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Family caregiver participation in hospice interdisciplinary team meetings: How does it affect the nature and content of communication?

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Abstract

Collaboration between family caregivers and healthcare providers is necessary to ensure patient-centered care, especially for hospice patients. During hospice care, interdisciplinary team members meet bi-weekly to collaborate and develop holistic care plans that address the physical, spiritual, psychological, and social needs of patients and families. The purpose of this study was to explore team communication when video-conferencing is used to facilitate the family caregiver's participation in a hospice team meeting. Video-recorded team meetings with and without family caregiver participation were analyzed for communication patterns using the Roter Interaction Analysis System. Standard meetings that did not include caregivers were shorter in duration and task-focused, with little participation from social workers and chaplains. Meetings that included caregivers revealed an emphasis on biomedical education and relationship-building between participants, little psychosocial counseling, and increased socio-emotional talk from social workers and chaplains. Implications for family participation in hospice team meetings are highlighted.

Hospice care is provided to both the patient and family, and includes attention to the physical, psychological, spiritual, and emotional needs of the dying and their loved ones (Centers for Medicare and Medicaid Services, 2008). Physicians, patients, families, and other healthcare providers agree that preparation for the end of life includes ensuring that the family is prepared for their loved one's death (Steinhauser, Christakis, Clipp et al., 2001).

Family members are most satisfied with hospice services when they are informed regularly and receive social support from staff (Rhodes, Mitchell, Miller, Connor, & Teno, 2008). Family members also feel satisfied with hospice services when they are informed about their loved one's condition on a regular basis, feel that the team provides them social support, and are able to identify one nurse as being in charge of the patient's care (Rhodes et al., 2008).

However, communication between family caregivers and providers continues to be problematic (Bowman, Rose, Radziewicz, O'Toole, & Berila, 2009). Caregivers report that they need more information, more support, and increased communication with staff (Dougherty, 2010). Bereaved caregivers of long-term care patients reported that they did not receive enough information when their loved one was dying, they did not understand what the clinician had told them about what to expect, and that the physician did not always discuss the patient's end-of-life wishes (Biola, Sloane, Williams et al., 2007). Hospice providers report that communication with caregivers can be difficult due to the caregiver's impaired concentration, the caregiver's propensity to engage in silence, the caregiver's desire not to bother clinicians, the caregiver's rejection of support services, and timing and amount of information received during an encounter (Hudson, Aranda, & Kristjanson, 2004). Inadequacies in communication with caregivers can also result from interdisciplinary relationships among team members that emerge from turf-type issues, the inability of the team to provide a common message to the patient/family, and inefficient communication processes within the care system (Kirk, Kirk, Kuziemy, & Wagar, 2010). This study investigated ACTIVE team meetings, when one or more family members virtually participate in team meetings, to examine how caregiver participation in interdisciplinary team meetings affected team communication with family caregivers.

Interdisciplinary Teams and Patient-Centered Care

The theoretical framework for this study combines a model for the participation of family on healthcare teams and interdisciplinary collaboration, an approach called ACTIVE: Assessing Caregivers for Team Intervention through Video Encounters (Parker Oliver, Demiris, Wittenberg-Lyles, & Porock, 2010). Similar to the input-process-output framework detailed by Real and Poole (2011) which considers communication structures that shape communication processes and how these processes influence healthcare outcomes, the ACTIVE framework combines a model of interdisciplinary collaboration that includes families proposed by Saltz and Schaefer (1996) and incorporates Bronstein (2003) who identifies important components to the team process which impact successful collaboration.

According to Saltz and Schaefer (1996), the model interdisciplinary team enacts patient-centered care by including the patient and family as a core member of the healthcare team. Team structures determine whether family members are viewed as "lay" team members (without detailed knowledge), or "specialists" (with a tremendous amount of knowledge regarding the patient). Bronstein (2003) further details team processes by providing an outline for successful collaboration between hospice staff. The framework identifies four components to interdisciplinary collaboration processes: 1) interdependence and flexibility; 2) newly created professional activities; 3) collective ownership of goals; and 4) reflection on process. Bronstein's model for interdisciplinary collaboration when combined with the work of Saltz and Schaefer (1996) supports inclusion of patients and family as the team will become *interdependent* with patient/family goals, and will *create new activities and roles* for patients/families within the team, requiring *flexibility* among individual members' role definitions. The patient/family involvement will require *collective ownership of all goals* by all team members, and the care outcomes will be evaluated through a *reflection on the team process*, again including feedback from patients/families.

