

Medical Interpreting: A Review of the Literature

Introduction

Sign language interpreters frequently provide services in medical settings. In fact, one agency reported that the majority of requests for services they receive are for medical interpreting (RID Views, 1999, p.13). Others estimate the rate of medical requests at 30-50% (Swabey, Alvarado-Little, & Taylor, 2006, p. 60). Deaf citizens are granted the right to services both under section 504 of the Rehabilitation Act of 1973 and under the Americans with Disabilities Act.

Despite the prevalence of medical assignments within the typical work schedule of many interpreters, there are relatively few comprehensive resources to guide interpreters wishing to work in this area, and little research on effective practices. The intent of a literature search was to locate resources; initial inquiry focused on sign language interpreting only, and expanded to address spoken language interpreting as well. Studies found were written from the perspective of interpreter practitioners, interpreter educators, linguists, and health care providers. This is a review of information gleaned from those sources.

Second-Language Patient Perspectives on Health Care

Deaf patient perceptions.

Until recent years, sign language interpretation studies specific to health care settings have been relatively scarce. One early study of sign language interpretation during a medical interview detailed an analysis of two certified interpreters' work in medical interviews between a nurse and a Deaf patient (Cokely, 1982). This study found errors of perception, memory, performance and meaning, and suggested strategies for preventing such errors from occurring.

Several studies published in health care journals have addressed the experiences of Deaf people in medical situations. Steinberg et al. (2006) used focus group discussions in three U.S. cities to research Deaf people's health care experiences. Participants said that they communicated best when "medically experienced certified interpreters" were provided, but that these were "infrequently available" (p. 261). Themes that emerged from the focus groups included Deaf patients' skewed understanding of the health care provider's instructions and their sense of fear in medical settings. The latter included both a fear of the consequences of miscommunication and a fear of letting health care providers know that the communication was inadequate. Likewise, participants were fearful of changing doctors, as a new doctor might be reluctant to pay interpreters. One reported that a doctor had commented, "The day I have to hire an interpreter is the day I stop having deaf patients" (p. 263). Participants also

reported a sense of mistrust, and a feeling that some providers disliked working with Deaf people. They felt frustrated that, in their view, Deaf people received a different level of care than non-deaf people did. The authors of the study concluded that Deaf people who use American Sign Language have much in common with members of other linguistic minority groups: limited access to English communication, infrequent contact with health care providers who know their language and culture, and the frequent necessity of using family and friends as interpreters. Where Deaf and signing health care professionals are available, Deaf patients prefer direct communication over interpreted encounters with non-deaf medical providers.

In another study, Steinberg et al. (2002) interviewed 45 Deaf women on their perceptions of access to health care. These women exhibited a lack of knowledge of health issues, and reported negative health care experiences and insensitive behaviors on the part of providers. They tended to avoid health services because of previous negative experiences. The authors recommended the development of special resource materials, improved prevention strategies targeted specifically to Deaf people, and the development of self-advocacy skills among the Deaf population. In one of the focus groups held in the northeastern United States, a woman explained that having an interpreter available meant the difference between a hysterectomy and a more conservative treatment that would leave her with the ability to bear children (p. 735). The women in these studies also expressed frustration at the difficulty of scheduling interpreting services, and the subsequent delays this caused. Some avoided seeking necessary treatment because of this.

In Boston, group interviews with Deaf and hard of hearing people found providers' conflicting assumptions about deafness to be a major source of distress in medical encounters (Iezzoni, 2004). Physicians often questioned Deaf patients about the cause of their deafness despite the fact that it was unrelated to the health problem that had brought them to the office. Participants felt that some doctors did not respect their "intelligence, motivation, and desire to understand and participate in their health care" (p. 356). They reported that doctors often did not understand that providing communication access was the responsibility of the health care provider, and that they complained about the costs or inconvenience of obtaining interpreting services. Doctors were also unaware of the need to have an interpreter with experience and knowledge in medical settings. Another issue in the disagreement with providers over interpreting services involved time: Deaf patients typically expressed the need for more time than their clinicians could or would provide (p. 359). Doctors often believed that note writing and lip reading were more effective than they actually are.

In a study reported in the journal *Family Medicine*, questionnaires were used to determine Deaf women's satisfaction with their prenatal care (O'Hearn, 2006). The study found that "Deaf women's expectations about provision of interpreter

services being met or exceeded was significantly associated with overall satisfaction” (p. 712). Deaf women saw a doctor’s willingness to provide an interpreter as a sign of his/her concern for them. The journal article, however, added, “Even providers who recognize a deaf patient’s preference for sign language fail to use interpreter services regularly” . Harmer (1999) noted that health care providers have historically resisted using interpreters, and suggested three reasons: They may not understand the extent of communication barriers; they may see their inability to communicate as a failure on their part; or they may fear cost, violation of patient confidentiality, or the potential of an interpreter to become a witness in a malpractice case (pp. 96-97).

In a British study published in 2000, Ubido et al. found that fewer than one in ten Deaf women understood what the doctor said to them if there was no interpreter present (p. 247). The women believed that non-deaf health care personnel were not able to understand their needs, and that their access to information was reduced. They also expressed anxiety over their experiences in waiting rooms, as they were unable to hear their names being called.

Another study in northwestern England reported that of 98 Deaf adults surveyed, more than half preferred to communicate with their doctors via a professional sign language interpreter, but that only 17% had actually had one provided (Reeves & Kokoruwe, 2005, p. 95). One third reported that they were not sure how well their doctor had managed their case, and did not fully understand their doctor’s advice or what they were to do next. A frequent concern was about medication: inadequate information about it, whether the correct medication had been prescribed, or whether they were using it correctly. The study concluded that “... the single change that would produce the greatest benefit for the largest number of deaf patients is the routine provision of sign language interpreter support for all who desire it” (p. 105).

In addition to communication barriers, it is common for Deaf patients to have limited medical vocabulary with which to communicate with health care providers. Bat-Chava et al. (2005), reporting on HIV/AIDS care and prevention among Deaf and hard of hearing people, found three barriers to Deaf people’s understanding of the disease: low education level, limited English proficiency, and limited communication with medical providers. Berry and Stewart (2006), in an article advising nurse practitioners on communicating with Deaf patients, stated that most nurse practitioners are unaware that Deaf people struggle with English, an observation that is likely true of most health care providers. Harmer (1999) explained that medical jargon causes problems for Deaf patients because most have limited health care knowledge and because doctors tend to use complex vocabulary and phrases in their explanations, rarely using visual information. Written materials given to hospital patients require, on average, an 11th grade reading level, and letters from doctors to patients are often written at a 16th grade level. It is generally acknowledged that the average Deaf high school graduate reads at a 4th or 5th grade level. Harmer also reported that, in 1995, a survey

indicated that 60% of doctors assumed that 85% of English words could be speech read.

