverse languages. (OMH, 2001a; Gordon, 2005). This descriptive study revealed significant differences in remote simultaneous medical interpretation (RSMI). Although study hospital administrators supplied language resources, significant differences were found in RSMI use by clinical practice area and hospital size. These differences may place limited English proficiency (LEP) patients at risk for decreased care and increased harm. Presented in this chapter is a discussion of RSMI characteristics and the research questions results. Also presented are study limitations, conclusions, implications for nursing, and recommendations for future research.

### 5.2 RSMI Characteristics

Most RSMI use was for short duration interpretation. This finding may indicate nurses are involving LEP patients in short-term communication to increase care and decrease harm. Short-term communication needs may include medication administration, pain assessment, and morning care. Consistent with the varying lengths of the needed communication, the length of

RSMI calls was as short as less than one minute and averaged under nine minutes. The average call duration was 8.49 minutes. The average call length may indicate teaching activity that requires the nurse to obtain verbal understanding from the patient and family. The longest RSMI call length was one incident and may reflect services to support a procedure. Procedures often require complex instruction to and cooperation from the patient. Forty-nine percent of all study calls lasted five minutes or less which was similar to the findings of Gany et al. (2007b). In addition, Gany and colleagues found RSMI to be the quickest and most readily available interpretation service providing the least delay in care. Results appear to support the notion that caregivers have joined hospital administrators in adopting RSMI for productivity and efficiency purposes, which was also observed by the American Institutes of Research, (2004). Remote simultaneous medical interpretation provided quick access to an interpretation of diverse languages.

Results show RSMI use included many different languages with 45 different languages interpreted remotely. These findings underscore why it would be difficult to support the National Council on Interpreting in Healthcare's (2009) initiative to provide language concordant caregivers. In this sample, most patients and families for whom RSMI was used spoke Spanish (77%, n=3499). In the state where the study was conducted, 46% of non-English speakers speak Spanish (U.S. Census Bureau, 2000a). At the time of the 2000 census, the Spanish speakers in the state identified themselves as speaking English less than very well. Non-English European speakers, including Spanish speakers, were the largest minority language group in the state. Non-English European speakers were the majority-minority language group. Asian and Pacific Island language speakers were the second largest group. The non-majority, non-English European speaking groups were the smallest language group. The types and

proportions of languages interpreted by RSMI reflect the state language profile. The non-English majority-minority languages were the largest group with whom RSMI was used. Asian and Pacific Island language speakers were the second largest group requiring RSMI services. Overall, findings show RSMI was used to care for LEP patients with diverse language needs.

RSMI was used to care for LEP patients. For every 50 admissions, one patient required RSMI services. Most telephone interpretations (n=2997) occurred during the day shift. The literature provides no evidence on how many patients require RSMI services per admission, or, the importance of time of day to RSMI use in the hospital setting. Higher use of RSMI use on the day shift may reflect recurring daily care communication needs between nurses and patients. The day shift is when instructions for activities such as morning care are typically provided, new medications and procedures are introduced, surgical consents are signed, and discharges from hospital care are more likely to happen (Ackley & Ladwig, 2004; Benner, et al, 2002). Shift differences may be a result of variables such as nurse staffing, patient care models, and clinical practice area (Gran-Moravec & Hughes, 2005). A report by the Agency for Healthcare Research and Quality (2001) cited nurse staffing as an important a variable that may affect outcomes relating to patient safety. For example, the nurse to patient ratio may affect care because the ratio varies by shift and nursing unit. Fewer registered nurses on a shift may affect the overall clinical practice area accountability and responsibility to deliver language appropriate care.

In regard to Research Question 1, all clinical practice areas were found to be significantly different in RSMI use. The smallest difference in RSMI use was between intensive care and medical-surgical practice areas. With literature to support this finding absent, the speculation was patient needs may be similar between these clinical practice areas. Intensive care and medical-surgical practice areas are likely to share the same patient population. For example,

when the condition of intensive care patients improves they are often transferred to a medical-surgical practice area for less intense care and to prepare for discharge. It may be that interpretation needs only appear similar. This small difference was interesting because intensive care practice areas often require more technology, medication, and treatment than medical-surgical practice areas. One would expect a larger difference in RSMI use between the medical-surgical practice and intensive care areas because of the need to communicate the intense care to the patient and family. However, patients on ventilators or unable to speak due to sedation or neurological conditions are more likely to receive care in an intensive care unit, which may explain the less frequent use of RSMI.

The largest clinical practice area difference in RSMI use was found between the mother-baby and medical-surgical practice areas. An explanation for this difference may be these areas provide different types of services to different populations. The two clinical practice areas also have different specialty practice standards. An example of different standards would be the emphasis of the Association of Women's Health, Obstetric, and Neonatal Nurses (2010) on culturally competent care. The definition states that a willingness to modify treatment approach is required to provide care that is culturally acceptable to the patient. Organizational and professional standards for patient teaching may vary across clinical practice areas. Mother-baby areas have standardized patient teaching outlines and the expectation for completing and documenting patient teaching is very high.

