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## Bilingual Health Communication: Distinctive Needs of Providers from Five Specialties

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Understanding providers' expectations and needs for medical interpreters can provide important insight into the dynamics and process of interpreter-mediated medical encounters. This is one of the first mixed-methods studies on the similarities and differences of providers' views of interpreters across five specialties (i.e., obstetrics/gynecology, emergency medicine, oncology, mental health, and nursing). The two-stage studies include interview data with 39 providers and survey data with 293 providers. We used principal component analysis to identify three components in the survey data that represent providers' views of interpreters: Patient Ally, Health Care Professionals, and Provider Proxy. We then used the interview data as exemplars to illuminate the quantitative findings. Patient Ally was the only component that reached significant differences between different specialties. Providers from different specialty areas differ significantly in their expectations on interpreters' ability (a) to assist patients outside of medical encounters and (b) to advocate for the patient. In particular, nursing professionals place more importance on these two abilities than mental health providers and oncologists. Based on our findings, we proposed three research directions necessary to advance the field of bilingual health communication: to reevaluate and reconceptualize interpreters' appropriate performances with special attention to the Patient Ally dimension, to examine the commonly held attitudes for all providers and the potential tensions within these attitudes, and to identify contextual factors that influence participants' perceptions, evaluations, and choices of interpreters and their corresponding impacts.

Recent developments concerning bilingual health care have highlighted the diversity of medical interpreters as well as the complexity of intercultural health care (Greenhalgh, Robb, & Scambler, 2006; Hsieh, 2006b; Hsieh & Hong, 2010; Jacobs, Diamond, & Stevak, 2010). Researchers and practitioners have argued for a paradigm shift in conceptualizing bilingual health communication by recognizing interpreters' active rather than passive roles in medical encounters. Although some researchers have argued that interpreters' interference with provider–patient communication creates errors to be avoided (e.g., Flores et al., 2003), recent studies have found that interpreters' active interventions in the process and content of provider–patient communication can have positive impacts on the quality of care

(Butow, Goldstein et al., 2011; Jackson, Nguyen, Hu, Harris, & Terasaki, 2011; Pham, Thornton, Engelberg, Jackson, & Curtis, 2008). For example, interpreters may modify their communicative strategies in response to providers' expectations and communicative needs (Hsieh, 2010). The success of an interpreter-mediated interaction relies on the effective collaboration between the provider and the interpreter (Hsieh, Ju, & Kong, 2010; MacPhail, 2012).

Studies on providers who work with patients with limited English proficiency (LEP) have been limited to their utilization patterns of different types of interpreters (e.g., on-site interpreters, telephone interpreters, and patients' family members). Although professional interpreters are found to promote the quality of care (Flores, 2005; Karliner, Jacobs, Chen, & Mutha, 2007), providers' combined use of different types of interpreters is not uncommon. Various studies have demonstrated that trained interpreters generally are used for less than 20% of patients with LEP (Meischke, Chavez, Bradley, Rea, & Eisenberg, 2010; Schenker, Pérez-Stable,

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Nickleach, & Karliner, 2011), even in states that have legislation mandating interpreters and/or cultural competency in health care settings (Ginde, Sullivan, Corel, Caceres, & Camargo, 2010).

There are strong factors that motivate providers to utilize a wide variety of interpreters. Time pressure and the lack of availability are often cited as reasons for providers to use untrained interpreters (Lee et al., 2006; Ramirez, Engel, & Tang, 2008). However, recent studies have underscored the importance of institutional norms, organizational structures, and specialty-specific needs in influencing providers' choice of interpreters (Diamond, Schenker, Curry, Bradley, & Fernandez, 2009; Rose et al., 2010). Different types of interpreters also entail diverse characteristics that may influence providers' choice (Hsieh, 2006b; Rosenberg, Leanza, & Seller, 2007). For example, a professional interpreter may have more medical knowledge and a family interpreter may have stronger rapport and trust with the patient. As a result, providers' underuse of professional interpreters is a complex issue that cannot be resolved simply by increasing interpreter service availability (Diamond et al., 2009). Understanding providers' expectations and needs for medical interpreters can help provide important insight into these patterns of interpreter use.

Considering a provider's responsibility in and influence over the medical encounter, it is critical that the providers' perspectives be included as we explore best practices for bilingual health care. One reason is that a single provider often needs to perform different tasks (e.g., medical history taking and rapport building) and enact various roles (e.g., investigator and social supporter) during a medical encounter (Cegala & Broz, 2002). Interpreters' ability to adapt to the changes in a provider's goals and roles may be important to the quality of interaction as well as to provider satisfaction (MacPhail, 2012; White & Laws, 2009).

Another reason to include the providers' perspectives is that providers of different specialties may have different preferences for the interpreters' roles and communicative strategies. For example, a family physician may be more interested in developing long-term trust and rapport with the patient, whereas a physician of emergency medicine may want to focus on only the information that is relevant to the immediate diagnosis. These different communicative needs are likely to result in varied expectations for interpreters. Several studies have explored providers' attitudes toward medical interpreters; however, they are limited to specific specialties (e.g., emergency medicine, oncology, and general practice), and thus it is unclear whether these attitudes represent their specialty-specific needs or are shared needs for all providers (Fatahi, Hellstrom, Skott, & Mattsson, 2008; Ginde et al., 2010; Nápoles et al., 2010).