In addition to difficulties with English, the average Deaf person has fewer opportunities for health education than most non-deaf people have. This results in less initiative to seek answers, less assertiveness, limitations on the types of medical care sought and reduced quality of services received (Harmer, 1999, p. 80). McEwan and Anton-Culver (as cited in Harmer, p. 80) reported that Deaf patients were less likely than other non-English-speaking patients to try to re-explain when providers failed to understand them. In a 1991 survey of Deaf and hard of hearing students, Deaf students exhibited limited knowledge of medical terms, could not properly respond to emergency situations, and were unable to understand prescriptions (p. 82). Similarly, Deaf people may have a poor understanding of the health care system and their own responsibilities for their care (p. 85). In childhood and adolescence, health care encounters are often handled by non-deaf parents, leaving Deaf patients with little awareness of their own medical history or of how the system works.

Non-deaf patient perceptions.

Sign language interpreters and Deaf people themselves commonly see the Deaf community experience as unique. However, research indicates a number of parallels between the experiences of Deaf patients and those of other non-English speakers. There is a body of research reporting on issues that arise in interpreted encounters between non-deaf second-language users and health care providers. Many of these studies relate to the quality of interpreting. For example, Prince (1986) analyzed questions in interpreted doctor-patient conversations and found distortions in three categories: interpreters answering questions for the patient; incomplete translations of multi-part questions; and incorrect translations, primarily due to mishearing, misunderstanding of technical terms, and failure to check the accuracy of information before relaying it.

Flores et al. (2003) reviewed interpreted outpatient pediatric visits facilitated by Spanish-speaking interpreters. Interpreters included both professional interpreters and *ad hoc* interpreters, that is, nurses, social workers, or family members, and averaged 31 errors per encounter. Most common were errors of omission, 63% of which had possible medical consequences. Errors in word or phrase choice were most often (73%) related to medical terminology. These included incorrect dosage, frequency or mode of administering medications, and omitting relevant information on drug allergies or medical history. The most serious errors were in interpretations by *ad hoc* interpreters. Other researchers, however, have questioned Flores' categorization of some utterances or omissions as errors, arguing that they may represent a meaning-based rather than a literal, conduit model of interpreting (Hsieh, 2006, p. 4).

Rivadeneira (2000) suggested that both health care providers and non-English-speaking patients may alter their behavior in ways that stand in the way of developing a trusting relationship, perhaps resulting in doctors' misunderstanding of patients' symptoms, and decreasing the likelihood of patients following doctors' recommendations (as cited in Angelelli, 2004, p. 21).

Although issues arising from encounters between non-deaf health care providers and Deaf patients and between health care providers and non-English-speaking patients are very similar, Iezzoni (2004) pointed to one important difference: Deaf people are more concerned than non-deaf second-language users when doctors question their intelligence. This is likely due to the long history of oppression and discrimination, and an education system that has historically linked deafness with low intelligence (p. 361). Writing about health care providers' expectations that Deaf patients will communicate easily by writing or speech reading, Harmer (1999) quoted Lotke (1995), "No other subset of Americans who use English as their second language are expected to do this, nor are they presumed to be retarded (sic) when they fail at these efforts. Deaf people are expected to do both" (p. 96).

Settings and Types of Medical Interpreting

The majority of medical diagnoses are made based on a medical history taken during a conversation between doctor and patient (Harmer, 1999, p. 73). According to Byrne and Long (1976, as cited in Angelelli, 2004, p. 75), a typical medical consultation consists of six phases: establishing the doctor-patient relationship, finding out the reason for the visit, a verbal and/or physical examination, consideration of the patient's condition, explanation of the treatment or further investigation, and termination. Interpreters are a vital part of this process.

Aside from their involvement in initial medical consultations, interpreters are needed in a variety of places in health care systems. The Registry of Interpreters for the Deaf (RID) Standard Practice Paper "Interpreting in Health Care Settings" (www.rid.org) lists the following examples of areas in which interpreters may work: taking a medical history, giving diagnoses, performing medical procedures, explaining treatments and prescriptions, providing patient education, describing discharge and follow up care, and admitting to emergency department or urgent care. Napier (2006) listed the following: initial medical consultations, physical checkups, emergency department visits, surgery, and informed consent. Both Frishberg (1990, p. 118) and Humphrey and Alcorn (2001) discussed settings in which medical interpreters are used, the latter dividing medical settings into two categories: medical appointments, and laboratory or hospital procedures (p. 13.30). Moxham (2005) discussed the ramifications of specific medical situations such as childbirth, dentistry, eye exams, home health care visits, medical school training, nursing home care, physical or occupational

therapy, radiology, and surgery. In-patient, outpatient, urgent care, and emergency departments are also usual settings for interpreters.

In addition to listing typical health-related settings, Stewart et al. (2004) reminded readers that due to increased opportunities for Deaf people, interpreting may also be done between a Deaf health care professional and a non-deaf patient, or in the education and training of Deaf health care professionals. Health-related occupations in which Deaf people are involved include general medicine, nursing, dentistry, physical therapy, chiropractic, podiatry, osteopathy, and veterinary medicine. Woodard (2007), for instance, discussed the provision of oral interpreting service to a Deaf medical resident (p. 8).

A few articles address interpreting in specialty areas of medicine in more detail. Martinez (1999) discussed preparation required for interpreting childbirth, proposing a series of questions an interpreter should ask him/herself as well as some for the Deaf patient (pp. 10-11). Reporting in the April 2003 *RID Views*, Cumsky Weiss and Schornstein described their experiences working as a Deaf-hearing team of interpreters for childbirth. The mother-to-be requested the team, as she felt she would be more comfortable with the ease of communication a Deaf interpreter could provide. The article details the process of interpreting the birth, and explains some of the logistics the interpreters faced in terms of ways to interpret effectively without hindering the operations of medical equipment and personnel (p. 6).

Bailey and Rockhill (1997) discussed interpreting in hospice, pointing out the importance of understanding the hospice philosophy and the interpreter's role in this setting as a member of the hospice team (pp. 41-50). Under the category of hospice interpreting, some situations are similar to those in other medical settings, including visits from nurses, doctors or social workers; medical exams; physical therapy; counseling; and physical therapy. However, interpreters in this setting also must face the patient's death, the pronouncement of death and the preparation of the body. The article describes Sign Language Associates' Hospice Services, and the specialized education necessary before interpreters work in this setting. Training covers the hospice philosophy, the process of death and dying, the hospice process, family dynamics, grief, stress during terminal illness, medical considerations, the interpreter's role, safety and emotional considerations, and personal feelings and values related to death and dying.

Challenges and Issues in Medical Interpreting

Legal issues.

Provision of sign language interpreting services in health care settings falls under two laws. Section 504 of the Rehabilitation Act of 1973 requires that access be provided in federally funded agencies, and the Americans with Disabilities Act,

signed into law in 1990, requires access in “public accommodations,” including doctors’ offices.

