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Families with Limited English Proficiency Receive Less Information and Support in Interpreted ICU Family Conferences

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Abstract

Objective—Family communication is important for delivering high quality end-of-life care in the ICU, yet little research has been conducted to describe and evaluate clinician-family communication with non-English speaking family members. We assessed clinician-family communication during ICU family conferences involving interpreters and compared it to conferences without interpreters.

Design—Cross-sectional descriptive study.

Setting—Family conferences in the ICU's of four hospitals during which discussions about withdrawing life support or delivery of bad news were likely to occur.

Participants—70 family members from 10 interpreted conferences and 214 family members from 51 non-interpreted conferences. Nine different physicians led interpreted conferences and 36 different physicians led non-interpreted conferences.

Measurements—All 61 conferences were audiotaped. We measured the duration of time that families, interpreters, and clinicians spoke during the conference and we tallied the number of supportive statements issued by clinicians in each conference.

Results—The mean conference time was 26.3 ± 13 minutes for interpreted and 32 ± 15 minutes for non-interpreted conferences ($p=0.25$). The duration of clinician speech was 10.9 ± 5.8 minutes for interpreted conferences and 19.6 ± 10.2 minutes for non-interpreted conferences ($p=0.001$). The amount of clinician speech as a proportion of total speech time was 42.7% in interpreted conferences and 60.5% in non-interpreted conferences ($p=0.004$). Interpreter speech accounted for 7.9 ± 4.4 minutes and 32% of speech in interpreter conferences. Interpreted conferences contained fewer clinician statements providing support for families, including valuing families' input ($p=0.01$), easing emotional burdens ($p<0.01$), and active listening ($p<0.01$).

Conclusions—This study suggests that families with non-English speaking members may be at increased risk of receiving less information about their loved one's critical illness as well as less

emotional support from their clinicians. Future studies should identify ways to improve communication with, and support for, non-English speaking families of critically ill patients.

Keywords

communication; end-of-life care; dying; death; palliative care; cross-cultural; limited English proficiency; family; interpreter

Introduction

In the United States, approximately 20% of deaths occur following admission into the intensive care unit (ICU) ¹. The majority of such deaths transpire following a decision to withhold or withdraw life-sustaining therapy ²⁻⁴. In such circumstances, patients are generally unable to communicate their preferences, and as a result, communication about decision making is often delegated to family members and clinicians ⁵. Communication is an important part of the process of end-of-life care in the ICU and interventions to improve communication with family members can improve outcomes for patients ^{6, 7} and family members ⁸.

Over 21 million Americans have limited English proficiency, and this number continues to increase rapidly ⁹. The Department of Health and Human Services, Office of Civil Rights defines individuals as having limited English proficiency (LEP) if they “cannot speak, read, write, or understand the English language at a level that permits them to interact effectively with health care providers and social service agencies” ¹⁰. Limited English proficiency adversely impacts healthcare received including palliative and end-of-life care ¹¹⁻¹⁴. Patients with LEP are less satisfied with the healthcare they receive compared to patients who speak English fluently ¹⁵. Using trained medical interpreters may help overcome these disparities. Compared to patients who need but do not receive an interpreter, patients who use trained medical interpreters seem to have better satisfaction, quality of care, and health outcomes ¹⁶. However, some studies suggest that the outcomes of patients using interpreters remain poorer than that of English-speaking patients ¹⁷.

Little is known about the effect of limited English proficiency on the content and quality of the ICU family conference. In an effort to identify effective strategies for cross-cultural communication around end-of-life care in the ICU, we undertook this analysis to assess the amount and quality of clinician-family communication about end-of-life care during ICU family conferences involving trained medical interpreters and compare it to communication in family conferences without interpreters. Our hypothesis was that even with professionally trained medical interpreters, information exchange and emotional support would be decreased for families with LEP compared to families who speak English.

