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The ecology of patient and caregiver participation in consultations involving advanced cancer

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Abstract

Objective—To identify predictors of participation of patients with advanced cancer in clinical encounters with oncologists and to assess the impact of patient and caregiver participation on perceptions of physician support.

Methods—This is a secondary data analysis from the Values and Options in Cancer Care study, a cluster randomized clinical trial of a patient-centered communication intervention. Patients and caregivers completed pre-visit and post-visit health and communication measures. Audio recorded patient-caregiver (when present)-physician encounters were coded for active patient/caregiver participation behaviors (eg, question asking, expressing concern) and for physicians' facilitative communication (eg, partnership-building, support). Mixed linear regression models were used to identify patient, physician, and situational factors predicting patient and patient plus caregiver communication behaviors and post-visit outcomes.

Results—Physician partnership building predicted greater expressions of concern and more assertive responses from patients and patient-caregiver pairs. Patients' perceptions of greater connectedness with their physician predicted fewer patient expressions of concern. Patient perceptions of physician respect for their autonomy were lower among patients accompanied by caregivers. Caregiver perceptions of physician respect for patient autonomy decreased with increasing patient age and varied by site.

Conclusions—In advanced cancer care, patient and caregiver communication is affected by ecological factors within their consultations. Physicians can support greater patient participation in clinical encounters through facilitative communication such as partnership-building and supportive talk. The presence of a caregiver complicates this environment, but partnership building techniques may help promote patient and caregiver participation during these visits.

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These authors report no conflicts of interest.

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SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

Keywords

cancer; caregiver; communication; oncology; patient participation; professional-patient relations

1 | BACKGROUND

The way patients with advanced cancer and their caregivers communicate with physicians can have significant effects on the quality of care they receive and their quality of life.^{1,2} Most patients with advanced cancer want physicians to talk honestly and informatively, but they also want sensitivity and compassion.^{3,4} Most patients with advanced cancer also want to participate actively in their care; this involvement benefits both patients and caregivers.^{3,5} Active patient (and family/caregiver) participation in these conversations—asking questions, making requests, stating preferences, and introducing topics—can help physicians identify, clarify, and understand patient goals, needs, preferences, and values.⁶

However, conversations involving poor prognosis and planning for end-of-life care often go unspoken or take place when the patient is close to death, too late to affect clinical decisions.^{7,8} Physicians may wait for patients to initiate these conversations, and patients often do not for many reasons, including fear, deference, and ignorance.⁹ Still, early discussion of end-of-life care is associated with care more consistent with patients' goals.^{3,10}

Explaining why some patients and caregivers are more engaged in these conversations is difficult because of the complex ecology of these encounters. An ecological perspective on communication in clinical encounters holds that patient and caregiver engagement in physician consultations is a product of multiple factors, including personal characteristics, context (eg, clinic location), and physician communication.^{11,12} Personal characteristics affecting patient participation include confidence in their ability to express goals, preferences, and needs.¹³ Differences in patients' communication are also related to race, gender, age, and education.^{11,12} Additionally, affective states including fear, worry, or anxiety may manifest in patients' expressions of concern or avoidance.¹⁴

Patient participation also can be influenced by a physician's communicative style, including the degree to which physicians try to facilitate involvement through partnership-building and supportive talk.^{15,16} For example, physicians might cultivate supportive environments by showing empathy, or engage in partnership building by encouraging patients to express feelings, both of which have been found to positively influence patient participation in clinical encounters.^{15–17} Additionally, situational features (the length of the visit, scheduling practices, type of clinic or practice, location of the practice, a physician's specialty, and the reason for the visit, for example, when a poor prognosis must be given) can influence patient participation.^{8,11,15}

A final factor is the presence of a caregiver in the visit. In advanced cancer, patients are more often than not accompanied by a spouse, child, or other caregiver who can impact the visit.^{18,19} When family caregivers are present, health care professionals, including physicians, are more likely to address emotional issues such as anxiety and fear.¹⁸ Caregivers can have other positive effects on the interaction, such as encouraging patient autonomy and facilitating

patient involvement in decision-making.^{18,19} Caregivers aware of a patient's symptoms of mental decline, for example, can update the physician or reinforce what the patient is saying.²⁰ However, caregiver presence can stifle patient participation when, for example, their reaction to prognosis overshadows the patient's reaction.¹⁸ Caregivers may even address their own information needs at the expense of the patient's.²⁰ Thus, we examined patient communication in advanced cancer consultations considering both the patient as an individual and the patient-caregiver dyad.¹⁹

This secondary data analysis of a recently completed cluster randomized clinical trial to improve communication in advanced cancer (Values and Options in Cancer Care [VOICE])²¹ aims to describe ecological factors at work in advance cancer consultations. Our first goal is to identify independent predictors of patient participation in these clinical encounters. We are particularly interested in whether predictors of individual patient participation also predict patient and caregiver participation combined when a caregiver is present. The second goal is to examine the impact of patient and caregiver participation in the clinical encounter on patient and caregiver perceptions of their communication experience with the physician. Thus, we analyze the relationship between participation variables and post-visit ratings by patients and caregivers of how strongly they felt their autonomy was valued during the visit.