Despite these laws, Deaf people continue to encounter difficulties in gaining communication access. Steinberg et al. (2002) commented, “Despite a decade of legal mandates and case law supporting inclusion, as well as cost-benefit ratios that favor full access to care, continued difficulties are reported when deaf consumers attempt to access health care” (p. 740). Geer (2003) reported that Deaf people file many ADA complaints that they have received accommodations they felt were inadequate (p. 135). Examples include providers asking a Deaf patient to bring a friend or relative to interpret, using a staff member who can fingerspell to communicate, and hiring an incompetent interpreter. Both the ADA and Section 504 of the Rehabilitation Act of 1973 require that interpreters be provided to Deaf sign language users. Depending on the complexity of the issues under discussion, however, there may be situations in which an interpreter is not required.

Some sources in journals for medical professionals have reported on outcomes of lawsuits related to provision of interpreter services with Deaf patients. For example, one article reported on a successful discrimination suit against a medical facility that attempted to use a staff member who knew a little signing instead of waiting for a professional interpreter (*Legal Eagle*, February 2007). In this case, the patient collected damages for pain and suffering for the time during which the surgery consult went ahead despite the hospital’s refusal to provide a professional interpreter. The article pointed out that although courts have not made it entirely clear whether a certified sign language interpreter is always required, the federal regulations do say that the facility should “give primary consideration to the requests of the disabled (sic) individual” (p. 3). However, an article in another issue of the same nursing association newsletter reported a different case in which a Deaf patient’s teenaged children were asked to interpret for their father, but were unable to sign well enough to do so. The hospital tried to contact a professional interpreter, but could not locate one. The court held that in order to prevail, the complainant would have to prove that the lack of appropriate interpreter service resulted from the medical facility’s “deliberate indifference” (May 2007, p. 5).

Spoken language interpreting services for non-English-speaking patients are governed by Title VI of the Civil Rights Act of 1964. Some articles intended for the health care community have reported that non-deaf patients who speak languages other than English face some of the same barriers to care as Deaf patients do. For example, in a case involving a Spanish-speaking laborer, the court awarded damages for the loss of sight in one eye due to inadequate treatment of an injury. The doctor spoke with an interpreter by phone, but did not make use of the service to talk with the patient, resulting in inadequate communication (*Legal Review and Commentary*, 2003).

HIPAA and privacy issues.

The Health Insurance Portability and Accountability Act (HIPAA) Public Law 104-191, passed in 1996, applies to health information created or maintained by health care providers, and limits who may see private health care information. The website www.hhs.ocr.hipaa gives information on this act as it applies to patients and health care providers. Two articles in the *RID Views* explain how this act applies to interpreters. According to Agan (2004), the law applies to health information in any form or medium. Patients must be notified of the law, and notification must be documented (pp. 1, 24). HIPAA addresses the patient's right to have access to his/her own health records, and to request corrections or submit a written statement of disagreement with them if s/he wishes. The patient has the right to an accounting of how the information was used and to whom it was disclosed. Particularly sensitive information is subject to certain restrictions on access, and a grievance process is in place for patients to use if problems arise (p. 24).

Thress (2005), who has experience as both a physician's assistant and an interpreter, pointed out that interpreters who are not employees of medical facilities fall under the "business associate" part of the law, and have access to patient information only for the purpose for which the medical facility collected it, i.e., to provide health care. An interpreter or referral service may use the patient's name, contact information, and generally identifiable health information for business purposes in the provision of service. Thress stated that interpreters need to sign a business associate's contract, a sample of which is provided on the HIPAA website.

Logistical issues.

Accessing interpreters in a timely manner for medical needs is often an issue, particularly in areas where there is already a shortage of interpreters. Elkins (1993) discussed a process established for dispatching interpreters in emergency situations through the Sign Language Associates, Inc. Emergency Services Division. This service contracts with hospitals, which pay an administrative fee, to provide services in cases of immediate need and short-notice appointments. Elkins' article points out that, in order to create an effective emergency system, a critical mass of Deaf consumers and interpreters is required. Geographic area, agency structure and interpreter qualifications must also be considered.

Carter et al. (2001) described an on-call system for dispatching medical interpreters in emergencies, developed in response to a class action suit against Connecticut hospitals by the Connecticut Association of the Deaf. The consent decree required that interpreters be provided "within one hour of identifying a patient or companion as needing the services" (p. 1). The system involves both recruiting and assigning interpreters, and providing initial and ongoing interpreter training.

New technology offers other avenues for timely access to interpreters. Swabey and Laurion (2005), in a presentation at the 2005 RID Conference, reported the results of a study on the feasibility of video remote interpreting in health care. Hirsch and Mirano (2007), writing in *Health Management Technology*, reported on the use of video conferencing to provide interpreting services. A New Jersey hospital that serves a high percentage of both non-English speakers and Deaf and hard of hearing people required interpreting services in 46 spoken languages and in ASL during a two-year period. In 2003, after exploring several solutions, the hospital contracted with an interpreting agency to provide interpreting via video conferencing. Among their requirements for the service were on-demand interpretation for both spoken languages and ASL, using one device to handle both. The service had to be easy to use, with information encrypted for HIPAA compliance, and the interpreters had to be “medically trained.” Hospital administrators found the service to be effective, particularly because it “helped realize large financial savings by not employing live interpreters with huge financial guarantees” . The hospital plans to include access to video interpreting with the in-room monitors used for TV viewing, and to extend its use to EMTs in the field.

Quality control: The case for professional interpreters.

Due to the relative scarcity, expense, and difficulty in scheduling associated with professional, medically trained interpreters, health care providers often resort to the use of ad hoc interpreters, typically staff members who know the patient’s language to some degree, or family and friends of the patient. However, the case for using professional interpreters trained in medical interpreting is strong in situations involving both Deaf individuals and non-English speakers.

Writing about sign language interpreting in medical settings, de Vlaming (1999) suggested that a common issue facing Deaf patients is the pathological view of deafness held by the majority of health care providers. The author stated, “...a professional interpreter acquainted with deaf culture can influence and introduce the perception that sign language is not the absence of spoken English...” (p. 14).

As mentioned previously by Flores (2003), errors increase when ad hoc interpreters are used (as cited in Angelelli, 2004, p. 23). Chen (2006), writing about her experience relying on the husband of an Arabic-speaking traditional Yemeni woman to interpret, advocated for the use of professional interpreters, stating that untrained interpreters are “reliably unreliable” (p. 1745). McAleer (2006), discussing Deaf patients’ experiences with health care in Great Britain, stated unequivocally, “Nurses who are not trained interpreters but have some knowledge in BSL (British Sign Language) should not act as interpreters”. Fallat et al. (2007) reported on a survey of members of the American Pediatric Surgical Association, which posed the following ethical dilemma: A doctor must rely on a

neighbor to interpret for Cantonese-speaking parents of a six-week-old baby in order to obtain informed consent for surgery on the child. Based on results of the survey, the report recommended the exclusive use of trained interpreters (pp. 129-136). Only one article supported the use of family members as interpreters. Kuo and Fagan (1999), writing about a group of non-English-speaking patients, found that those non-deaf patients felt highly satisfied with and comforted by family interpreters, and may prefer them.