Third, providers may want an interpreter to assume the role of conduit, active participant, or a combination of the two, depending on the situation and/or personal preference (Hsieh & Hong, 2010). Provider preferences for interpreter

behavior have been found to include providing cultural information, discussing possible intercultural conflicts, and suggesting treatment strategies that are culturally sensitive, but doing so in ways that do not threaten the provider's goals (Hsieh et al., 2010).

This study is one of the first mixed-methods studies to compare providers' needs and expectations for medical interpreters across five specialties. We have chosen these specialties because they represent providers with distinctive needs and expectations for medical interpreters. For example, obstetrics/gynecology (OB/GYN) providers often need to develop long-term relationships with their patients, helping them through the months of pregnancy. Providers in the emergency department are less concerned about developing long-term rapport with a patient but are under time pressure to make an accurate diagnosis. Oncologists often deal with issues that are highly emotional and cultural and may need to interact with the patient's family members regularly. Mental health providers use languages not only to communicate but also to diagnose and treat a patient's illness. Nurses often interact with patients at a closer level than physicians and thus may have different communicative needs. We also included several contextual variables that may influence providers' views of interpreters. By combining both qualitative and quantitative analysis, we aim to examine the similarities and differences between providers' expectations and needs for medical interpreters.

## METHODS

### Participants and Procedures

This study is a part of a larger study that examines providers' expectations of medical interpreters. During the first stage of the study, the first author recruited 39 providers from a major health care facility, which also serves as a university teaching facility, in the southern United States. We intentionally recruited providers who are experienced with working with medical interpreters (i.e., 31 out of 39 providers have worked with interpreters more than 10 times). The providers were from five specialty areas: OB/GYN, emergency medicine, oncology, mental health, and nursing. Participants in the nursing area were recruited through women and newborn services; all others are physicians of the corresponding specialties. In total, the research team conducted eight specialty-specific focus groups (each lasting 1–1.5 hour) and 14 individual interviews (each lasting 1–1.5 hours). The research questions were designed to examine providers' perceptions, expectations, and evaluations of interpreters' roles and practices (for detailed interview procedures and sample questions, see Hsieh & Hong, 2010). The research team used constant comparative analysis and published qualitative studies based on the interview data, exploring providers' diverse expectations and needs for medical interpreters (see

Hsieh, 2010; Hsieh & Hong, 2010; Hsieh et al., 2010). Although these prior studies found preliminary evidence that “some expectations [were] emphasized by one specialty more than others” (Hsieh & Hong, 2010, p. 194), we refrained from making specific claims about the relationships between the providers’ specialties, expectations, and other variables because such claims are best explained through quantitative analysis. We designed the second stage of the study as an extension of the previous studies with the goal of examining these relationships.

For the second stage, the first author recruited 293 providers from five specialties to participate in the survey. After reviewing the survey responses, we dropped five surveys due to missing values, leaving us a total of 288 participants. The first author recruited the providers through departmental meetings, through grand rounds, and from individual clinics. All participants included were physicians or residents who work in the corresponding specialty areas, except nurses, who were recruited through hospital-wide, nursing-specific meetings. Providers completed the written survey on site or mailed the completed survey in a prepaid envelope. Providers received \$15 gift cards as incentives for participating in the survey. All procedures of the study were approved by the institutional review boards involved. We have included demographic data of both stages in Table 1.

TABLE 1  
Providers’ Demographic Data

Variable	N	%
Specialty areas		
Emergency medicine	88	30.6
Mental health	54	18.8
Nursing	57	19.8
OB/GYN	53	18.4
Oncology	36	12.5
Total	288	100.0
Gender		
Male	119	41.3
Female	169	58.7
Total	288	100.0
Experiences with interpreters		
0–10 times	105	36.5
10+ times	183	63.5
Total	288	100.0
Age (years)		
18–30	98	34.0
30–50	139	48.3
50+	50	17.4
Not reported	1	0.3
Total	288	100.0
Native language		
English	264	91.7
Spanish	9	3.1
Other	14	4.9
Not reported	1	0.3
Total	288	100.0

## Materials

The 18-item survey was developed based on our previous qualitative studies and past literature to assess participants’ evaluation about the importance of specific characteristics or issues related to medical interpreting. In addition to including items that explore interpreters’ conduit and patient advocate roles, we also included several less well-known roles (e.g., co-diagnostician and information gatekeeper) and functions (e.g., providing emotional and informational support and other logistic services) that were identified in our previous qualitative studies (Hsieh, 2007, 2008, 2010; Hsieh & Hong, 2010; Hsieh et al., 2010). The 18 items use a 7-point Likert scale, ranging from 1 (*extremely unimportant*) to 7 (*extremely important*). Table 2 provides a list of the items.

We also measured five demographic variables, which include providers’ gender, experiences with interpreters, age, native language, and specialty area. These demographic variables were later used for a series of multivariate analyses of variance (MANOVAs) (see Table 1).