METHODS

Identification and Enrollment of Family Conferences

The study was conducted from August 2000 to November 2002 in four Seattle hospitals, which included a county hospital, a university hospital, and two community hospitals. Family conferences were identified through daily contact with charge nurses in each ICU every weekday morning. Following identification of scheduled family conferences, the attending physician was contacted to obtain permission to contact patients' families. The following criteria were required for a conference to be eligible: 1) the conference was scheduled to occur on a weekday; 2) the conference would include family members and clinicians; 3) the attending physicians anticipated the discussion to include topics of withholding or withdrawing life support or the delivery of bad news; 4) the patients were at least 18 years of age; and 5) family members were sufficiently fluent in English to not require the use of an interpreter. If the above

study criteria were met, the nurse caring for the patient asked the family if they were willing to talk with research staff. Families were only enrolled if all family members and clinicians who had planned to participate in the family conference agreed to participate and signed a consent form. Study procedures were described previously¹⁸⁻²².

This initial study protocol excluded conferences for which interpreters were required. Subsequently, we obtained supplemental funding and began to include family conferences if at least one of the family members was not proficient in English (although some family members present may have spoke English). Standard practice in the participating hospitals was that, if at least one family member did not speak English, a professional medical interpreter was requested. To be eligible for inclusion, a professional medical interpreter had to be available and to consent to participation in the study. All other recruitment and consenting procedures were followed as described above. Interpreter conferences were obtained between January 2001 and November 2002. The Institutional Review Board of each hospital approved all study procedures.

Speech Time

Speaking time on recordings of conferences was measured with audio software by three investigators. Two investigators measured speaking time for the non-interpreted conferences²⁰ and one investigator (JDT) measured speaking time for the interpreted conferences. These investigators measured the duration of the following: conference time, physician and other clinician speech, interpreter speech, family speech and silent pauses (defined as absence of speech of greater than 2.5 seconds). Each duration measurement was recorded as the number of minutes and seconds. All clinicians participating in the conference were counted in clinician speech, although the majority of clinician speech was by the physician leading the conference. Proportion of speaking time was derived by dividing family, clinician, or interpreter speech times by the family conference's total speech time (family plus clinician plus interpreter which could be more than the total conference time due to some overlap in speech from these different groups).

Coding Framework

A medical transcriptionist with qualitative research experience transcribed the English portions of the audiotapes verbatim. For each language, a professional medical interpreter who was not present for the actual conference and who did not know the conference interpreter translated the non-English portions of the transcripts and transcribed those passages in English.

As previously described¹⁸, transcripts were analyzed in pairs of investigators using a limited application of grounded theory. Grounded theory is a general methodology for developing theory that is based on qualitative data systematically gathered and analyzed^{23, 24}. The coding framework included two areas: 1) content of communication; and 2) communication style and emotional support. In the current analyses, we were interested in codes associated with communication style and, in particular, with codes that were associated with ways in which emotional support was provided to families during a family conference. Of the 45 style and support codes, 29 (64%) were chosen *a priori* for inclusion in this analysis based on our hypotheses that the communication aspects identified by these codes might differ between the interpreter and non-interpreter conferences (See Appendix table A1 for listing of the 29 codes examined).

Trustworthiness of the coding

Trustworthiness of the qualitative coding was addressed in three ways. First, the coding investigators represented diverse primary backgrounds including critical care medicine, critical care nursing, health services research, psychology, anthropology, and social and behavioral

sciences¹⁸. The team of investigators worked in pairs to review and code all transcripts and pairs were constructed to ensure diversity so that no pair of investigators had similar primary backgrounds. Pairs attempted to achieve coding consensus. If consensus was not achieved among pairs, a group of at least four investigators was consulted to achieve a consensus. Second, we convened groups of four investigators to review every fifth transcript to ensure veracity of coding. Third, in a previous analysis of the association of the qualitative codes from the non-interpreted conferences with quantitative measures collected from families, we found that several of these codes were significantly associated with family satisfaction with communication, suggesting some construct validity to the coding²¹.