Even when professional interpreters are available, doctors may not avail themselves of their services. A 1996 survey of 165 doctors at a professional conference found that all were unaware of their legal obligations to provide access to Deaf people under the ADA (Harmer, 1999, p. 80). Iezzoni (2004) found that, "When hiring interpreters, physicians often do not seek persons trained specifically in medical sign language" (p. 359). Steinberg et al. (2006) referred to a study published in the *Journal of the American Medical Association* (Ebert & Heckerling, 1995), which found that doctors used interpreters with Deaf patients infrequently even though they recognized that communication was better when an interpreter was present. An increase in the use of professional interpreters was noted when health care providers were given training in working with interpreters (Karliner, 2004, p. 175).

Medical interpreting is most often done by community interpreters, rather than staff interpreters. Mikkelsen (1999) noted in the *RID Journal of Interpretation*, "Whereas court interpreting is just beginning to emerge as a recognized profession in this country, ... other types of community interpreting are far behind". However, this is changing in the area of medical interpreting.

Mikkelsen (1999), a spoken language interpreter, pointed out that two states, California and Washington, have made efforts to require certification for some types of medical interpreting, and medical interpreter associations have been established in California, Washington and Massachusetts (p. 130). California has also taken steps to prohibit the use of children as medical interpreters in some circumstances (Yee et al., 2003).

Not all states have such requirements, and even in states with specific laws requiring the use of professional interpreters, state laws often "do not define what constitutes adequate screening, testing, training and proficiency for interpreters" (Baker et al., 1998, p. 1469). This points to the need for professional standards for interpreters in both sign and spoken languages, which is the subject of a later section of this paper.

The Interpreting Role in Medical Settings

Conduit or co-participant: A discussion of interpreting models.

While much has been written on models of interpreting, perspectives on this subject have evolved with the growth of the profession. In health care settings, as elsewhere, research and practice have redefined traditional interpreting roles in the interests of producing more effective communication.

Perhaps the best-known recent discussion of a sign language interpreter's role in medical interpreting is found in Metzger's *Sign Language Interpreting: Deconstructing the Myth of Neutrality* (1999). Metzger introduced her research with this statement: "In discussions of the issue of interpreter neutrality, the anecdotes that interpreters and lay people share suggest that the traditional perception of the interpreter's role as a neutral conduit of language is at odds with people's real-life experiences" (p. 1). Her study analyzed two types of medical discourse mediated by interpreters. One set of data was from role-plays of medical interviews facilitated by student interpreters, and the other was from actual medical interviews facilitated by a professional interpreter. In addition to translating statements made by the health care provider and the patient, both groups of interpreters were found to initiate statements on their own. These included "source attributions," i.e., indicating who was talking, repetitions, requests for clarification, dealing with interference, and calling for the attention of one of the parties (pp. 114-122). Her findings were similar to those in Roy's (1989 & 1993, as cited in Metzger, 1999) analysis of interpreted dialogue: Interpreters participate in the discourse by regulating turns, and by altering discourse to accomplish participants' goals.

Studies on spoken language interpreting have found similar results. Wadensjo (1992) studied medical interviews interpreted by spoken language interpreters and categorized their performances as "relaying," i.e., conveying what the parties intended to say, and "coordinating" (pp. 18-19). Coordinating functions include asking for clarification, prompting a response or turn from one of the parties, explaining what one party means, or explaining that one party doesn't understand the other. Angelelli (2003) proposed the term "visible co-participant" to describe the interpreter's role, in contrast with the invisible, completely neutral role traditionally ascribed to interpreters and still commonly promoted in professional organizations of interpreters and in interpreter education (pp. 3-26).

In her book, *Medical Interpreting and Cross-Cultural Communication*, Angelelli (2004) noted that, due to the lack of a "theoretical underpinning to account for the special type of interaction that occurs in a medical setting," standards of practice for interpreters are often based on those for court or conference interpreting, valuing accuracy over goal, intent and context, and seeing the interpreter as a conduit (pp. 2, 7). She observed and interviewed spoken language interpreters in a California hospital who had a great deal of experience in medical interpreting, but little formal training. Angelelli found that the interpreters both saw and conducted themselves as "co-constructors to the interaction," rather than as invisible interpreters (p. 7). The interpreters actively managed issues of power and solidarity, and the asymmetrical relations between speakers of dominant and

less dominant languages. She described the interpreter's role as "opaque co-participant" rather than "transparent language modem" (p. 11). She pointed out that interpreters accomplish this by means of "text ownership," i.e., saying something not originated by one of the parties to the encounter, in response to social factors such as the patient's ethnicity, level of education, or socio-economic status (p. 76). She proposed a continuum of interpreter visibility that ranges from low to high, with a corresponding impact on the medical or personal information involved. Interpreters in this study used a variety of metaphors to describe their roles as they saw them: bridge, detective, diamond connoisseur, and miner, the last three referring to their perception of the need to locate relevant information amid an extended response to a health care provider's question (pp. 130-131). Wadensjo's (1992), Metzger's (1999), Roy's and Angelelli's research all showed that an interpreted conversation is necessarily "triadic," i.e., the interpreter is an active participant in a three-party conversation (p. 4).

Dysart-Gale (2007) pointed out that the view of interpreters as conduits is based on the "transmission model of communication" (p. 240). The medical discipline has traditionally followed this model as well: The doctor talks and the patient listens (p. 241). The author suggested that a more appropriate model for both parties involved is the "semiotic model," which envisions meaning evolving through the collaboration of the participants. Writing about spoken language interpreters, Dysart-Gale proposed additional roles: clarifier, cultural broker, and patient advocate (p. 239). As clarifier, the interpreter might add information when a cultural difference renders the message unclear. An interpreter acting as cultural broker would provide a cultural framework that allows the receiver to understand the message, and an interpreter in an advocate role might act on behalf of the patient outside of the medical interview, with the goal of promoting quality of care as well as quality of communication. Dysart-Gale added that "role expansion" is controversial, and that some fear it is tantamount to "practicing medicine without a license" (p. 240).

Araujo-Lane and Phillips mentioned that interpreters run the risk of blurring the boundaries between interpreting and medical practice (p. 171). They suggested that interpreters need to explore the concepts of impartiality and transparency and find a "professional center," which allows them to be accurate and ethical while being transparent and aware of "a complex dynamic that involves understanding themselves, the patient's culture and the U.S. health care system" (pp. 167-173). According to Solomon (1997), to achieve transparency interpreters must explain to health care providers the difficulties they encounter in translating a concept, and negotiate ways in which it might be adapted to make it understandable (p. 91).