No clinical practice area studies were found to explain area differences. However, an early study by Anthonypillai (1993) connects nurse clinical practice specialty and LEP patients. Described was intensive care nurse cultural self-efficacy. The nurses reported they believed their

inability to communicate with limited English proficient patients may have reduced quality of care.

Concerning Research Question 2, there was less difference in RSMI use between small and large hospitals and more difference between medium and large hospitals. Consideration of nurse and patient racial, ethnic, and language diversity by hospital location may clarify study results (AACN, 2003; AACN, 2007; Calvillo et al., 2009; Matherlee, 2004; Sullivan Commission, 2004). Further, collective nurse cultural self-efficacy may explain RSMI use between different size hospitals (Andrulis & Brach, 2007). In a post-study communication, it was discovered that administrators at medium size hospitals had inadequately budgeted for needed RSMI services. Because there was inadequate budget, administrators may not have encouraged nurses to use RSMI services. This lack of support could explain the decreased RSMI use at medium size hospitals. Poorly supported language services could decrease language care delivery and expose patients to increased risk for harm.

### 5.3 Limitations

One study limitation was the data contained in the databases were not collected for research purposes. Because data collection controls were unknown to the investigator study controls were needed (Burns & Grove, 2005; Nicoll & Beya, 1999). A coding protocol was used to decrease the effect of consistency and completeness within the data.

Another limitation related to database secondary analysis was sampling. Sampling was limited to the data present at the time of analysis. The large size of the database served as a control for this limitation because study total incidences (N=4502) exceeded the required size of 485 total incidences for adequate power. Although sampling a database from a single source is a limitation that limits generalizability, the data in this study were gathered from 13 system

hospitals. The number of hospitals involved may have compensated for this limitation. In replications of this study, researchers may want to consider collecting data in more than one hospital system to address this limitation.

#### 5.4 Conclusions

Language diversity was found in all clinical practice areas and at all hospital sizes. While non-English European languages were the most frequently interpreted, over one-third of the patients spoke less common languages. Language appropriate care is just as important for patients speaking less common languages as for patients speaking languages that are more common because risk for harm does not distinguish between spoken languages. Clinical practice area and hospital size location may affect LEP patient care and risk for harm.

Limited English proficient patients were less or more likely to receive RSMI depending on the clinical practice area where care was received. Additionally, hospital size matters for LEP patients with RSMI needs. Patients may be at higher risk for harm if they receive care at a medium size hospital because RSMI use was less at this size of hospital. Finally, this study bridges a gap in understanding RSMI use. It described the existence of RSMI use differences by clinical practice area and hospital size. These differences in RSMI use may have organizational implications for the delivery of safe care for LEP patients.

#### 5.5 Implications for Nursing

Hospital administrators are responsible for making language services available to nurses and caregivers (OMH, 2001a). Even though hospital administrators make language services organizationally available to nurses to care for LEP patients, this does not mean these services are used. While the relationship between hospital size and organizational cultural care resource availability was found in the literature, use was not described (Hasnain-Wynia, Yonek, Pierce,

Kang, & Greising, 2006). This RSMI use study goes beyond hospital size and language services availability. It connects language interpretation use with clinical practice area and hospital size. Descriptive results were provided that could have implications for clinical practice. Nurses in clinical practice are responsible for using evidence to decrease patient risk for harm.

Described RSMI use differences may place patients at increased risk for harm. Nurses need to consider which clinical practice area and hospital size is less or more likely to support delivery of language appropriate care and adjust practice accordingly. Reinforcing the relationship between the Nurse Practice Act and the omission or commission of delivering language appropriate care within the organization is crucial (Green-Hernandez, Quinn, Denman-Vitale, Faulkenstern, & Judge-Ellis, 2004; National Council of State Boards of Nursing, 2003). While hospital administrators are responsible for making language services available, nurses are accountable and responsible for RSMI use during patient care delivery to protect vulnerable LEP patients from harm (Orem, 2001).