2 | METHODS

2.1 | Research setting and participants

The data were collected as part of the VOICE study, a cluster randomized clinical trial of a patient-centered communication intervention. The protocol for this study and its rationale have been described in detail elsewhere.²¹ Data used in this analysis were collected during Phase One in which baseline measurements were taken prior to the randomization and intervention phase. In this phase, patients and caregivers were asked to complete survey measures prior to the visit, participate in an audio recorded visit with the physician, and complete post-visit measures. The patients, physicians, and caregivers included in the study were recruited from academic and private oncology practices in Rochester/Buffalo, New York and the UC Davis Comprehensive Cancer Center in Sacramento, California. A total of 38 physicians from the 2 recruitment sites participated in the cluster randomized clinical trial.²²

Patients eligible for Phase One of the VOICE study ($n = 119$) were adult English-speaking patients of the participating physicians who had a diagnosis Stage IV solid (non-hematological) cancer or Stage III cancer when physicians "would not be surprised if they died within the next year."²¹ Patients were recruited through the participating oncologists and were required to have had at least 1 prior visit with the oncologist. Caregivers were selected by asking the recruited patients to identify an adult family member, partner, or friend who would help make medical decisions and likely help with daily activities. Caregivers included in the study accompanied patients to the target visit. Professional caregivers were not included in the study.

2.2 | Pre-visit measures

Prior to the recorded visit, patients and caregivers completed several measures including an assessment of the therapeutic alliance of the patient-physician relationship (The Human Connection Scale—THC).²³ They also completed the 5-item Peace, Equanimity, and Acceptance in the Cancer Experience (PEACE) scale that measures peaceful acceptance of the cancer diagnosis;²⁴ a 7-question assessment of general physical well-being taken from the FACIT measurement system²⁵ (GP); and 11 questions of the McGill Quality of Life Questionnaire (MQOL) assessing patient emotional and existential well-being.²⁶ Both patients and caregivers rated their self-efficacy in communicating with their physician using the short form Perceived Efficacy in Patient-Physician Interactions measure (PEPPI).²⁷

2.3 | Communication measures

For patients and caregivers, we coded communication behaviors that reflect active participation in clinical encounters.¹⁴ These include asking questions, expressing concern (stating fear or anxiety, or vocal cues of negative affect), and assertiveness (stating preferences, introducing discussion topics).¹⁴ These “active” forms of patient participation are considered so because of their potential to influence physician behavior and beliefs as well as the content and structure of the consultation (See Supporting Information for examples).²⁸

We also coded 2 types of physician communicative acts that support patient participation in clinical encounters, partnership building (utterances that encourage or accommodate patients’ concerns, emotions, preferences, and opinions^{15,29}), and supportive talk (responses that reassure, support, or empathize with patients²⁹). The audio-recordings and transcripts were coded using the Active Patient Participation Coding Scheme. The Active Patient Participation Coding Scheme is a validated instrument for coding physician, patient, and caregiver utterances that assesses indicators and facilitators of patient participation in clinical encounters.^{14,15,30} The 3 types of active participation—question-asking, assertive responses, and expressions of concern—were coded separately for patients and caregivers.²⁸ For this analysis, 2 types of active communication measures were computed—we totaled the number of questions, concerns, and assertive responses made by each patient and by each caregiver during the encounter. We also summed the patients’ and the caregivers’ instances of each behavior during the encounter to create a single score per behavior. For physicians, the number of partnership-building responses and number of supportive utterances were computed for each interaction.

2.4 | Post-consultation measures

The post-consultation outcome measure for both patients and caregivers was the Health Care Communication Questionnaire (HCCQ), a 5 item self-reported measure of the patient’s sense of support of their autonomy by their physician (eg, engaging them to ask questions, responding to their concerns).³¹ Patients and caregivers independently completed this assessment after their consultation with their physician; thus, HCCQ scores were analyzed separately.