Metzger (1999) recommended that a similar strategy be used toward Deaf patients. Arguing that one issue is the differing schema between health care providers and Deaf patients, she suggested that interpreters should provide

information about the interpreted interview to both parties so that all have a similar schema (p. 197). Interpreters need to recognize that, although they cannot include their own opinions and ideas in their interpretations, they cannot as humans be entirely impartial either. In the field of sign language interpreting, a well-known article by Charlotte Baker-Shenk (1991) entitled “The Interpreter: Machine, Advocate or Ally?” reminds interpreters that they cannot be completely neutral. They must be aware of the impact of the choices they make, and make responsible decisions (p. 120ff).

Although there is little research on the actual behavior of sign language interpreters in medical settings other than Metzger’s work, there is research on spoken language medical interpreters’ behavior. Kaufert and Putsch (1997, as cited in Angelelli, 2003, p. 6) found that interpreters expanded and adapted health care providers’ communication, provided cultural explanations and advocated on behalf of patients. Hsieh (2006) studied 26 professional spoken language interpreters who had completed 40 hours of training developed by the Cross Cultural Health Care Program (p. 5). The author found that the interpreters saw themselves as part of the health care team, and tailored their communication strategies to the goal of diagnostic efficacy, for example, by “editorializing” information to emphasize key medical points, seeking information on their own without a prompt from the health care provider, and volunteering medical information to patients. “Editorializing” took the form of deciding whether or not information provided by the patient had medical value before passing it on to the provider, or editing the provider’s statements to more efficiently elicit information from patients (p. 7). Interpreters also substituted medical concepts for patients’ culture-specific comments about their illnesses (p. 28). When the provider left the room, they often summarized, explained, or repeated previous information for the patient. Occasionally they even went so far as to volunteer information on their own, such as suggesting an alternate treatment or discussing their own experience with a disease. The researcher concluded that the interpreters were acting on their own preconceived notions of doctors as authority figures, rather than on an actual assessment of the current interaction, causing them to over-emphasize the information-gathering aspect of the encounter at the expense of the doctor’s goal of establishing a relationship with the patient (p. 23). The behaviors of the interpreters in Hsieh’s study contrast sharply with the model most sign language interpreters follow. For example, Neumann-Solow (1981) advised interpreters to leave explanations of terms to the medical professionals (p. 6).

Often, the difficulties interpreters are responding to when they deviate from the neutral role have to do with conflicting expectations or with cultural differences between provider and patient. A common example, familiar to ASL-English medical interpreters, is the cultural difference between a provider who expects a brief answer to a question about the current illness and a patient whose culture requires that an explanation of the present circumstances be rooted in past events. Spanish speakers, like ASL users, often respond with narratives rather

than one-word answers (Sanheim, 2003, p. 35). Mediating culture and world-view are challenges both spoken and sign language interpreters face.

Interpreters and cultural differences.

According to Shuy (1976), problems that arise in medical interviews can be attributed to differences in linguistic and cultural backgrounds and to different goals and understandings of the interaction by patients and health care providers (p. 365). Harmer (1999) characterized “health care culture” as emphasizing rapid diagnosis and treatment, efficient use of services, and a minimum of interaction (p. 86). Lee (2002) suggested that differences between patients’ and doctors’ cultural beliefs and values “hinder the establishment of the cooperative partnership” important in a doctor-patient relationship (as cited in Angelelli, p. 19). Cambridge (1999) wrote that dangers are inherent in the interpreted medical encounter due to the participants’ “lack of a common ground within the transaction” (p. 201).

Mindess’ 1999 book, *Reading Between the Signs: Intercultural Communication for Sign Language Interpreters*, highlights some of the cultural differences between the culture of the U.S. non-deaf majority and U.S. culturally Deaf citizens as they influence the interpreting process. For example, non-deaf mainstream Americans living in a relatively low-context culture value self-reliance and independence (p. 70). In contrast, Deaf Americans live in a more high-context culture, and place more value on the group than on the individual (p. 113). In a telecourse presentation comparing Deaf and non-deaf cultures, Marie Philip (1993) explained that it is customary for a Deaf person to consult others in the group before making an important decision, a practice that would be seen as overly dependent by many U.S. non-deaf majority members. Harmer suggested that some “grassroots” Deaf people may seek out better-educated peers for medical advice (p. 90).

This kind of cultural difference is not unique to the Deaf community. Dysart-Gale (2007) explained that group members might develop their beliefs and attitudes toward disease not from information given by health care providers, but through communicating with their social group (p. 241). Commenting on a study by Kaufert and Putsch (1997) that showed spoken language interpreters making cultural adjustments in their interpretations, Solomon (1997) pointed out that the emphasis in medical encounters is on patient autonomy. However, not all cultures value autonomy. In some cultures, the preferred norm is to allow a spouse, family members or friends to participate with the patient in important medical decisions (p. 89ff).

Mindess (1999) suggested several techniques for cultural adjustment and provided concrete examples, some of which are specifically related to medical settings. She also provided a “mental checklist” that interpreters can use to decide whether an adjustment is needed (pp.189-190). In these examples, “Not

only did the interpreters not take over, but by their skillful handling of the situations and elimination of cultural red herrings, they allowed the participants themselves to control their interactions” (p. 188). This is a definite contrast to the practice of interpreters profiled in Hsieh (2006,), who took a much more directive approach to cultural mediation, resulting in a skewing of the intent of the encounter.

Dysart-Gale (2007) wrote, “Almost by definition, medical interpreting is a service most often provided to socially marginalized groups ...” (p. 238). This can affect communication in many ways. For example, Lee pointed out that doctors should not assume that patients will ask questions when they are confused or unsure, and should realize that the absence of questions does not indicate that patients are uninterested in knowing (as cited in Angelelli, , p. 19). Ferguson and Candib (2002) noted that minority group patients, especially those who do not speak English well, are less likely to evoke physician empathy, establish rapport with health care providers, receive sufficient information, and be involved in medical decisions (as cited in Angelelli, , p. 21).

Davidson (1998, as cited in Angelelli,) suggested that the doctor and the patient have different views of an interpreter in a medical encounter. The doctor sees the interpreter as “an instrument that keeps the patient on track,” and the patient considers the interpreter a “co-conversationalist”. The author concluded that spoken language interpreters align themselves with health care providers, serving as “gatekeepers” for the patients for whom they interpret.

Given the obvious complexity of the medical interpreting task, it is clear that interpreters need preparation before working in this setting. Preparation includes both formal training and education, and knowledge needed for a specific medical encounter. Resources for both types of preparation will be reviewed in a later section of this paper.

Professional ethics and standards.