## Analysis

We used PASW Statistics 18 for principal component analysis (PCA) and analysis of variance (ANOVA) to examine the different needs and expectations for interpreters across the five demographic variables. For PCA, we first examined the factorability of the 18-item survey. The finding was positive, with Kaiser–Meyer–Olkin measure of sampling (MSA) = .909 and Bartlett’s test of sphericity  $\chi^2 [df = 153] = 2527.03, p < .05$ . Univariate MSA values also showed good signs with all items greater than .60. As a result, all 18 items were retained for the PCA. To determine the number of components to be extracted, a scree plot and a 95th percentile parallel analysis were used. In order to give a clear interpretation of the components, direct oblimin rotation was utilized. We extracted three components based on all 18 items, based on the convergence of scree plot criteria and eigenvalues. The 95th percentile parallel analysis was not taken into consideration because the communalities values of all 18 variables are good (above .40). Items 5 and 7 were eliminated because their loading on two components are  $> \sim |.40|$  and thus are considered cross-loaders. After deleting items 5 and 7, we reran the PCA on the remaining 16 items. The MSA and communalities values were very strong for the 16 items ( $> .60$ ), providing a clear picture of how each item correlates with each other in each component. This model had no loadings less than 0.55 for any item of the three components.

We created new variables representing the three dimensions identified through PCA by summing the items of each dimension. We then conducted one-way ANOVA and pairwise comparisons to explore how the five contextual variables (i.e., providers’ gender, experiences with interpreters, age, native language, specialty area) influence

TABLE 2  
Providers' Expectations and Needs for Medical Interpreters

Item	Content	Component loading		
		Patient Ally	Health Care Professional	Provider Proxy
8	Interpreters' ability to provide emotional support to the patient	.799		
12	Interpreters' familiarity with the patients' needs	.739		
11	Interpreters' ability to help the patient seek information (e.g., such as asking treatment alternatives or more affordable medication)	.719		
10	Interpreters' willingness to assist patient outside of the medical encounter	.691		
2	Interpreters' ability to read the patient's nonverbal behaviors	.644	.340	
9	Interpreters' ability to develop rapport between the provider and the patient	.635	.322	
14	Interpreters' ability to advocate for the patient	.555		.351
13	Interpreters' ability to help patients to navigate the health care system	.549		
4	Interpreters' ability to not take sides (i.e., neutrality)		.821	
6	Interpreters' ability to remain emotionally detached		.746	
3	Interpreters' ability to offer literal (i.e., word-for-word) translation		.739	
1	Interpreters' medical knowledge and medical terminology		.577	.329
17	Interpreters' ability to ensure the quality of care			.743
16	Interpreters' ability to keep the medical interview on track		.402	.655
18	Interpreters' familiarity with the patient's medical history			.630
15	Interpreters' ability to facilitate your agenda (e.g., treatment) in medical encounters		.311	.578
5	Interpreters' ability to anticipate and minimize cultural differences between the provider and the patient			
7	Interpreters' ability to put patients at ease			

providers' perception in these three dimensions. If we did not obtain significant findings, we proceeded with one-way ANOVA with individual items on the survey as dependent variables.

Based on the statistical findings, we then reviewed the interview data to identify exemplars of the principal components identified and to provide additional insight into the findings. All narratives included in this study are from providers who are very experienced in working with interpreters (over 10 times). We believe that this is a result of the semistructured and open-ended nature of the interview format, because experienced providers are more likely to provide complex, extensive discussions on their expectations for interpreters. The texts are CAPITALIZED to reflect the speakers' emphasis. We denote the providers' expertise with abbreviated superscripts after their pseudonyms. Obstetrics-gynecology is abbreviated as <sup>OB/GYN</sup>, emergency medicine as <sup>EM</sup>, oncology as <sup>ONC</sup>, nursing as <sup>NUR</sup>, and mental health as <sup>MH</sup>. We chose not to include background information of individual providers due to concerns about the risk to participant confidentiality.

## RESULTS

### Components Shaping Providers' Views

According to the PCA results, three dimensions effectively measured providers' views of interpreters: (a) interpreter as patient ally ( $\alpha = 0.874$ ), (b) interpreter as health care professional ( $\alpha = 0.792$ ), and (c) interpreter as provider proxy ( $\alpha$

$= 0.763$ ). Because the PCA demonstrated significant loading on all three components, each with high  $\alpha$  value (i.e., high internal validity among items), the items effectively measured providers' attitudes for medical interpreters through these dimensions (see Table 2).

**Interpreter as patient ally.** The first component, interpreter as patient ally (Patient Ally), is comprised of eight items, including interpreters' ability to provide emotional support to the patient (item 8), interpreters' familiarity with the patients' needs (item 12), interpreters' ability to help the patient seek information (item 11), interpreters' willingness to assist patients outside of the medical encounter (item 10), interpreters' ability to read the patients' nonverbal behaviors (item 2), interpreters' ability to develop rapport between the provider and the patient (item 9), interpreters' ability to advocate for the patient (item 14), and interpreters' ability to help patients navigate the health care system (item 13). Several items of Patient Ally (e.g., to help patient seek information or navigate the health care system, to read the patient's nonverbal cues, to facilitate provider-patient rapport, and to be familiar with patients' needs) are irrelevant when all speakers are competent in communicating with one another. Others traditionally have been viewed as problematic behaviors (e.g., advocating for patients, assisting patients outside of medical encounters, providing emotional support to others) (see Dysart-Gale, 2007; Hsieh, 2006a, 2008; Hsieh & Hong, 2010).