The role of Telemedicine in Interdisciplinary Team Communication

Telemedicine tools, such as advanced communication technology, offer the potential to improve team communication and collaboration by facilitating caregiver involvement in team meetings. Attendance and participation in team meetings is problematic for many hospice caregivers due to the care needs of the patient, geographic distance and travel to the hospice office, confidentiality issues as people wait in the office, and the time involved for team members (Parker Oliver, Porock, Demiris, & Courtney, 2005). Consequently, family caregivers are rarely included in hospice team meetings. ACTIVE team meetings offer caregivers the opportunity to utilize video-conferencing technology to participate in hospice interdisciplinary team meetings and overcome barriers to participation.

Previous research on telemedicine interactions has included family members, but little is known about their participation. One study found that while family members participated in 48% of interactions, they contributed only 10% of talk during the interaction (Nelson, Miller, & Larson, 2010). Similarly, another study found that companions (family or friends of the patient) contributed only 7% of talk in face-to-face interactions and 9% in telemedicine interactions (Agha, Roter, & Schapira, 2009). The majority of talk shared by companions during telemedicine encounters involves sharing the patient's medical symptoms and therapeutic regimen, followed by lifestyle and psychosocial status and agreement statements (Agha et al., 2009). One reason for the low involvement of family members is because telemedicine interactions are typically structured as a dyadic encounter between the patient and a physician. Consequently, it has been suggested that telemedicine interactions are less patient-centered than in-person visits because physicians tend to dominate discussions with biomedical talk and limit exchanges about psychosocial and lifestyle issues (Agha et al., 2009).

ACTIVE meetings are unique because the caregiver is the primary spokesperson on behalf of the patient and the goal of the meeting is to collaborate rather than to provide direct patient care. The goal of the study was to investigate how family involvement influences interdisciplinary team communication. Specifically, we questioned:

- RQ1** How does communication differ between standard interdisciplinary team meetings and ACTIVE team meetings?
- RQ2** How do caregivers and team members engage in collaborative communication during ACTIVE team meetings?

Methods

Data for this study were drawn from a larger, ongoing randomized controlled trial that assesses caregiver clinical outcomes associated with participation in ACTIVE meetings. In this study, hospice family caregivers are randomly assigned to one of two study conditions: standard hospice care that consists of bi-weekly team meeting discussions of the patient's case or the ACTIVE meeting, which involves the use of web-based video-conferencing to enable caregivers to virtually participate in team meetings. Participants randomized to the ACTIVE meeting (intervention group) are invited to participate in bi-weekly meetings for the duration of their loved one's hospice care. During these team meetings, caregivers are asked if they have any questions or concerns to share with the hospice team. In the standard care arm of the study, hospice patients are discussed at the regular biweekly interdisciplinary team meetings, but caregivers are not specifically asked to participate. The location of hospice care is unchanged for both groups. The study was approved by both the Institutional Review Board at the supporting university and the participating hospices.

Participants

Caregivers were recruited from two hospices in the Midwestern United States. To participate in the study, caregivers had to be at least 18 years of age and be the designated primary caregiver for a hospice patient (as determined by hospice staff). The telemedicine component required a high-speed Internet connection with a computer to participate in the ACTIVE meeting with video. However, audio participation was available with any telephone device.