In both sign and spoken language interpreting, professional standards provide a critical foundation for effective interpreter practice; this is especially true of interpreting in medical settings. Bancroft (2005), as part of a project for the National Council on Interpreting in Health Care (NCIHC), reviewed interpreting standards worldwide, comparing their content (p. vi). Most emphasized consumers’ health and well-being, promotion of the patient-provider bond, and respect for all parties (p. 25). Relying primarily on standards from the International Medical Interpreters Association (<http://www.mmia.org/>), the California Health Care Interpreters Association (cms.chiaonline.org), and the “Bridging the Gap” curriculum (www.xculture.org), the NCIHC developed a set of standards for medical interpreters (<http://www.ncihc.org/>). The goal of the standards is to facilitate communication, promote accurate interpreting, support the patient-provider relationship, establish procedures for mediation during the

interpreted encounter, overcome barriers to understanding, and promote ethical behavior. Although RID has a Standard Practice Paper entitled “Interpreting in Health Care Settings,” its purpose is more for guidance of consumers than of interpreters (<http://www.rid.org/>). The organization provides no specific standards for medical interpreting.

Both RID and the NCIHC have ethical codes available on their websites to guide interpreters’ practice. The NAD-RID Code of Professional Conduct, instituted in 2005, includes seven tenets, with “guiding principles” and “illustrative behaviors” for each. The NAD-RID code is intended to cover all situations, including medical. The NCIHC code is specific to medical interpreting, and includes the following standards: accuracy, confidentiality, impartiality, respect, cultural awareness, role boundaries, professionalism, professional development, and advocacy. Unlike the NAD-RID code, NCIHC guidelines specifically mention “cultural context” as a part of the interpreter’s purview, and encourage the interpreter to increase his/her cultural awareness. NCIHC also specifically states that the interpreter “may be justified in acting as an advocate”. The NAD-RID code allows the interpreter to “judiciously provide information or referral regarding available interpreting or community resources without infringing upon consumers’ rights” (Professionalism; Illustrative Behavior, 2.6).

Professional ethics are customarily included as part of sign language interpreter education, and many resources are available to program students and instructors. Although several of these, for example, Stewart and Witter-Merithew (2006), Cartwright (1999), and Humphrey (1999), included medical interpreting among the scenarios in their texts, they offered no specific guidance about how to make ethical decisions in health care settings. However, Gish (1990) specifically addressed ethical decision-making and health care. This book provides exercises in values clarification, gives a historical perspective on health care ethics, discusses specific health care issues such as distribution of health care resources, looks at the impact of stress and illness on communicators, reviews legal issues in health care, and leads students through both decision-making and professional communication activities.

The NCIHC also provides a “Guide to Initial Assessment of Interpreter Qualifications,” published in April 2001, intended to lay out a strategy for assessment of medical interpreters. This guide can be used either in conjunction with other quality assurance measures such as state or national certification, or alone. It includes basic language skills, ethical case studies, cultural issues, health care terminology, integrated interpreting skills, and translation of simple instructions.

RID has a national testing and certification program which awards both a generalist certificate and a certificate for legal interpreters. To date, RID does not certify medical interpreters.

Preparing to Interpret in Medical Settings

What does an interpreter need to know?

The complex nature of interpreting in health care settings demands that practitioners be well equipped for the task. Napier et al. (2006) described medical interpreting as “diverse and unpredictable” as well as a “high stakes setting” (pp. 111-112). Clearly, preparation is key to working effectively in this setting. A review of writings that covered both sign and spoken language interpreting found general consensus on what interpreters need to know, and on personal characteristics that are important in medical settings.

By far the most commonly cited need for medical interpreters was knowledge of medical terminology (Yaffe, 1999, pp. 1, 12; Barnard, 2005, p. 7; Goldberg, 2003, p. 6; Dower, 2003, p. 3; Napier, 2006, p. 112; Humphreys, 2003, p. 90; Frishberg, 1990, p. 119). The second requirement noted was knowledge of medical tests, treatments, procedures and equipment. Interpreters must be aware of the stages in medical processes, and the relative importance of communication at each stage (Humphrey & Alcorn, 2001, p. 13.35). Interpreters also need to be familiar with human anatomy and with the varieties of medical disciplines, roles of various medical professionals and hierarchies in the health care system. Lest interpreters find these requirements too daunting, Rogers (1999) pointed out that interpreters need not have a degree in medicine or in medical vocabulary to be effective, and should always be willing to ask both patient and doctor for clarification (p. 9). Barnum, quoted in Stewart et al. (2004), suggested that interpreters must be “educated enough in the field of medicine ... not to be a doctor ... but to be familiar with and comfortable in (the) medical setting...” (p. 110). Interpreters should have a general background in science, and knowledge of common illnesses, and be aware of safety issues that may affect them or their patients. Interpreters should be aware of the influence of culture and power dynamics in medical settings. Emotional issues, such as the ability to bring calm to a stressful situation, the capacity for “being present” for whatever the patient endures, and awareness of the possibility of vicarious trauma, are also important.

Many authors addressed issues specific to medical settings and suggested ways that interpreters could deal with them. One of the most commonly addressed issues was the need for patient privacy or “modesty,” and discussion included interpreter strategies for maintaining visual access with Deaf patients during physical examinations (Frishberg, 1990, p. 119; Humphrey & Alcorn, 2001, p. 31). Steinberg et al., addressing protocols for quickly identifying Deaf patients and providing interpreter services, stressed the importance of gender preference in choosing an interpreter for certain medical procedures (p. 739). Frishberg suggested that the interpreter could step out of the room during the actual exam or procedure, after explanations have been made (p. 120).

Placement of the interpreter within sight of the patient but out of the way of medical professionals, equipment and procedures is often a challenge. As Humphrey and Alcorn (2001) pointed out, an “ideal” placement, with the interpreter near the health care practitioner and both within the Deaf patient’s sight line, is “virtually impossible” in some situations (p. 31). Frishberg (1990) agreed, pointing out that although interpreters are taught to place themselves near the source of information, the best placement in medical settings is not always near the practitioner (p. 120). Modifications in placement may need to be made to avoid hindering the procedure, or because of safety issues that may affect the interpreter.

A few sources dealt with specific kinds of procedures. For example, Napier (2006) explained the particular challenges that arise in eye care appointments: Some procedures, such as vision testing in a darkened room, removing a patient’s glasses, or dilation of the eyes, compromise the patient’s ability to see the interpreter (p. 113). Moxham (2005) discussed interpreting various types of medical procedures, including dentistry, physical therapy, home health care, nursing home care, and many more, pointing out challenges and suggesting ways interpreters may choose to deal with them (pp. 25-52).

Another challenge interpreters face in medical settings is working with Deaf patients who are stressed, worried, in pain, medicated, or physically compromised (Humphrey & Alcorn, 2001, p. 31). Frishberg (1990) suggested that health care providers sometimes need to be reminded that Deaf patients need to see to be able to communicate, and that interpreters need to be brief, clear and avoid fingerspelling with patients who are sedated (p. 121). A striking example of a physically compromised patient is provided in an article addressing end-of-life care needs of Deaf senior citizens (Allen et al. 2002). A Deaf person in hospice care suffering from a brain tumor was unable to sign clearly. A Deaf hospice visitor was able to understand what he was trying to communicate, even though an ASL-English interpreter with 20 years’ experience was not (p. 198). Although this incident did not involve an interpreted event, it highlights the difficulties a Deaf patient may have, as well as the need for Deaf interpreters in the medical settings.