#### 5.6 Recommendations for Future Research

Differences in use of RSMI in one hospital system were identified in this study, but two larger questions remain. Were the differences in RSMI use due to the availability of resources, the response of health care professionals to the needs of LEP patients or the distribution of LEP patients across clinical practice areas and hospitals? A research focus could be to explore why clinical practice areas differed in RSMI use. Is the difference because of practice-focused factors such as nurse staffing, patient care model, patient assignment, patient turnover, cultural self-efficacy, or, could it be due to the nature of clinical practice type alone? For instance, the type of clinical practice area may focus on disease process and procedures as opposed to treating the patient holistically. Another area for research is to explore why RSMI use differed by hospital

size. Organizational factors such as cultural competency education, budgetary issues, technology access, or, the regulatory environment may be shaping use. Replicating the study in other hospital systems could provide information on whether RSMI use differences are specific to this study sample or if they exist across the hospital industry. The second large question that is unanswered is whether RSMI use matched the needs and numbers of LEP patients on each unit. A study designed to compare the number of LEP patients and the RSMI use per unit or clinical practice area would be a beginning in this line of inquiry.

### 5.7 Summary

There were statistically significant findings to the research questions, a) does RSMI use significantly differ by clinical practice area? and, b) does RSMI use significantly differ by hospital size? Significant differences were found in RSMI use for both clinical practice area and hospital size. LEP patients were more likely to experience similar RSMI services if their hospitalization included care in both the intensive care and medical-surgical clinical practice areas. Patients were less likely to receive RSMI at medium size hospitals. Lastly, patients were more likely to receive RSMI services during the day shift.

A codebook with a recorded systematic coding process was used to control secondary database collection limitations. The sample limitation was addressed through adequate sample size. Sample size ( $N = 4502$ ) was adequate to meet the total incidences ( $N = 485$ ) of RSMI use required to address our primary research objective. Study replication would serve generalizability.

More evidence is needed to support RSMI use by clinical practice area and hospital size. Language diversity findings support the need to have an RSMI service that offers a wide range of languages. Further, short interpretation duration findings reinforce the notion that readily



available interpretation around the clock is essential. Because there were differences found in clinical practice areas, at hospitals of various sizes, and in patient RSMI needs, it was unlikely that exclusive language concordant interpreter use would have been a viable service to keep LEP patients safe from harm. Patients depend on hospital administrators, nurses and other caregivers to protect them from harm. Language appropriate services and care are important to non-English majority-minority and minority language speakers. Language appropriate care is important to both language groups. Positive, safe, health outcomes are important to all patients.

APPENDIX A  
KEY TERMS AND DEFINITIONS

Table A.1

*Key Terms and Definitions*

Term	Description
CLAS	Culturally and Linguistically Appropriate Services.
Cultural competency	Cultural competency is the possession of adequate cultural knowledge, attitude, and skills to provide cultural care.
Education	Education and training are used interchangeably in this proposal to represent learning activity.
Hospital Metropolitan Status	Urban/suburban/rural status defined by Texas State Data Center of metropolitan status areas.
LEP	Limited English proficient.
Language concordance	Two speakers speaking the same language to each other.
RSMI	Acronym for remote simultaneous medical interpretation.
Remote simultaneous medical interpretation	The use of the telephone, an interpreter, the patient, and the nurse in the interpretative process. The telephone set may have a dual or single handset, with or without a speaker function, or where all people in close proximity can communicate with the interpreter at the same time. Dual headsets are another telephonic technology used in RSMI.
Same language	Two speakers speaking the same language to each other.
Telephonic	Communication conducted using telephone technology.

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Term	Description
Training	Training and education are used interchangeably in this proposal to represent learning activity.

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APPENDIX B  
NATIONAL STANDARDS ON CULTURALLY AND LINGUISTICALLY  
APPROPRIATE SERVICES

Table B.2

*Office of Minority Health. National Office of Minority Health. National Standards on Culturally and Linguistically Appropriate Services (CLAS).*

Standard	
Number	Standard Description
Standard 1	Health care organizations should ensure that patients/consumers receive from all staff member's effective, understandable, and respectful care that is provided in a manner compatible with their cultural health beliefs and practices and preferred language.
Standard 2	Health care organizations should implement strategies to recruit, retain, and promote at all levels of the organization a diverse staff and leadership that are representative of the demographic characteristics of the service area.
Standard 3	Health care organizations should ensure that staff at all levels and across all disciplines receive ongoing education and training in culturally and linguistically appropriate service delivery.
<b>Standard 4</b>	Health care organizations must offer and provide language assistance services, including bilingual staff and interpreter services, at no cost to each patient/consumer with limited English proficiency at all points of contact, in a timely manner during all hours of operation.

Standard	
Number	Standard Description
<b>Standard 5</b>	Health care organizations must provide to patients/consumers in their preferred language both verbal offers and written notices informing them of their right to receive language assistance services.
<b>Standard 6</b>	Health care organizations must assure the competence of language assistance provided to limited English proficient patients/consumers by interpreters and bilingual staff. Family and friends should not be used to provide interpretation services (except on request by the patient/consumer).
<b>Standard 7</b>	Health care organizations must make available easily understood patient-related materials and post signage in the languages of the commonly encountered groups and/or groups represented in the service area.
Standard 8	Health care organizations should develop, implement, and promote a written strategic plan that outlines clear goals, policies, operational plans, and management accountability/oversight mechanisms to provide culturally and linguistically appropriate services.