**Interpreter as health care professional.** The second component, interpreter as health care professional



(Professional), includes: interpreters' ability to not take sides (item 4), interpreters' ability to remain emotionally detached (item 6), interpreters' ability to offer literal translation (item 3), and interpreters' medical knowledge and medical terminology (item 1). This component is similar to the conduit role (Dysart-Gale, 2007), which highlights interpreters' responsibilities to relay neutral, faithful, and accurate information from one language to another. Some items extend beyond the conduit role, requiring interpreters to be independent (e.g., to remain emotionally detached) and to have a certain level of medical expertise (e.g., to have medical knowledge and terminology).

*Interpreter as provider proxy.* The third component, interpreter as provider proxy (Provider Proxy), includes: interpreters' ability to ensure the quality of care (item 17), interpreters' ability to keep the medical interview on track (item 16), interpreters' familiarity with patient's medical history (item 18), and interpreters' ability to facilitate provider's agenda in medical encounters (item 15). This component situates the interpreter as a member of a health care team who shares responsibilities to ensure the quality of care and is familiar with patients' medical histories. However, it also views interpreters in a subordinate, auxiliary role assisting providers' control over the medical encounter (e.g., keeping the medical interview on track and facilitating the provider's agenda).

### Variables Influencing Providers' Attitudes

*Provider gender.* Provider's gender has a significant impact on provider views of interpreters ( $F_{(3, 284)} = 4.277$ , Wilks's  $\lambda = .957$ ,  $\eta_p^2 = 0.043$ ,  $p = .006$ ). Provider's gender is significantly different in Patient Ally ( $F_{(1, 286)} = 4.201$ ,  $p = .041$ ,  $\eta_p^2 = 0.41$ ) and Professional ( $F_{(1, 286)} = 6.412$ ,  $p = .012$ ,  $\eta_p^2 = 0.22$ ) but not in Provider Proxy ( $F_{(1, 286)} = .014$ ,  $p = .905$ ,  $\eta_p^2 = 0.00$ ). Female providers value Patient Ally ( $M = 41.19$ ,  $SD = 7.28$ , 95% CI [40.05, 42.33]) and Professional ( $M = 23.40$ ,  $SD = 3.46$ , 95% CI [22.83, 23.96]) more highly than male providers ( $M = 39.34$ ,  $SD = 7.85$ , 95% CI [37.99, 40.70] and  $M = 22.27$ ,  $SD = 4.06$ , 95% CI [21.60, 22.94], respectively).

*Providers' experiences with interpreters.* The provider's experience with interpreters does not have a significant impact on the provider's overall views of interpreters ( $F_{(3, 284)} = 1.255$ , Wilks's  $\lambda = .987$ ,  $\eta_p^2 = .013$ ,  $p = .290$ ). Among the three dimensions, however, Professional was marginally significant ( $F_{(1, 286)} = 3.324$ ,  $\eta_p^2 = .011$ ,  $p = .069$ ). Follow-up tests examining individual items revealed that providers with more experiences working with interpreters (i.e., more than 10 times) place higher importance on the interpreters' ability to offer literal translation (item 3;  $F_{(1, 286)} = 3.959$ ,  $\eta_p^2 = .014$ ,  $p = .048$ ), to anticipate and minimize cultural differences between the provider and the patient (item 5;  $F_{(1, 286)} = 3.984$ ,  $\eta_p^2 = .014$ ,  $p = .047$ ), to

advocate for the patient (item 14;  $F_{(1, 286)} = 5.698$ ,  $\eta_p^2 = .020$ ,  $p = .018$ ), to keep the medical interview on track (item 16;  $F_{(1, 286)} = 6.035$ ,  $\eta_p^2 = .021$ ,  $p = .015$ ), and to ensure the quality of care (item 17;  $F_{(1, 286)} = 4.027$ ,  $\eta_p^2 = .014$ ,  $p = .046$ ) (see Table 3).

*Provider's age.* The provider's age does not have a significant impact on the provider's views of interpreters ( $F_{(6, 564)} = 1.496$ , Wilks's  $\lambda = .969$ ,  $\eta_p^2 = .016$ ,  $p = .177$ ). Pairwise comparisons did not yield any significant findings. Follow-up tests examining individual items revealed that provider's age is positively correlated to the importance the provider places on an interpreter's ability to remain emotionally detached (item 6;  $F_{(2, 284)} = 4.666$ ,  $\eta_p^2 = .032$ ,  $p = .010$ ), and to ensure the quality of care (item 17;  $F_{(2, 284)} = 3.912$ ,  $\eta_p^2 = .027$ ,  $p = .021$ ).

*Provider's native language.* The provider's native language does not have a significant impact on the provider's views of interpreters ( $F_{(6, 564)} = 1.496$ , Wilks's  $\lambda = .995$ ,  $\eta_p^2 = .003$ ,  $p = .962$ ). No significance finding was discovered for any individual items.

### Similarities and Differences Between Specialties

Provider specialty does not have a significant impact on provider views of interpreters ( $F_{(12, 744)} = 1.078$ , Wilks's  $\lambda = .955$ ,  $\eta_p^2 = .015$ ,  $p = .375$ ).

*Interpreters as patient ally.* Pairwise comparisons, however, suggest that nurses ( $M = 42.35$ ,  $SD = 1.00$ , 95% CI [40.38, 44.33]) place more significance on the Patient Ally dimension than do oncologists ( $M = 38.92$ ,  $SD = 1.26$ , 95% CI [36.45, 41.39]) and mental health providers ( $M = 39.32$ ,  $SD = 1.06$ , 95% CI [37.23, 41.41]) (see Table 4 for significance levels and 95% CI for differences). No other specialty differences were observed in the other two dimensions. We conducted MANOVAs with the other four demographic variables and did not find any significant results.