Safety is another topic that several authors addressed. Interpreters must protect themselves from exposure to illness as well as radiation from x-rays, and be careful that their own health does not negatively affect Deaf patients. Humphreys (2003) suggested that interpreters be aware that when health care providers don scrubs, masks, and shoe covers in preparation for a procedure, interpreters should as well (p. 90). Clear plastic masks are available that will allow the Deaf patient to see the interpreter’s face. Interpreters should also be sure that their routine vaccinations are current, and should have a TB test, hepatitis vaccinations, and tetanus shots. Moxham (2005) suggested an interpreter survival kit of sorts, which would include a nametag, hand sanitizer, sensible

shoes, an identifying vest, and a copy of the ADA (p. 12).

One point not often addressed in the literature, and often not covered in interpreter education, is the existence of almost 200 types of genetic hearing loss, about one-third of which are part of a syndrome that can produce major health problems (Harmer, 1999, p. 75). Patients whose deafness falls into this sub-category may need more complex health care than other patients.

These are only a few of the challenges interpreters face in health care interpreting, and for which they need preparation. In the next section, resources for medical interpreters and curricula for medical interpreter training and education will be reviewed.

Education and resources for interpreters.

Dealing with the vast array of medical procedures and terminology can be daunting. A number of resources are available for working interpreters who are either actively involved or interested in medical interpreting. One of the most comprehensive is Tamara Moxham's 2005 book, *Deaf Patients, Hearing Medical Personnel: Interpreting and Other Considerations*. The book is intended and written for interpreters, Deaf consumers and their families, and medical staff and administrators, and covers protocol for hiring interpreters, including Deaf interpreters; HIPAA; interpreter roles; emergency coverage; ethics; medical context and culture; and specific types of medical scenarios.

In an article published in the *Journal of Deaf Studies and Deaf Education*, Harmer (1999) has provided an overview of Deaf people and medical care entitled "Health Care Delivery and Deaf People: Practice, Problems, and Recommendations for Change." This broad-ranging article examines factors affecting Deaf people and health care, reviews literature on the subject and recommends changes.

The *Interpreting Handbook for Diagnostic Procedures* (1998, 40 pgs.), by Cathy Cochran of the Olathe Medical Center, describes common radiologic diagnostic procedures, such as chest x-rays, bone studies, ultrasounds, and angiographies, giving information that interpreters need to interpret them successfully. For each procedure, the author has explained the purpose of the exam, how the patient is prepared, the position of the patient, appropriate placement of the interpreter, precautions, and special considerations. She has also provided specific information on how interpreters can protect themselves during these procedures, and included a list of common medical abbreviations.

Writing in the *RID Views*, Barnard provided a very brief list of terms associated with sexually transmitted diseases, giving a definition of each and suggesting that interpreters attend lectures or read up on STDs (January 2005, pp. 1, 15). Goldberg suggested low-cost training options such as workshops and college

courses in anatomy and physiology or in Greek and Latin affixes, and further recommended that interpreters watch medical programs on television, particularly those on public or educational channels, paying particular attention to the social dynamic among professionals (January 2003, pp. 6-7). The author also suggested medical dictionaries and laminated pages from medical study guides as useful resources.

Although written primarily for spoken language translators and interpreters, materials available from the American Translators Association (www.atanet.org) can also be helpful to sign language interpreters. This organization, which has a medical section for members, publishes *Medical Translating and Interpreting: A Resource Guide: A comprehensive resource for translating and interpreting in the medical field*. Among the articles in issues of recent conference proceedings are discussions of specific medical topics. For example, two papers written by a doctor who is also a translator define coronary heart disease, giving symptoms and risk factors and describing the diagnostic procedure and treatment (Rivera, 2004, pp. 141-146); and explain issues and terminology associated with palliative medicine (Rivera, 2003, pp. 161-173). Another summarizes classifications, terminology and treatment of epilepsy (Rosdolsky, 2005, p. 177ff). Philips and Araujo-Lane (2005) offered ideas on how to request clarification in medical interviewing and walked readers through options for interpreting a specific medical term, describing the ramifications of each interpretation (pp. 197-205).

Other resources include Barnum and Siebert's (1987) *Interpreting in Medical Settings: A Student Manual*, written for the program in Medical Interpreting at the College of St. Catherine, and *Bridging the Gap: A Basic Training for Medical Interpreters* (1999) from the Cross Cultural Health Care Program (<http://www.xculture.org/>). Language-specific resources include Trabing and Metivier's (1995) *Training Manual for Spanish/English Interpreters in Health Care Settings* from the North Carolina Primary Health Care Association, and Mikkelson's (1994) *The Interpreter's Rx: A Training Program for Spanish-English Medical Interpreting*.

Swabey et al. (2006) wrote, "Although health care interpreting is one of the most common forms of community interpreting, effective practices for the education of interpreters working in health care have yet to be identified" (p. 59). A few sources suggested topics that might be included in such a curriculum. A survey of medical interpreter training options available for spoken language interpreters in California in 2002 found that programs ranged from 30 to over 360 hours, with most 40 hours long. Two-thirds of these programs required no practicum experience as part of the training. Typical courses included role and ethics, basic interpreting techniques, controlling the flow of the session, medical terminology, professional development and the impact of culture in medical interpreting. Longer programs included more practice interpreting and more analysis of the conversation process (Dower, 2003, p. 3).

The College of St. Catherine established a Health Care Interpreting Program in 1983. According to Barnum (1989), students were required to take Human Anatomy and Physiology, General Psychology I and II, Lifespan Development, Psychology of Adjustment, and Medical Terminology as part of their general education courses. In addition to the language and interpreting skills classes typical of most programs, students were offered classes specific to the medical setting. "Introduction to the Health Care Interpreter Setting" consisted of lectures, tours and observations of medical interpreters, and was designed to help students understand the health care system. "Medical Interpreting" provided an opportunity for students to gain hands-on experience while they continued to learn about the health care system. Each unit also included vocabulary and role-plays related to the topic. Topics included placement, determining appropriate communication mode, job stress, medication, and safety issues. Students also completed practicum hours with a working medical interpreter during this course. After taking "Medical Interpreting," students took "Mental Health Interpreting," which included such topics as therapy, sexual abuse and domestic violence, and chemical dependency. This course also included a practicum. The last course in the health care course sequence was a 90-hour practicum. In addition to these courses, the program included "Ethics and Decision-Making for Health Care Interpreters" in which students studied ethical issues in the health care setting (1989, p. 85ff).

Reporting on the emergency dispatch system for sign language interpreters in Connecticut mentioned earlier, Carter et al. (2001) wrote that initial training of working interpreters unfamiliar with medical interpreting included safety and universal precautions, consent forms, radiology and pharmacology, working with deaf-blind people in medical settings, and "Rx for Effective Medical Interpreting". Ongoing weekly small group classes included case studies, role-plays, films on specific medical topics and question-and-answer sessions. Mentoring on the job, individual weekly sessions, and classes for CDIs and oral interpreters were also provided.