Procedure

Following referral by hospice staff, a member of the research team visited the family caregiver's home to describe the study and obtain informed consent to participate. Once consent was obtained, all participating caregivers for the patient were randomized into standard care or participation in ACTIVE meetings. For those randomized to ACTIVE meetings, the caregivers' residential infrastructure was assessed to determine technology needs. Caregivers with high-speed Internet and a computer were provided with an instructional manual and given the website address and password for the video-conferencing website. ACTIVE meetings were facilitated through Virtually InterACTIVE Families (www.vifamilies.com), a company that provides secure, encrypted, password protected video-conferencing services. To enhance technical quality, caregivers were loaned a web camera and headphones to use during team meeting participation. Caregivers who lacked adequate technology to support video-conferencing were asked to participate via telephone. Family caregivers were provided a designated time and date to participate in each ACTIVE meeting, but were not trained on what to do or say during the video conference.

Standard team meeting discussions and ACTIVE team meeting discussions for a random selection of consenting caregivers were video-recorded. Standard team meetings were recorded using a webcam and laptop computer. To enable ACTIVE meetings in the hospice office, a web camera was connected to a laptop computer with high-speed Internet and the screen image was projected onto a television screen for the view of the entire hospice team. This connection allowed family members to have a visual image of the team as well as a two-way conversation with them. Software on the laptop video-recorded the interaction. The research team member who recorded meetings also completed a seating chart of team members, identified only by their profession.

Coding Instrument

The Roter Interaction Analysis System adapted for telemedicine (RIAS-Telemed) (Miller & Nelson, 2005; Nelson et al., 2010) was used to code video recordings of standard and ACTIVE team meetings. The RIAS tool is used to study dialogue in medical interactions by treating talk, defined in terms of utterances (sentences comprising a complete thought), as the unit of analysis (Wakefield, Bylund, Holman et al., 2008).

Using two primary categories of talk, task and socio-emotional, the RIAS is used to code utterances between participants and classify utterances into a mutually exclusive category concerning the function of the talk in the interaction. Socio-emotional talk captures the affective dimension of the interaction and includes social talk (non-medical chit chat), positive talk (agreements, jokes), negative talk (disagreements, criticism), emotional talk (concern, empathy, reassurance), and participatory facilitators such as asking for opinion and checking for understanding. Task-focused behaviors include talk related to medical problem-solving. The specific communication features of task-focused behavior are data gathering and patient education and counseling. Task-focused talk includes question asking, information giving by the provider or the caregiver, paraphrasing, transitioning, and counseling or directing behavior. Within these functions, content areas are detailed and

include biomedical and psychosocial topics. The RIAS-Telemed allows utterances that are technology-specific (conversation directly related to technological aspects of the interaction) to be coded within RIAS categories. For example, participants who asked a question related to technical quality (“*Can you hear me, now?*”) were coded as a closed-ended technology-related question. Finally, because the RIAS has not been used in a team setting, we added intra-team communication as a category to capture instances when team members spoke to each other as part of the interaction. Examples include a team member telling another team member that they would be visiting the patient on a certain day or taking responsibility for overseeing a specific care task.

Coding was conducted directly from video recordings. Using the RIAS-Telemed, three members of the research team (EWL, AG, and KW) watched video-recordings of standard hospice team meetings and ACTIVE team meetings and categorized utterances by all participants (team members and caregivers) into one of the RIAS-Telemed categories. To ensure intercoder reliability, coders participated in six hours of training using eight team meeting discussions that were not included in this data analysis. First, coders independently coded three cases and then met to discuss and resolve differences and refine coding categories. Next the coders independently coded five interactions and Pearson’s r reliability statistic was used to test for intercoder reliability. This resulted in an average reliability of $r = .87$ for all categories. Coders engaged in more discussion about differences and developed definitive coding rules for future coding. Each video-recorded team meeting in the data set was double-coded by members of the research team and all differences resolved through extended discussion. The study’s small sample size prohibited assessment of reliability statistics for specific categories.

Analysis

To compare communication differences between standard and ACTIVE meetings, the number and percentage of utterances in all categories were calculated (socio-emotional, task-focused, technology-related). The three general RIAS categories are used to discern differences in collaborative practices between medical team members (medical directors and nurses) and non-medical team members (social workers and chaplains). We compared the number of utterances for socio-emotional and task-focused talk by each team member between the two groups using paired t-tests. Finally, to examine how caregivers and team members engage in collaborative communication during ACTIVE meetings, the mean, range, and percentage for specific utterances and topic of utterance were calculated.