Quantitative analyses

To assess the differences in speech times (e.g., mean conference duration, mean proportion of family speech, mean proportion of clinician speech) between interpreted and non-interpreted conferences, we used Student's t-test. To assess differences in the use of support codes, we tallied the frequency for each code. Code counts included speech from all clinicians and family members. These counts are presented as both medians and means per conference to more fully describe the data. Mann-Whitney tests were used to compare the median number of codes per interpreted and non-interpreted conferences. Statistical significance was defined as a two-tailed test with $p < 0.05$. All analyses were performed with Stata 9.2 statistical software.

RESULTS

Audiotapes were obtained for 10 interpreted and 51 non-interpreted family conferences. A total of 32 of 70 family members who participated in the 10 interpreted conferences spoke English sufficiently to be given surveys and 22 of these 32 completed and returned the surveys (69% response rate). In the non-interpreted conferences, 169 of 214 family members returned the surveys (76% response rate). The demographic characteristics of the patients and of the conference participants including family members and physicians leading the conferences are found in Table 1. The languages spoken in the interpreted conferences were: Cambodian, Chinese, Hmong, Korean, Russian, Somali, Spanish, and Vietnamese. Of the 10 patients for whom an interpreted conference was audiotaped, seven died during the hospital stay (70%) and of the 51 patients for whom a non-interpreted family conference was audiotaped, 41 died during the hospital stay (81%). A total of 9 physicians led the 10 interpreted conferences and 36 physicians led the 51 non-interpreter conferences.

Speech Time

Comparisons of the speech time and proportion of speech time between the interpreted and non-interpreted conferences are shown in Table 2. There was no difference in total time of the interpreted and non-interpreted conferences (26.3 minutes compared to 32.0 minutes respectively, $p = 0.25$). Clinician and family speech time combined (excluding interpreter speech time) was significantly less in interpreter conferences with an average of 18.4 minutes compared to an average 32.0 minutes in the non-interpreted conferences ($p = 0.008$). Families spoke an average of 7.1 minutes in interpreted conferences compared to 8.2 minutes in non-interpreted conferences which was not significantly different ($p=0.66$). Clinicians spoke an average of 10.9 minutes in the interpreted conference which was less than the average 19.6 minutes in the non-interpreted conferences ($p=0.001$). Families in the interpreted conferences spoke for the same proportion of time as their counterparts in the non-interpreted conferences (24% for interpreter conferences compared to 25% for non-interpreter conferences, $p = 0.75$). However, clinicians spoke for a significantly lower proportion of time in the interpreted conferences compared to the non-interpreted ones (60% compared to 43%, $p = 0.004$). Interpreters' speech accounted for 32% of conference speech, and clinician and interpreters together accounted for 75% of conference speech time in the interpreted conferences.

Support During the Conferences

Clinicians in non-interpreted conferences offered more verbal emotional support than those in interpreted conferences. Nine of the 29 (31%) support codes were expressed significantly less commonly by clinicians in the interpreter conferences. Table 3 shows the 9 codes that were significantly less common in the interpreter conferences and the 20 codes that were not significantly different are shown in the Appendix. None of these communication style and support codes were more common in the interpreter conferences.

Communication style and support codes that were significantly less common in the non-interpreter conferences fell into three groups: 1) informational approaches; 2) emotional support; and 3) personalization. In the area of informational approaches, clinicians in interpreted conferences were less likely to use active listening techniques ($p = 0.008$) and they were less likely to allow pauses during which the family might be able to raise new questions or concerns ($p = 0.001$). In the area of emotional support, clinicians in interpreted conferences were less likely to make statements that might ease the burden on family members by alleviating their sense of responsibility for poor outcomes ($p = 0.003$). These interpreted conferences were also less likely to express value for the family's questions or input ($p = 0.01$), to offer assistance with practical tasks ($p = 0.05$), to express appreciation for the family as a form of support ($p = 0.03$), and to show emotion ($p = 0.03$). Last, in the area of personalization, clinicians in non-interpreted conferences were less likely to ask family members about who the patient was as a person ($p = 0.008$).