MANOVA was used to examine whether specialties differed on the items that loaded on Patient Ally. Providers from the five specialties share significantly different views on items loaded on Patient Ally ( $F_{(32, 1019)} = 1.675$ , Wilks's  $\lambda = .828$ ,  $p = .011$ ,  $\eta_p^2 = 0.46$ ). They differ significantly in their expectations concerning the interpreters' ability (a) to assist patients outside of medical encounters (item 10;  $F_{(4, 283)} = 3.625$ ,  $p = .007$ ,  $\eta_p^2 = 0.49$ ) and (b) to advocate for the patient (item 14;  $F_{(4, 283)} = 4.216$ ,  $p = .002$ ,  $\eta_p^2 = 0.56$ ). Least significant difference (LSD) pairwise comparisons (see Table 5) show that compared to both mental health providers and oncologists, nurses place significantly more importance on these two and interpreters' ability to offer emotional support to patients. Mental health providers place less value on assisting patients outside of medical encounters than do all other specialties (except oncology), and less on advocating for the patient

TABLE 3  
Pairwise Comparisons Between Different Experiences

Item	(I) Exp.	(J) Exp.	Mean Difference (I-J)	Std. Error	Significance	95% CI for Difference	
						Lower Bound	Upper Bound
3: Interpreters' ability to offer literal translation	High	Low	0.286*	0.144	.048	0.003	0.570
5: Interpreters' ability to anticipate and minimize cultural differences between the provider and the patient	High	Low	0.281*	0.141	.047	0.004	0.558
14: Interpreters' ability to advocate for the patient	High	Low	0.416*	0.174	.018	0.073	0.758
16: Interpreters' ability to keep the medical interview on track	High	Low	0.281*	0.141	.047	0.004	0.558
17: Interpreters' ability to ensure the quality of care	High	Low	0.392*	0.195	.046	0.008	0.777

\*The mean difference is significant at the .05 level.

TABLE 4  
Pairwise Comparisons Across Specialties: Principal Component

Dimension	(I) Exp.	(J) Exp.	Mean Difference (I-J)	Std. Error	Significance	95% CI for Difference	
						Lower Bound	Upper Bound
Patient Ally	Nursing	OB/GYN	2.035	1.436	.158	-0.792	4.863
		Mental health	3.170*	1.429	.027	0.356	5.983
		Emergency medicine	1.519	1.280	.236	-1.000	4.039
		Oncology	3.364*	1.603	.037	0.210	6.518

\*The mean difference is significant at the .05 level.

TABLE 5  
Pairwise Comparisons Across Specialties: Survey Items

Item	(I) Specialty Areas	(J) Specialty Areas	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
						Lower Bound	Upper Bound
8. Interpreters' ability to provide emotional support to the patient	Nursing	OB/GYN	0.153	0.234	.514	-0.307	0.613
		Mental health	0.580*	0.233	.013	0.122	1.038
		Emergency medicine	0.285	0.208	.172	-0.125	0.695
		Oncology	0.534*	0.261	.042	0.020	1.047
10. Interpreters' willingness to assist patient outside of the medical encounter	Mental health	OB/GYN	-0.561*	0.278	.045	-1.109	-0.013
		Emergency medicine	-0.555*	0.249	.027	-1.045	-0.065
		Oncology	-0.259	0.310	.403	-0.869	0.351
	Oncology	Nursing	-0.996*	0.273	.000	-1.534	-0.458
		OB/GYN	-0.302	0.311	.333	-0.914	0.310
		Mental health	0.259	0.310	.403	-0.351	0.869
14. Interpreters' ability to advocate for the patient	Mental health	Emergency Medicine	-0.295	0.285	.301	-0.856	0.265
		Nursing	-0.737*	0.307	.017	-1.340	-0.133
		OB/GYN	-0.424	0.271	.119	-0.958	0.110
	Oncology	Emergency medicine	-0.803*	0.242	.001	-1.280	-0.325
		Oncology	-0.213	0.302	.481	-0.807	0.381
		Nursing	-0.887*	0.266	.001	-1.411	-0.363
		OB/GYN	-0.211	0.303	.486	-0.808	0.385
Mental health	Oncology	0.213	0.302	.481	-0.381	0.807	
	Emergency Medicine	-0.590*	0.278	.034	-1.136	-0.043	
Nursing	-0.674*	0.299	.025	-1.262	-0.086		

\*The mean difference is significant at the .05 level.

than do emergency medicine and nursing. Oncologists place less importance on both these functions of interpreters than do nurses and less importance on advocating for the patient than do physicians of emergency medicine.

*Providers' shared attitudes.* While providers from different specialties may have different expectations and needs, we also recognize that providers in general may share common attitudes toward interpreters. Because no individual items in the Professional and the Provider Proxy dimensions showed significant results in pairwise comparisons, our data would suggest that they may be common beliefs shared by all providers.