Results

A total of 40 team meeting discussions (20 standard, 20 ACTIVE) comprised the data set. With the exception of one ACTIVE team meeting, caregivers participated via video-conferencing (one caregiver participated via telephone). Table 1 provides an overview of caregiver and patient demographics for the team meeting discussions analyzed for this study. The average length of standard meeting discussion of a patient’s case was 3 minutes 38 seconds, ranging from 6 minutes 40 seconds to 50 seconds. Comparatively, the average length of the ACTIVE meetings was 9 minutes, ranging from 4 minutes to 19 minutes. There were 385 utterances in standard team meetings and 1,186 utterances in ACTIVE team meetings, reflecting the difference in meeting length. To explore communication differences between standard and ACTIVE team meetings (research question one), we examined utterances by participant (team member’s discipline, caregiver) and by the two primary types of talk identified by the RIAS (task and socio-emotional). The total utterances for each meeting type by participant categories and talk are shown in Table 2.

Standard and ACTIVE team meeting discussions were predominantly task-focused (89% of talk in standard, 54% of talk in ACTIVE), with more socio-emotional talk clearly occurring during ACTIVE meetings (32% of talk compared to 11% in standard meetings). Social workers and chaplains did not contribute socio-emotional talk during standard team meetings, yet 32% of social worker talk and 50% of chaplain talk focused on socio-emotional issues during ACTIVE meetings. Nurses also devoted more socio-emotional talk (28% of talk) in ACTIVE meetings compared to standard meetings (10%). Medical directors exhibited little change in talk between meeting types. In ACTIVE meetings, only 13.7 % of talk related to the use of technology.

There was a noticeable change in contribution among participants between standard and ACTIVE team meetings. Social workers and chaplains were less verbally active in standard team meetings, contributing only 5% of talk in these discussions and contributing only task-related talk. However, their overall contribution to team meeting discussions doubled in ACTIVE meetings to 11% of total talk. In contrast, nurses talked less overall (41% of all utterances in standard; 30% of all utterances in ACTIVE). The biggest decrease in contribution coming from medical directors who went from 43% of total talk in standard meetings to 7% of all talk during ACTIVE meetings. Caregivers clearly dominated ACTIVE meetings with 483 utterances (41% of all talk).

The between-group difference in mean number of socio-emotional and task-related utterances differed significantly for some team members (Table 3). Mean socio-emotional utterances were higher in ACTIVE meetings for nurses ($p = .001$), social workers ($p < .001$), and chaplains ($p = .005$), but not for physicians or other participants. Mean task-related utterances were higher in ACTIVE meetings for social workers ($p = .009$) but not for other team members.

Communication between interdisciplinary team members and family caregivers during ACTIVE meetings (research question two) is summarized in Table 4. Physicians and nurses engaged in more biomedical education than social workers and chaplains, with nurses substantially dominating caregiver education (an average of 4.45 utterances per encounter). Social workers provided considerably more psychosocial counseling, although psychosocial counseling to caregivers was limited overall. Nurses asked the most questions, with the majority of questions devoted to biomedical rather than psychosocial topics. Nurses also dominated rapport-building by engaging in emotional talk and positive talk (e.g., complimenting the work of the caregiver), while social workers and chaplains provided some emotional talk. Medical directors engaged in little rapport-building with caregivers compared to other team members. All team members, with the exception of chaplains (0%), devoted 4% of talk to partnering with caregivers by asking for their opinion, understanding or paraphrasing discussion. Procedural communication was also minimal and did not include contributions by chaplains. Finally, medical directors and nurses engaged in substantially more intra-team communication than social workers and chaplains.

Similar to the team's profile, biomedical education dominated caregiver talk, with 3.5 times as much biomedical disclosure occurring than psychosocial. They were also twice as likely to ask questions about biomedical concerns compared to psychosocial topics. Caregivers predominantly worked to build a relationship with the healthcare team (45% of all talk). Positive and social talk were substantially higher than negative and emotional talk, corresponding with findings regarding the team's rapport-building profile, and illustrate acknowledgement of the team's comments. Interestingly, only 3% of caregiver talk was a request for service.