DISCUSSION

In this study, we identified differences in clinician support to families between interpreted and non-interpreted family conferences. Although the quality of communication during end-of-life discussions in the critical care setting has been shown to be poor^{25, 26}, this is the first study to document that the communication experience for persons with limited English proficiency may be even less adequate when compared directly to communication experience for families with limited English proficiency. In addition, another report from this study also describes the high prevalence of errors in interpretation which may further impair the quality of this communication.²⁷ This issue is of particular importance as improved clinician-family communication about end-of-life care in the ICU has been shown to enhance the quality of care^{6, 7} and reduce symptoms of anxiety, depression, and post-traumatic stress disorder among family members⁸.

Prior studies have shown that as many as half of family members involved in ICU family conferences have important misunderstandings about the diagnosis, treatments, or prognosis of the critically ill patient²⁵. Our study suggests that interpreted conferences are of the same length as non-interpreted conferences, yet clinicians seem to speak less in these conferences. In addition, the total amount of time that clinicians and family members speak (subtracting the time for interpreter speech) was less during interpreted conferences. While this finding reflects, in part, the time required for interpreter speech, it also seems likely that clinicians impart less information to families in interpreted conferences. This finding is supported by a study conducted in the clinic setting where physicians were found to spend the same amount of time with non-English-speaking patients and English-speaking patients, but physicians incorrectly believed that they spent more time with non-English-speaking patients²⁸. Although these studies do not directly assess the amount of information conveyed, a reduction in the amount of time that clinicians speak seems likely to imply that these families receive less information than families who speak English.

We also found that clinicians were less likely to demonstrate aspects of communication that convey support and concern such as valuing families' comments, listening actively, and easing

the families' burden. The finding that emotional support is less common in interpreted conferences is not surprising given the difficulty of communication through interpretation and the informational and emotional complexity of the ICU family conference. Therefore, we believe these findings do not necessarily reflect poorly on the communication skills of the clinicians or interpreters in these difficult situations. The necessity of working through an interpreter, even using professional interpreters, may hamper clinician-family communication and reduce the ability of clinicians to provide emotional support. Nonetheless, several of the supportive behaviors used in the "VALUE strategy" -a strategy that is associated with reduced family symptoms of depression, anxiety, and post-traumatic stress disorder - were used less commonly in the interpreter conferences⁸. In addition, errors in interpretation may further impair the ability of clinicians to provide emotional support. In a recent study of pediatric clinical encounters, errors in medical interpretation were quite frequent. Errors that had potential clinical consequences occurred 77% of the time with ad hoc interpreters and 53% of the time with professional interpreters¹³. An analysis of interpreter errors in these interpreted ICU family conferences suggests that a similar frequency of errors occur and many of these errors seemed to decrease the emotional support provided to family members²⁷.

Our study was not able to distinguish the extent to which the differences noted were due to language barriers or cultural differences between clinicians and family members. Understanding these differences will be important for the development of interventions to improve communication, but will be difficult since acculturation and English proficiency are highly correlated²⁹. Language barriers are likely best addressed by training interpreters and clinicians to work well together^{9, 30}. Barriers introduced by cultural differences are likely best addressed by developing training in cultural competency^{31, 32}. Both approaches may be needed to maximize the information and emotional support provided to families who have both limited English proficiency and are from a culture different from the clinicians.