It is important to note that the Professional and Provider Proxy components are conceptually distinctive and not necessarily compatible with one another. The Professional dimension emphasizes an independent, noninterfering, passive expert role in relaying information. Many of our providers noted their desire for interpreters' neutrality and emphasized the need for literal interpretation, a finding also supported by previous studies (e.g., Fatahi et al., 2008). For example, when asked about interpreters' role in medical encounters, Ed<sup>EM</sup> explained, "The role of interpreters basically should be just interpret what is said back and forth. I think at least initially [they are] just as a voice box, just to help me get history." Gloria<sup>OB/GYN</sup> also said, "I really think [interpreters] should word it very much WORD for WORD." Ginger<sup>OB/GYN</sup> echoed:

I would want the role of the interpreter to be [. . .] as literal of a translation as it can be, without any filtering of information, of what they think is important and what is not of what I said or the patient said. Or without adding any extra information that they think I might say next or the patient might be implying. I'd just rather to have a pure, literal translation.

When providers express expectations of a word-for-word or literal interpretation, they expect interpreters to be no more than a conduit, a channel for information exchange without any interference with the original information. Candice<sup>ONC</sup> noted, "I mean they are supposed to FACILITATE communication. They need to make sure that it's communicating from both sides. Word-for-word interpretation." From this perspective, interpreters are perceived as instruments to help facilitate communication, rather than human agents who can serve to construct, mediate, and negotiate meanings in provider-patient communication.

In contrast, the Provider Proxy dimension highlights interpreters' supplementary role in fulfilling providers' goals (e.g., communicative, interpersonal, and therapeutic goals) and thus may require interpreters to anticipate and actively manage provider-patient interactions. For example, due to language barriers, providers may rely on interpreters to keep patients' narratives on track for the medical interviews. Eli<sup>EM</sup> explained, "The interpreter should at least have

the capacity to be able to redirect the patient and kind of filter what they say, if the response is completely unrelated to the question." Although several studies have noted providers' concerns about family interpreters (Hsieh et al., 2010; Rosenberg et al., 2007), who are presumed to be in alliances with patients, Provider Proxy is a dimension in which providers expect interpreters to be in alliances with providers in a way that favors their agenda over that of the patients. When asked about how interpreters should work with them, Camila<sup>ONC</sup> argued, "The translators should work with [providers] in a way that best meets their needs. I don't think patients are really thinking about the translator. I think they are thinking about their health care." Carmen<sup>ONC</sup> explained, "[Interpreters are] pursuing [my] agenda. Their bias is towards us." From this perspective, providers' expectations of interpreters' roles are rooted in their clinical/therapeutic needs and imply a hierarchical structure in provider-interpreter relationship.

## DISCUSSION

As one of the first mixed-methods studies to examine providers' views of interpreters across various specialties, we advance the literature by examining how the variables suggested by previous studies relate to each other. We reevaluate and/or strengthen the validity and reliability of previous qualitative findings by triangulating through a quantitative design. Our findings highlight several research directions that are important to the theoretical development of and practice implications for bilingual health communication.

First, the specialty differences in providers' attitudes for the Patient Ally dimension suggest the need to reevaluate and reconceptualize interpreters' appropriate performances, particularly in the Patient Ally dimension. Because the Patient Ally dimension involves behaviors that can be considered irrelevant or problematic to interpreter-mediated interactions, it often is overlooked (if not condemned) by researchers and practitioners. However, our findings demonstrate that although not all specialties expect interpreters' emotional and/or advocacy functions to facilitate patient care (Diamond et al., 2009; Hsieh & Hong, 2010), some specialties (e.g., nursing) may have strong preferences for interpreters being able to provide these aspects of care (see also Nailon, 2006). It is not surprising that nurses highly value several items in the Patient Ally dimension. This is consistent with the general tasks of nurses, in which they often need to help patients voice their concerns, actively address their information needs, and provide emotional support to patients (Morse, Bottorff, Anderson, O'Brien, & Solberg, 2006; Wros, 2009).

Compared to nurses, oncologists' low priority of the Patient Ally dimension is somewhat intriguing. One would assume that because cancer is an illness that entails strong emotions that are culturally situated, providers would require



interpreters' assistance in addressing the emotional aspect of care. In previous studies, although oncologists valued the emotional aspects of their care (Hsieh & Hong, 2010), they also reported concerns about the accuracy and completeness of interpretations due to the complexity of information they needed to convey (Abbe, Simon, Angiolillo, Ruccione, & Kodish, 2006). It is possible that due to the social and clinical significance of the illness, the oncologists consider the Patient Ally dimension inconsequential to their care (also see later discussion on providers' need to prioritize different dimensions of interpreter performances).

In contrast to other specialties, there are significantly more publications on interpreter-mediated interactions in mental health care settings due to the close relationship between communication and therapy. For mental health providers, interpersonal interactions (e.g., emotional support, comforting, and listening) serve as a form of treatment and thus carry potentially greater therapeutic consequences. Although interpreters' ability to encourage provider-patient rapport, to read patients' nonverbal behaviors, or to help patients seek or express information are extremely important for mental health providers to offer accurate diagnosis and appropriate treatment (Tribe & Lane, 2009), interpreters' interactions and relationships with the patients may also create challenges to provider-patient bonding and even compromise therapeutic objectives (Hsieh & Hong, 2010; Paone & Malott, 2008). Most publications in this area, however, consist of expert commentary or qualitative designs (Bauer & Alegria, 2010; Paone & Malott, 2008). The current study advances past literature by providing quantitative evidence on mental health providers' distinctive needs in the Patient Ally dimension. Our findings suggest that medical interpreting in mental health care settings may require a specialty-specific communicative style that is different from all other clinical contexts and accommodates the delicate balance of provider-interpreter-patient relationship.