Discussion

Family involvement in team meetings created a new professional role for nurses who emerged as informal leaders. Although physicians have long been considered the hierarchical figure in healthcare teams, hospice services are largely nurse-driven and this study illustrates their dominant role in hospice care. The large number of utterances between medical directors and nurses suggest that hospice nurses negotiate the role of subordinate-yet-equal team members during standard team meetings, supporting earlier work on nurse-physician relationships (Apker, Propp, & Ford, 2005). Given that task talk was the focus of standard hospice team meetings, it was not surprising that the biomedical focus of ACTIVE meetings was influenced by nurses who asked the most questions and provided the most education and counseling on biomedical topics.

Hospice medical directors talked much less during ACTIVE team meetings than standard meetings, neglecting the opportunity for rapport-building with caregivers and instead opting to focus more on intra-team communication. Unlike nurses, hospice medical directors typically do not make home visits or assume the role of the attending physician and thus do not develop relationships with caregivers. The high presence of intra-team communication by medical directors illustrates that family involvement enhances team member interdependence and flexibility. By engaging in intra-team communication medical directors accommodate the nurse's hierarchical position by maintaining autonomy and contributing to patient or team goals as peers rather than as leaders (Apker, Propp, & Ford, 2005). With new regulations now requiring face-to-face visits by medical directors, more attention will need to be paid to its impact on family caregiver communication, care planning, and caregiver satisfaction.

While family involvement removes the supportive nature of the nurse's role in the medical director-nurse relationship, it also enacts the nurse's position as superior to other lower status team members (Apker, Propp, & Ford, 2005). Hospice social workers and chaplains spoke considerably less than nurses and medical directors in both standard and ACTIVE meetings. The lack of participation among these non-medical team members reveals a lack of collective ownership of goals. However, family involvement increased participation from social workers and chaplains who contributed socio-emotional talk. Whereas collaboration among hospice team members commonly occurs outside of team meetings, social workers had higher task-related talk in ACTIVE meetings. Although limited, contribution among all team members as well as caregivers during ACTIVE meetings suggests collective ownership of goals among all parties.

The organizational context and team structure influenced communication between caregivers and team members. Caregivers were invited to participate in already scheduled, predetermined team meeting discussions. Caregivers did not have flexibility regarding team meeting day, time or duration. Consequently, ACTIVE meetings were similar to physician-patient interactions as caregivers and team members were mutually influenced by one another and primarily engaged in positive and social talk to facilitate the interaction. While this resulted in an increase in socio-emotional talk compared to standard meetings, it is important to note that this was primarily due to social etiquette and limited to greetings. Caregiver positive talk was five times more likely than emotional talk, revealing that socio-emotional talk overall was still restricted.

Appropriate introductions of all team members were provided to family caregivers in order to reduce anxiety and increase understanding. However, there were often team members on call for other team members and caregivers were not always clear on the roles of team members (i.e., specific disciplines). It may be helpful to provide caregivers with a handout

about their role in hospice care in terms of the team structure and a template of participating team members. Anecdotally, when caregivers were asked if they had any concerns, many reported that there were no concerns but they worried about the patient. More work needs to be done to determine concrete caregiver task needs from emotional support needs.

Important implications for how team meeting communication impacts care outcomes should be noted from the study results. In hospice care, the team's reflection on outcomes should emphasize holistic pain control (physical, psychological, social, spiritual) and caregiver bereavement and satisfaction. Previous work has found that hospice interdisciplinary teams engage in little collaboration during care planning discussions and there are deficiencies in information sharing between team members (Demiris, Washington, Parker Oliver, & Wittenberg-Lyles, 2008). Standard team meetings in this study predominantly consisted of medical directors and nurses talking about the patient's case; the absence of contribution by social workers and chaplains provide further evidence for collaboration deficiencies. Holistic pain control cannot be accomplished if non-medical and medical team members do not contribute equally during team meetings and if socio-emotional aspects of care are not addressed during care planning.