Our study is not able to provide an evidence-based approach to improving communication and emotional support for families with limited English proficiency. Nonetheless, a number of suggestions for improvement can be suggested based on the findings in this current study as well as a recent qualitative study examining the perspectives of professional medical interpreters on end-of-life communication³³. Physicians could meet briefly with the interpreters prior to delivery of bad news or difficult decisions to help prepare the interpreter and allow them to provide the physician with information about the patient, family or culture. Physicians could also consider meeting with the interpreter following the discussion to allow for any necessary debriefing. In addition, interpreters should explicitly state when they are providing a strict linguistic interpretation and when they are providing cultural mediation or interjecting their own suggestions or comments in an effort to enhance understanding in a cross-cultural setting. Further research is needed to determine if these suggestions would improve the quality of communication or emotional support for family members.

One feature of this study deserves additional comment. There was a higher proportion of residents leading the interpreted family conferences than the non-interpreted conferences. Although this difference did not achieve statistical significance, it is possible that some of the discrepancies in communication between these two groups of conferences may have been due to the experience level of the physicians leading these conferences. We believe our findings are not explained entirely by experience level for two reasons. First, in quantitative analyses comparing the family ratings of the quality of communication in the 51 non-interpreted conferences, we did not find that attending physicians received higher scores.¹⁹⁻²¹ Second, in qualitative analyses examining missed opportunities and emotional support in the non-interpreted conferences, investigators did not find that attending physicians were more likely to conduct better quality conferences.^{18, 19} Nonetheless, due to our small sample size, we cannot exclude the possibility that years of experience may be an important predictor of

communication skill and provision of emotional support in this context. Future studies should examine this issue. In addition, it is important to note that residents and fellows in our study did not receive formal training in cross-cultural communication or in conducting family conferences with medical interpreters. This type of formal training is an opportunity for improvement in the future.

This study has a number of additional limitations. First, the recorded conferences in this study represent a select subset of all family conferences conducted in the ICU's under study. Furthermore, interpreter conferences were relatively rare and we were not able to accurately assess the proportion of such conferences that were enrolled. Families with limited English proficiency may have been more likely to refuse to participate or their clinicians may have decided that they should not be approached to participate. It seems likely, however, that those conferences that were not included represented worse clinician-family communication and, had they been included, would magnify the differences found in this study. Second, the presence of recording equipment may have altered the communication occurring during the conferences. While we have no way of assessing this potential bias, it is unlikely that the presence of recording equipment would differentially bias the communication within the interpreted groups compared to the non-interpreted groups. Third, the sample size of the interpreted conferences was small, and as a result, comparisons with the non-interpreted conferences are subject to a type 2 error. The fact that statistically significant differences were found emphasizes the magnitude of the differences found between interpreted and non-interpreted groups. In addition, we examined eight different languages. There may be cultural or linguistic differences between languages that we were not able to examine. Although including conferences in more than one language increases the generalizability of our findings, results may differ in other languages not included. Fourth, we were not able to control for the complexity of decisions or severity of illness for patients in the two groups because we did not collect data on severity of illness of these patients, although the fact that the mortality was high and similar suggests that these were comparable. Fifth, because our questionnaires were not translated into multiple languages, we were able to collect demographic information on only a minority of family members in interpreted conferences. However, since we did not explore the effect of demographic factors, this seems less important. Finally, this study was limited to four hospitals in one city. There may be systematic geographical variation in communication during ICU family conferences and future studies should address the extent of and reasons for such variation.

In this study, we identified areas for improvement in communication between clinicians and family members with limited English proficiency during the ICU family conference. We demonstrated that patients with limited English proficiency may be at risk of receiving less information regarding choices or decisions that may need to be made which may limit their ability to be involved in effective shared decision-making. We also showed that these family members are less likely to receive some components of emotional support during the family conferences which could put them at increased risk for psychological morbidity including symptoms of anxiety, depression and post-traumatic stress disorder⁸. We propose some suggestions for improving this communication, but further studies are necessary to evaluate whether incorporating these changes into the family conference improves family understanding, emotional support, and long-term psychological symptoms.