Taken together, our findings suggest that the Patient Ally dimension should not be viewed as a universally appropriate/acceptable performance but a contextual, situational demand of interpreters' functions. For example, providers' therapeutic objectives, professional responsibilities, or tasks-at-hand may influence their receptiveness to interpreters' performances as Patient Ally. To extend this line of research, future studies should explore (a) the specific factors (e.g., specialties and communicative objectives) and contextual features (e.g., patient with low health literacy) in which the Patient Ally dimension is desirable, (b) participants' (e.g., providers' and patients') evaluation of the different forms of the Patient Ally dimension (e.g., providing emotional support versus seeking information on patients' behalf), and (c) the specific communication strategies and models that facilitate interpreters' performance of the Patient Ally dimension.

A second future research direction is to examine the commonly held attitudes for all providers and the potential

tensions within these attitudes. It is not surprising that we were not able to identify specialty-specific differences for the Professional dimension. Many studies have noted that physicians often expect interpreters to assume a neutral conduit role (Abbe et al., 2006; Fatahi et al., 2008). Our findings, however, highlighted two important issue regarding providers' shared attitudes.

First, the conduit model of interpreting remains influential in shaping providers' expectations, despite many researchers and interpreters having viewed it as unrealistic and impractical for bilingual health care (Butow et al., 2011; Dysart-Gale, 2007). An earlier study found that inexperienced interpreters were more likely to adopt a conduit role, whereas experienced interpreters actively influence the dynamics and process of medical encounters (Hatton & Webb, 1993). In contrast, our study suggests that when providers become more experienced with interpreter-mediated interactions, they value the Professional dimension more. Providers and interpreters thus appear to diverge on the Professional dimension. In addition, our study suggests that this may be a universal expectation across all specialties, even when providers recognize the values of interpreters' active roles in bilingual health care.

Best practices in bilingual health communication should accommodate all participants' perspectives. As a result, rather than proposing a rejection of the conduit model (e.g., Dysart-Gale, 2005), a more realistic approach to this phenomenon is to explore how Professional as a theoretical dimension shapes providers' expectations of and collaboration with interpreters. For example, interpreters need to demonstrate a mastery of medical knowledge and terminology to be perceived as competent and trustworthy by providers (Flores et al., 2003; Hsieh et al., 2010; Nailon, 2006). Failure to maintain this Professional dimension may lead to provider-interpreter conflicts even when interpreters view their active intervention to be legitimate (Butow et al., 2011; Hsieh, 2006a).

Second, it is important to recognize that providers may not be aware of their competing, if not conflicting, expectations for medical interpreters. Each dimension identified in this study implies different alliances between the interpreter, the provider, and the patient. They are not necessarily compatible with one another. For example, if an interpreter truly were a neutral conduit (i.e., Professional), s/he would not be able to pursue the provider's agenda (i.e., Provider Proxy). Nevertheless, both are shared attitudes for providers across all specialties. Several qualitative studies have noted the conflicting desires for providers and interpreters, as they negotiate and manage different aspects of care, including therapeutic objectives, interpersonal relationships, education, and empathy, among others (Fatahi et al., 2008; Hsieh, 2006a; Price, Pérez-Stable, Nickleach, Lopez, & Karliner, 2012). If the providers and interpreters are not aware of the competing demands and expectations, they may experience a general sense of frustration

or confusion without a clear strategy for resolving such a dilemma (Butow et al., 2011; Fatahi et al., 2008). We believe that educating providers and interpreters to increase their awareness about their potentially conflicting demands for interpreters' roles and functions can be extremely valuable. Accepting the potential for conflicting demands opens up a new line of research by recognizing the complexity and fluidity of provider–interpreter collaboration. For example, depending on the communicative needs and clinical scenario, providers may prioritize one aspect of interpreter performance (e.g., expressing emotional support) over another (e.g., remaining emotionally detached). These discussions can take place through pre-session and post-session briefing (Paone & Malott, 2008). The success of bilingual health care relies on participants' ability to effectively express and negotiate such priorities and communicative goals.

From this perspective, as researchers examine the commonly held attitudes for all providers and their corresponding tensions, the key is to (a) identify the contexts (e.g., communicative needs and clinical scenarios) in which specific expectations/dimension should be prioritized over others and (b) explore effective strategies, including organizational procedures and discursive strategies, for participants in bilingual health communication to identify and negotiate these priorities.