With few tele-health interventions specifically designed for hospice care, this study has several implications for telemedicine delivery (Demiris, Parker Oliver, & Wittenberg-Lyles, 2011). First, the study shows that the use of technology among a variety of hospice end-users, including different professional disciplines and family caregivers, is feasible. The diffusion of technological tools in hospice care are impacted by challenges such as user acceptance and privacy. The low use of technology-related categories in this study was congruent with other telemedicine research using the RIAS instrument (Nelson et al., 2010) and caregivers in this study demonstrate technological utilization among family caregivers. More importantly, this study extends the use and function of technology in hospice care as a communication tool rather than a tool to deliver one time primary care. Our findings demonstrate that a videoconferencing platform can facilitate the virtual participation of caregivers allowing them to communicate with all team members and engage in meaningful conversations.

Second, staff members who use tele-health technology need to learn how to practice patient-centered communication via video-conferencing (Wakefield et al., 2008). Congruent with similar investigations of telemedicine interactions, hospice team members had the most utterances and directed the conversation (Nelson et al., 2010). In particular, nurses played a dominant role in ACTIVE meetings. Prior research has found that nurses are more likely to ask open-ended questions, communicate listening, and make jokes on the telephone when compared to video-mediated interactions (Wakefield et al., 2008). More research is needed to train team members to elicit caregiver participation and engage in patient-centered communication during telemedicine encounters.

Limitations

Communication patterns found in this study may be unique to the hospice setting. Federally required team meetings sustain an exclusive context for collaborative care planning. A limitation of this study is that care planning discussions for all patients were not captured; video-recordings of team meetings only occurred for discussions about patients who provided consent for the study. As a result some team talk could not be included for study analysis. Additionally, study results could have benefitted from further examination of specific team documentation about care planning. Care planning discussions are recorded in patient medical charts and a comparison between the team's perceived collaboration and actual occurrences may have revealed the team's perceptions of the caregivers and whether or not caregiver involvement impacted care planning documentation. Finally, the number of

team members varied between the participating hospice agencies and this study did not take into account the size of the hospice team involved in ACTIVE meetings. Larger groups may have influenced the caregiver's willingness and ability to participate in ACTIVE meetings. Although this study is limited by a small sample size of limited diversity, it provides insight on caregiver-clinician interaction and raises questions about hospice team meetings.

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Table 1

Summary Demographic Variables for Patients and Caregivers

Variable	Caregiver (n=25)	Patient (n=23)
Diagnosis	Not applicable	
Cancer		17% (4)
Dementia		13% (3)
Other		69% (16)
Patient Residency	Not applicable	
Home		48% (11)
Nursing home		52% (12)
Mean Age	59.2 years (range 35–81)	85.5 years (range 64–96)
Sex		
Female	80% (20)	78% (18)
Male	20% (5)	21% (5)
Race		
White/Caucasian	84% (21)	83% (19)
Black/African-American	16% (4)	17% (4)
Education		
Less than high school	8% (2)	Not captured
High school	24% (6)	
Some college	28% (7)	
Undergraduate college degree	16% (4)	
Graduate/Professional degree	24% (6)	
Caregiver Employment		
Not employed	8% (2)	
Part-time	20% (5)	
Full-time	28% (7)	
Other	8% (2)	
Retired	36% (9)	
Relationship to patient		
Spouse/partner	12% (3)	
Adult child	64% (16)	
Sibling	4% (1)	
Other relative	20% (5)	

Table 2Summary table of utterances by participants and by meeting type (*n*, %)

Team members	Standard Meeting			ACTIVE meeting			Total
	Type of Talk			Type of Talk			
	Socio-emotional	Task-focused	Total	Socio-emotional	Task-focused	Technology-related	
Medical Directors	20 (12%)	144 (88%)	164 (43%)	11 (13%)	73 (85%)	2 (2%)	86 (7%)
Nurses	16 (10%)	140 (90%)	156 (41%)	101 (28%)	236 (67%)	17 (5%)	354 (30%)
Social Workers	0	15 (100%)	15 (4%)	29 (32%)	55 (60%)	7 (8%)	91 (8%)
Chaplains	0	6 (100%)	6 (1%)	17 (50%)	16 (47%)	1 (3%)	34 (3%)
Other ^a	6 (14%)	38 (84%)	44 (11%)	39 (28%)	39 (28%)	60 (43%)	138 (12%)
Caregivers				185 (38%)	222 (46%)	76 (16%)	483 (41%)
Total	42 (11%)	343 (89%)	385 (100%)	382 (32%)	641 (54%)	163 (14%)	1,186 (100%)

^aHospice director/administrator and research personnel who were responsible for facilitating use of the technology.