APPENDIX

Comparison of support codes frequencies between non-interpreted and interpreted conferences for the 20 out of 29 codes that were not significantly different (remainder shown in manuscript)

Code	Mean Non-Interpreted Conference Count (Median)	Mean Interpreted Conference Count (Median)	<i>p</i> Value ⁺
Clinician elicits, solicits questions	2.6 (2)	2.8 (3)	0.29
Clinician raises or responds to complaints, conflicts, problems	2.2 (0)	3.4 (1.5)	0.41
Truth-telling, asks for or shows willingness to be realistic and truthful	1.25 (0)	0.9 (0.5)	0.95
Asks for or offers trust in terms of decisions, medical course	0.25 (0)	0 (0)	0.13
Confirms or checks understandings	9.1 (5)	12.6 (6.5)	0.56
Provides clear explanations, no jargon	1 (0)	0.3 (0)	0.23
Solicits information	16 (13)	17.2 (14.5)	0.81
Expressing concerns, emotions, feelings, regret	2.8 (2)	1.5 (1.5)	0.16
Acknowledging caring of and caring about the patient and support for the patient by the family	1.1 (0)	0.8 (0.5)	0.99
Acknowledging the emotional difficulty of the situation	4.2 (3)	2.8 (2.5)	0.44
Reassuring family that patient will not suffer, patient's comfort	2.8 (3)	3.4 (2)	0.51
Acknowledges the complexity of the information	1 (0)	0.6 (1)	0.72
Acknowledges, accepts and encourages expression of emotions	0.65 (0)	0.4 (0)	0.86
Asks if, or states that, everything possible is being done or will be done for patient	0.6 (0)	1.5 (0.5)	0.18
Supports or expresses hope	1 (0)	0.3 (0)	0.55
Asks about or offers spiritual support	0.86 (0)	0.9 (0)	0.89
Assures family that the patient will not be abandoned before death	0.2 (0)	0.2 (0)	0.42
Clinician informs that he/she is accessible	2.4 (2)	1.6 (1)	0.29
Allowing the family to have control over end-of-life decision-making	6.3 (5)	4 (3)	0.09
Demonstrates support for family's opinions and decisions about end-of-life care	0.82 (0)	1 (0.5)	0.79

⁺Mann-Whitney statistic used to account for non-parametric distribution.

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Demographic characteristics of the 61 patients, their family members who were present at the conferences, and the physicians leading the family conferences

Table 1

Characteristics	Non-Interpreted Conferences			Interpreted Conferences		
	Patients (n = 51 of 51) [†] No. (%)	Family Members (n = 169 of 214) [†] No. (%)	Physicians Leading Conferences (n = 35 of 36) [†] No. (%)	Patients (n = 10 of 10) [†] No. (%)	Family Members (n = 22 of 70) [†] No. (%)	Physicians Leading Conferences (n = 9 of 9) [†] No. (%)
Gender						
Female	26 (51)	101 (60)	12 (34)	2 (20)	9 (41)	2 (22)
Race/Ethnicity [‡]						
White	31 (61)	136 (81)	30 (86)	0	2 (9)	6 (67)
Black	7 (14)	14 (8)	0	1 (10)	1 (5)	0
Hispanic	2 (4)	6 (4)	2 (6)	1 (10)	1 (5)	0
Asian/Pacific Islander	1 (2)	5 (3)	4 (11)	5 (50)	17 (77)	2 (22)
Native American	1 (2)	10 (6)	0	0	0	0
Other/undocumented	9 (18)	0	1 (3)	3 (30)	1 (5)	1 (11)
Diagnoses						
Intracranial hemorrhage	9 (17)			0		
End-stage liver disease or GI bleed	8 (16)			0		
Trauma	8 (16)			1 (10)		
Sepsis or infection	7 (14)			0		
Respiratory failure	6 (12)			2 (20)		
Cardiac failure or myocardial infarction	5 (10)			4 (40)		
Other	8 (15)			3 (30)		
Relationship to patient						
Spouse/partner		17 (10)			1 (5)	
Child		35 (21)			10 (45)	
Sibling		34 (20)			1 (5)	
Parent		20 (12)			0	
Friend		9 (5)			0	
Other		54 (32)			10 (46)	
Staff position						