A unique training program was developed to prepare interpreters of spoken Navajo to interpret information related to diabetes, a major health problem among that population. Under the auspices of the Navajo Nation, the project developed a glossary of common terms and concepts, and used case studies to address four common situations: the newly diagnosed diabetic, the patient with poorly controlled diabetes, retinopathy screening, and nephropathology screening and treatment (*Nutrition Research Newsletter*, pp. 12-13).

Angelelli (2006) recommended that health care interpreter education should aim to develop skills in six areas: cognitive processing; interpersonal issues, such as role visibility/neutrality and power; linguistic factors, such as vocabulary and changing registers to accommodate patient needs; professional issues, such as ethics and certification; settings; and sociocultural issues, such as the impact of the institution and society (p. 25). The author stressed that the current model of

interpreter education is based on preparing conference interpreters, but that new models need to “account for the role of the interpreter, so that students understand the agency that they have, how it falls within a continuum of participation or visibility, and what duties and responsibilities emerge from this agency that cannot be denied” (p. 29). Students need to be exposed to medical discourse so that they see the connections between settings, expectations and actual performance. Angelelli recommended “problem-based learning,” of the sort that is used in medical schools, and suggested that students might also benefit from health care communication courses offered in medical schools (p. 35). She suggested the following course sequence: introduction to medical interpreting, language enhancement for medical interpreting, strategies for medical interpreting, the role of the medical interpreter, and a practicum in medical interpreting (p. 38).

A problem-based learning strategy used in many in sign language interpreting programs is the “Demand Control Schema.” Dean and Pollard (2005) defined interpreting as a “practice profession,” like law or medicine, one that requires the practitioner to be able to consider the situation and human interaction in order to work effectively (p. 259). This is in contrast with “technical professions,” like engineering or accounting, in which one needs only knowledge and skills to function well. These authors echoed Roy , Metzger , Hsieh , Angelelli and Wadensjo in their statement, “Our teaching and practice experiences have led us to conclude that the field of sign language interpreting suffers from significant gaps in rhetoric versus defacto practice” (p. 265). In other words, interpreters in real life do influence the flow of communication, and must realize their agency in order to practice effectively. Dean and Pollard proposed the Demand-Control Schema as a framework for decision-making in interpreting. All situations, including medical ones, force interpreters to make decisions regarding the demands of the situation in four areas: environmental, interpersonal, paralinguistic, and intrapersonal. Interpreters may choose to deal with these in active (liberal) or inactive (conservative) ways. Moving too far to either end of this continuum may risk unethical behavior (p. 273).

The Demand-Control Schema has been used in teaching interpreting in general and in teaching medical interpreting in particular (Dean et al. 2003, pp. 1, 10-12). Davis (2005) explained how the interpreting program at the University of Tennessee, working with the University of Rochester, offered an introductory course in Demand-Control Schema followed by a course in medical interpreting (p. 40). In the second course, students shadowed health care providers at the University of Tennessee Medical Center, using the Demand-Control Schema to analyze the settings they observed. Through their observations, they were exposed to basic medical knowledge and terminology, doctor-patient interaction, and a variety of health care settings. Following each observation they researched related medical information, then participated in a “group supervision meeting” in which they discussed their experiences under the guidance of an instructor. Students benefited not only from the knowledge they gained, but also from the

opportunity to gain empathy for patients and to understand the health care providers' perspectives (Dean et al., p. 12).

Metzger suggested that one way to prepare students for future medical interpreting would be a team effort between an interpreter education program and a medical education program that pairs interpreting students with medical students (p. 200). This would also benefit medical students, preparing them to work with interpreters in their future careers, and might well have the effect of increasing usage of interpreting services. Kennedy and Rho (2004) have used professional interpreters in a formal curriculum to teach doctors "triadic interviewing," that is, interviewing patients using an interpreter, and have found it very successful (p. 557).

Summary and Implications

This review of literature, though not exhaustive, offers useful insights into the practice of interpreting in medical settings. Many articles both on sign and spoken language interpreting have not been included; there are also video resources, including instructional materials, which are not reviewed here. However, by identifying apparent gaps and needs in the field, this brief survey provides a salient background for further research and study.

Within health care settings, second-language patient experiences appear similar in many respects for both Deaf and non-deaf individuals. Despite the parallels, however, differences rooted in a history of oppression produce a unique Deaf community experience.

A discussion of the variety of medical interpreting types and settings reinforces the complexity of this interpreting specialty. Ongoing challenges to effective practice include both legal issues and logistical concerns. Despite the existence of laws mandating language accommodations for second-language users, communication access remains elusive or sporadic in many instances. Logistical complications include timely scheduling of interpreters for emergencies, service provision to remote locations, and the need to bolster interpreter numbers to meet service demand. Emerging innovations, such as on-call dispatch systems for medical emergencies, offer some practical solutions, and new technology promises further gains, especially in the area of video remote interpreting.

A number of studies have described the benefits of using educated, professional interpreters in medical settings, and promoted their exclusive use with both Deaf and non-deaf second-language populations. In reality, however, quality assurance remains a concern. Health care providers hire professional interpreters inconsistently, a problem that indicates a need for further education and awareness.

Examination of the interpreter's role has included a look at both traditional and more recent interpreting models, and reveals active participation to be a necessary function of working in health care. Given the unique needs of the setting, an interpreter cannot operate strictly as a conduit, nor be completely impartial.

Although professional and ethical standards are available to guide the general practice of interpreters, standards and guidelines specific to signed language interpreters in the medical settings are still evolving. Neither interpreter assessment tools nor certification for medical settings are widely available, although strides are being made. This is an area to be further developed.

For both spoken and sign language interpreting, studies show that cultural and linguistic differences within the interpreted medical event can influence interpersonal dynamics and shape the outcome of the encounter. Problems arising are often due to differing cultural norms, and the onus falls to the interpreter to make the adjustments required for accurate communication.

As emphasized throughout the review, adequate education and preparation are necessary for effective interpreter performance, and learning opportunities tailored specifically to medical interpreting offer the greatest benefits. Interpreters need to be equipped with not only a basic medical background and an awareness of medical procedures, but also a thorough understanding of the emotional and safety issues inherent to health care settings. Additional needs in this area include the development of comprehensive curricula, and identification of best practices for medical interpreting.

Overall, this survey of the literature on medical interpreting both in ASL and in spoken languages confirms that interpreting in the medical setting is a complex, challenging and crucial task, and one that requires intensive preparation and education. There is a great deal of research, curriculum development, and learning still to be done. Further exploration of this subject is essential to expanding the knowledge base, developing quality learning opportunities for medical interpreters, and ensuring more effective communication access for Deaf citizens within the health care system.

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