Table 3

Comparison of utterances of socio-emotional or task-related talk between ACTIVE and standard meetings, by type of team member [mean (95% confidence interval)].

Team member	Type of talk	ACTIVE meeting	Standard meeting	p-value ^a
RN	Socio-emotional	5.05 (3.14 – 6.96)	0.8 (0.29 – 1.31)	0.001
	Task-related	11.8 (9.63 – 14.0)	7.0 (3.26 – 10.74)	0.08
Social worker	Socio-emotional	1.45 (0.84 – 2.06)	0.0	<0.001
	Task-related	2.75 (1.68 – 3.82)	0.75 (0.12 – 1.38)	0.009
Chaplain	Socio-emotional	0.85 (0.33 – 1.37)	0.0	0.005
	Task-related	0.80 (0.34 – 1.26)	0.3 (–0.05 – 0.65)	0.154
Physician	Socio-emotional	0.55 (0.09 – 1.01)	1.0 (0.08 – 1.92)	0.446
	Task-related	3.65 (1.15 – 6.15)	7.2 (2.43 – 11.97)	0.223
Other	Socio-emotional	1.95 (0.31 – 3.59)	0.3 (–0.02 – 0.62)	0.065
	Task-related	1.95 (0.10 – 3.80)	1.9 (1.05 – 2.75)	0.961

^aPaired t-tests between ACTIVE and standard meetings, by team member and type of communication. Utterances by caregivers and technology-related utterances are not included.

Table 4
 Communication categories of utterances used by hospice interdisciplinary team members and family caregivers during ACTIVE meetings^{a,b}

RIAS Category	Team member														
	Medical Directors			Nurses			Social Workers			Chaplains			Caregivers		
	M	R	%	M	R	%	M	R	%	M	R	%	M	R	%
Education and counseling			24%			29%			47.5%			33%			38%
Biomedical	.7	0-5		4.45	0-9		.6	0-4		.15	0-2		6.05	2-16	
Psychosocial	.25	0-3		.35	0-1		1.3	0-4		.40	0-2		1.7	0-7	
Data Gathering			11%			23%			9%			12%			11%
Biomedical	.25	0-4		3.35	0-8		.1	0-1		.05	0-1		1.55	0-6	
Psychosocial	.2	0-3		.4	0-1		.25	0-2		.15	0-1		.75	0-2	
Building a relationship			14%			29%			36%			52%			45%
Social	.1	0-1		1.6	0-5		.5	0-3		.4	0-2		2.7	1-6	
Positive	.1	0-2		1.25	0-4		.5	0-3		.15	0-1		5.15	1-11	
Emotional	.35	0-3		1.9	0-11		.45	0-2		.3	0-2		1.25	0-6	
Negative	0	0		0	0		0	0		0	0		.15	0-3	
Partnering	.15	0-3	4%	.8	0-4	4%	.15	0-2	4%	0	0	0	.3	0-1	2%
Procedural	.15	0-3	4%	.75	0-3	4.5%	.05	0-1	1%	0	0	0	.2	0-2	1%
Intra Team Communication	1.7	0-10	43%	1.75	0-8	10.5%	.1	0-1	2.5%	.05	0-1	3%	n/a	n/a	n/a
Request for service	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	.55	0-4	3%

M=mean, R=range

^aTeam member totals do not include uninterpretable utterances, utterances related to technology, and utterances made by research staff and hospice administrators (n=255)

^bCaregiver totals do not include uninterpretable utterances and utterances related to technology (n=76)