Standard	Standard Description
Number	Standard Description
Standard 9	<p>Health care organizations should conduct initial and ongoing organizational self-assessments of CLAS-related activities and are encouraged to integrate cultural and linguistic competence-related measures into their internal audits, performance improvement programs, patient satisfaction assessments, and outcomes-based evaluations.</p>
Standard 10	<p>Health care organizations should ensure that demographic information for each individual patient /consumer’s race, ethnicity, and spoken and written language are collected in health records, integrated into the organization's management information systems, and periodically updated.</p>
Standard 11	<p>Health care organizations should maintain a current demographic, cultural, and epidemiological profile of the community as well as a needs assessment to accurately plan for and implement services that respond to the cultural and linguistic characteristics of the service area.</p>



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Standard	Number	Standard Description
Standard 12	Health care organizations should develop participatory, collaborative partnerships with communities and utilize a variety of formal and informal mechanisms to facilitate community and patient/consumer involvement in designing and implementing CLAS-related activities.	
Standard 13	Health care organizations should ensure that conflict and grievance resolution processes are culturally and linguistically sensitive and capable of identifying, preventing, and resolving cross-cultural conflicts or complaints by patients/consumers.	
Standard 14	Health care organizations are encouraged to make public information available about their progress and successful innovations in implementing the CLAS standards and to provide public notice in their communities about the availability of this information.	

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Note: From the U.S. Department of Health & Human Services, Office of Minority Health (2001a).

APPENDIX C  
INSTITUTIONAL REVIEW BOARD CERTIFICATIONS

**From:** THR IRB

**Sent:** Monday, January 04, 2010 12:49 PM

**To:** Logan, Debra

**Subject:** IRB Notification: STUDY CERTIFIED EXEMPT



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***CERTIFICATION OF EXEMPTION FROM IRB REVIEW***

12/8/2009 10:57 AM

**To:** Debra Logan

**CC:** Debra Logan

**From:** THR Office of Research Compliance

Please note that the Office of Research Compliance has determined that the proposed research referenced below is exempt from the requirements for IRB review and approval in accordance with federal regulations, 45 CFR 46.101(b).

**Study No.:** Pro00001787  
**Study Title:** The Pursuit of Language Appropriate Care: Remote Simultaneous Medical Interpretation

**Principal Investigator:** Debra Logan

**Co-Investigators:**

fullName
None

**Other Study Staff:**

Last Name	First Name	Status	Expiration
None			

**THR Federalwide Assurance No.:** FWA00013095

**Funding Information:** [Not Applicable](#)

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January 13, 2010

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Re: UT Arlington Institutional Review Board  
Acknowledgement of Approved Research Activity

Project Title: *The Pursuit of Language Appropriate Care: Remote Simultaneous Medical Interpretation*

UT Arlington IRB No: 2010-0201

THR IRB No: Pro00001787

Dear Dr. Debra Logan

<http://www.uta.edu/research>  
[Expertise at UT Arlington](http://www.uta.edu/expertise)  
<http://www.uta.edu/expertise>

The UT Arlington Office of Research Administration and the UT Arlington Institutional Review Board are pleased to acknowledge your participation in the "*The Pursuit of Language Appropriate Care: Remote Simultaneous Medical Interpretation*" protocol.

The Texas Health Resources Institutional Review Board is noted as the IRB of record for the project, last approved on January 4, 2010. You will not be required to submit a protocol for UT Arlington IRB approval.

In agreement with the IRB of record, this project is approved as follows:

Review: Exempt

Having met the conditions set forth by the Institutional Review Board at THR and in compliance with applicable regulations this acknowledgment is granted for a period not to exceed one year from the date of last review.

**Please be advised that you will be responsible for forwarding to the Office of Research Administration, Regulatory Services, at minimum, a copy of the approval letter forwarded to you upon each continuation review period, modification approval or adverse event acknowledgment as documentation of assertion that the project remains in compliance with all applicable mandates, assurances and institution policies and procedures. In the conduct of cooperative research projects, each institution is responsible for safeguarding the rights and welfare of human subjects and for complying with 45 CFR 46 and 46.114.**

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The UT Arlington Institutional Review Board and the Office of Regulatory Services appreciate your continuing commitment to the protection of human subjects engaged in research and wish you all the best in your research endeavors. Should you require further assistance, please contact Robin Dickey at 817-272-3723.

Sincerely,

**Patricia Turpin** Digitally signed by Patricia Turpin  
DN: cn=The University of Texas System, ou=The University of Texas at  
Arlington, CA, o=www.verisign.com/repository/CPS InCorp. by  
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Date: 2010.01.14 02:01:14 -0600

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