Finally, the third research direction highlighted by our study is the importance of identifying contextual factors that influence participants' perceptions, evaluations, and choices of interpreters and their corresponding impacts. Although researchers have long recognized health disparities resulting from language barriers, the theoretical development of bilingual health communication is still at an early stage. For example, Hsieh was one of the first researchers to emphasize the need to differentiate the types of interpreters (e.g., chance interpreter and onsite interpreter) in order to examine their corresponding impacts (Hsieh, 2006b). Since then, several studies have systematically examined the differences between professional and family interpreters in their discursive strategies and in providers' expectations (Leanza, Boivin, & Rosenberg, 2010; Rosenberg et al., 2007; Rosenberg, Seller, & Leanza, 2008). Other scholars have examined how different modes of interpreting (e.g., in-person, video, and telephonic interpreting) may influence patient satisfaction, provider evaluation, and interpreters' communicative strategies (Locatis et al., 2010; Nápoles et al., 2010; Price et al., 2012). This line of research advances past literature by abandoning the untested presumption that trained interpreters are always better in all situations. Instead, researchers can now specifically identify the contexts and situations when and why certain types of interpreters or interpreting mode can outperform others. For example, because family interpreters often provide emotional support and act as caretaker to patients (Rosenberg et al., 2007; Rosenberg et al., 2008), providers who prioritize the Patient Ally dimension for the communicative task (e.g.,

disclosing poor prognosis and taking medical history) may benefit from choosing a family interpreter (rather than a professional onsite interpreter, who excels in the Professional dimension, or a telephone interpreter, who is unable to perform many tasks involved with the Patient Ally dimension). In this study, we investigated several contextual factors that have been overlooked in the literature.

We examined clinical specialty as a contextual factor in influencing providers' expectations and needs of medical interpreters. Our findings suggest that researchers should consider providers' expectations in two ways: attitudes shared by all providers, and specialty-specific needs. As the first study to differentiate shared versus specialty-specific attitudes among providers, our findings have important practice implications. The attitudes shared by all providers should be incorporated into interpreters' training programs, allowing interpreters to have a realistic understanding of providers' needs and expectations. On the other hand, as researchers identify providers' specialty-specific needs, these can be incorporated into specialty-specific training for health care providers and interpreters as they learn to coordinate and negotiate their therapeutic objectives and communicative needs.

Our study also found that providers' experiences or familiarity with interpreters may influence their views of interpreters. Traditionally, it is a common practice to avoid repeated use of the same interpreter to avoid patient–interpreter bonding, which is believed to facilitate the conduit model of interpreting (Hsieh et al., 2010). Recent studies have found that providers at times may prefer using the same interpreter, which may increase interpreters' familiarity with patients' medical history and their ability to anticipate and facilitate the provider's agenda (Fatahi et al., 2008; Hsieh et al., 2010). It is intriguing that our study shows that providers' higher experience levels with interpreters led to increases in potentially conflicting demands: Experienced providers are more likely to desire literal translation but also want interpreters to advocate for the patient and to keep the interview on track. The answer to these seemingly incompatible demands may be that the experienced providers have a better understanding and stronger preference for their contextual needs (i.e., they desire different performances from the interpreter depending on the situational needs). By identifying the interpreting strategies that best fit specific contexts, future studies will allow researchers and practitioners to develop best practices for bilingual health care.

Finally, our study suggests another contextual factor to be examined in future research. In the past, interpreters were instructed to assume a limited role and avoid patient advocacy even when they perceive problematic interactions (i.e., patients have the right to their voice without interpreters' interference; Hsieh, 2008; Leanza, 2008). The items in the Patient Ally dimension, however, suggest that *participant communicative competence* (e.g., being able to seek

and give information in a way that is culturally appropriate) may influence providers' receptiveness to interpreters' active involvement. If all speakers have high communicative competence, there may be less need for an interpreter to adopt behaviors associated with the Patient Ally dimension. On the other hand, interpreter as Patient Ally may be much appreciated if a patient is unable to communicate effectively with the provider due to cultural or educational differences. In other words, interpreters' appropriate performance can be dependent on the characteristics of other speakers involved in the medical encounter. This finding is consistent with the increasing interests in patient-centered care and patient empowerment in the health care community. Interpreters can provide the necessary conditions that enable patients to make informed decisions (e.g., increase patient health literacy by assuming Patient Ally functions). This also highlights the interpreter-mediated medical encounters as a collaborative and goal-oriented activity (i.e., all participants need to collaborate to ensure optimal care).

There have been many guidelines provided for bilingual health communication; however, most guidelines were provided through a top-down approach with minimal empirical data to support these recommendations. Systematic investigations of contextual factors allow researchers and practitioners to better identify the boundaries, limitations, and influences of these contextual factors and to develop best practices that are informed by evidence-based theories.

### Limitations

Although we recruited providers from specialty-specific settings, their attitudes toward interpreters may be informed through their experiences with diverse clinical expertise. Due to providers' characteristics in different specialties, the specialty-specific effects may not be as strong as we initially desired. For example, nursing as a specialty area is extremely diverse and can include practitioners who assume drastically diverse responsibilities. A psychiatric nurse in an inpatient unit may have very different expectations for interpreters than an oncology nurse or a pediatric nurse practitioner. Similarly, medical residents often rotate between various clinical specialties. It is possible that the residents recruited at the emergency medicine unit just completed their training at the OB/GYN unit a month ago. Medical specialists often have experiences with various clinical specialties. For example, a gynecologic oncologist may be initially trained as an OB/GYN physician. As such, it would be more difficult to identify the specialty-specific differences due to the characteristics of our participants.

### CONCLUSION

Three specific dimensions shape providers' expectations and needs of interpreters: interpreter as patient ally, interpreter as

health care professional, and interpreter as provider proxy. Providers in different specialties may share different preferences in these dimensions depending on their therapeutic objectives and communicative needs. Because these dimensions may not be compatible with one another, providers need to be aware of their competing demands and develop effective strategies to prioritize and communicate their needs when working with medical interpreters.

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