Characteristics	Non-Interpreted Conferences			Interpreted Conferences		
	Patients (n = 51 of 51) [†] No. (%)	Family Members (n = 169 of 214) [†] No. (%)	Physicians Leading Conferences (n = 35 of 36) [†] No. (%)	Patients (n = 10 of 10) [†] No. (%)	Family Members (n = 22 of 70) [†] No. (%)	Physicians Leading Conferences (n = 9 of 9) [†] No. (%)
Attending physician			20 (57)			2 (22)
Resident or fellow			15 (43)			7 (78)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Age in years	60 (20.3)	48 (15.8)	38 (9.5)	66 (17.9)	33 (9.1)	32 (4.1)
Years in practice			12.4 (9.7)			5 (4.6)

[†] Shows proportion of each category with information collected. Although 70 family members participated in the study, only 22 read English sufficiently to be able to complete the questionnaire.

[#] Sum is greater than column total as some individuals identified with more than one race and/or ethnicity.

Table 2Comparison of speech time between non-Interpreted and interpreted conferences[†]

Items	Non-Interpreted Conferences	Interpreted Conferences	<i>p</i> Value
Total Conference Time (Mean Minutes ± SD)	32.0 ± 14.8	26.3 ± 13.3	0.25
Total Conference Time without Interpreter Speech (Mean Minutes ± SD)	32.0 ± 14.8	18.4 ± 12.3	0.008
Duration of Clinician Speech (Mean Minutes ± SD)	19.6 ± 10.2	10.9 ± 5.8	0.001
Proportion of Clinician Speech (% ± SD)	60.5% ± 14.5	42.7% ± 14.9	0.004
Duration of Interpreter Speech (Mean Minutes ± SD)	-	7.9 ± 4.4	
Proportion of Interpreter Speech (% ± SD)	-	32% ± 14.1	-
Duration of Family Speech (Mean Minutes ± SD)	8.2 ± 6.3	7.1 ± 7.1	0.66
Proportion of Family Speech (% ± SD)	25.0% ± 12.4	23.6% ± 11.5	0.75

[†]Total speech time included clinician, interpreter, and family speech as well as silent pauses of greater than 2.5 seconds.

Table 3

Comparison of support code frequencies between non-interpreted and interpreted conferences for the 9 out of 29 codes that were significantly different (remainder shown in online repository)

Code	Mean Non-Interpreted Conference Count (Median)	Mean Interpreted Conference Count (Median)	<i>p</i> Value [†]
<i><u>Informational approaches</u></i>			
Uses active listening techniques (acknowledges, rephrases, affirms) and encouragement	2.5 (1)	0.4 (0)	0.008
Uses pauses to allow family members time to think, formulate additional questions	2.9 (3)	.4 (0)	0.001
<i><u>Emotional support</u></i>			
Attempts to ease burden on family members or clinicians	1.8 (1)	0.1 (0)	0.003
Attempts to put family members or clinicians at ease through use of humor or comforting statements	1.4 (1)	0 (0)	0.002
Expresses value for questions or comments	2.1 (1)	0.7 (0)	0.01
Expresses appreciation or gratitude as a form of support	3.6 (3)	1.7 (1.5)	0.03
Offers assistance or takes on practical empirical tasks, "case management"	.8 (0)	.1 (0)	0.05
Shows emotion	3.1 (1)	0.5 (0)	0.03
<i><u>Personalization</u></i>			
Makes statements or asks questions about who the patient is as a person	3.2 (2)	.3 (0)	0.008

[†] Mann-Whitney statistic used to account for non-parametric distribution.