2.5 | Data analysis

To identify independent ecological predictors of patient and caregiver participation and meet our first aim, we created mixed-effects linear regression models using each of the active participation variables (questions, expressions of concern, and assertive responses) as outcome variables. We initially planned to test 3 sets of models, each predicting patient participation, caregiver participation, or caregiver plus patient participation. However, no variables were statistically significant predictors of caregiver participation and are not reported here. For these models, physician partnership building, physician supportive talk, demographics, and patient pre-visit measures were used to predict each of the 3 types of patient participation and patient plus caregiver participation. Demographics included gender, race, age, relationship status (partnered or not), and education. Although we do not include the results here, we also tested models predicting physician communication behaviors. In these models, physician characteristics were not statistically significant predictors of physician communication behaviors. To meet our second aim of identifying participation variables that predict perceptions of autonomy, mixed linear regression models were used. Separate patient and caregiver measures of respect for patient autonomy were our outcome variables.

All the mixed-effects linear regression models were specified to account for the nesting of patients/caregiver (units of analysis) within physicians (units of randomization). Physician-level covariates for study site (New York vs California) and oncologist subspecialty (breast cancer vs not) were also specified to account for the stratified randomization. Because correlation between patient PEPPI and THC score is high and significant (Person correlation coefficient = 0.62), we dropped the less significant PEPPI from the models to avoid multicollinearity.

3 | RESULTS

Of 119 patients studied, the majority ($n = 83$, 70%) had caregivers present during the visit (Table 1). Just over half of patients (55%) were female, and 70% of caregivers were female. Although most patients and caregivers were white, they ranged in education. The physician sample was mostly male (68%) and mostly white and Asian (53% white, 45% Asian, 2% African American). Means, ranges, standard deviations, and reliabilities of pre-visit measures are reported in Table 2. Participation variables for patients, caregivers, and physicians, along with inter-coder reliabilities, are also reported in Table 2.

Table 3 presents predictors of patient and patient/caregiver participation in consultations. Physician use of partnership-building predicted the degree to which patients were assertive and expressed concerns. In these models, no patient demographic predicted any of the participation variables. Among pre-visit measures, the only predictor of patients' communication was patients' perception of the therapeutic alliances with the physician on THC. There were no significant predictors of patients' question asking. Although expressions of concern and partnership building each have a significant relationship with the physician-patient relationship measure (THC) in multivariate analyses, the bivariate correlation between partnership building and THC was not statistically significant.

When caregivers' active participation behavior was combined with patients', the results were similar to analyses of patients alone, with 2 exceptions (Table 3). First, physician partnership building predicted combined patient and caregiver question asking. Second, patients and caregivers at the California site asked more questions than those at the New York site.

Finally, although patients' and patients' plus caregivers' expressions of concern and assertive responses in the encounters did not predict patients' or caregivers' post-consultation perception of physician support for their autonomy, measured by the HCCQ, questions did—more patient and caregiver combined question-asking predicted patient perceptions of more autonomy support. In addition, there was a negative relationship between patient perception of autonomy support (HCCQ) and the presence of a caregiver (Table 4).

4 | DISCUSSION

The results of this study highlight the importance of examining diverse influences on patient and caregiver participation in advanced cancer visits. Physician difficulties are well chronicled, ranging from delivering bad news to introducing non-curative care options, but more active patient and caregiver participation can reveal concerns that may be more effectively addressed during these visits.¹⁷ Within the clinical encounter ecology, patient participation is affected by multiple variables each of which might serve as a target for communication interventions.

Our results underscore the importance of physician efforts to facilitate patient involvement using partnership building and supportive talk. Physician partnership building in the advanced cancer consultations studied included soliciting questions and additional information from patients, often about their symptoms or condition. Consistent with other research,^{14,32} partnership building predicted expressions of concern and assertive responses from patients.

The significance of this finding for advanced cancer communication is 2-fold: physicians who use partnership-building techniques can elicit patients' preferences and goals, and physicians may elicit more expressions of negative emotions when engaging in partnership building. Because advanced cancer care should address palliative and end-of-life preferences, creating an environment in which patients and caregivers can openly express their concerns and preferences may provide clearer insight to patients' goals for care. Voicing concerns can also be indicative of problems that need to be addressed, especially if physicians are prepared to respond with strategies such as validation, empathy and, if needed, assistance and referral.³³ However, these strategies can increase physician emotional labor and require additional training.³⁴

Second, the negative relationship between patient and caregiver expressions of concern and patients' perceptions of their relationship with the physician suggests that patients who feel a stronger therapeutic alliance may be less inclined to explicitly express concerns. Patients who rated their therapeutic alliance with their physician as lower than average expressed concern about the progress of their disease with statements such as, "when your interns

come in and the go over my history it's really...scary." This finding merits further exploration because it is open to multiple interpretations. It could mean close relationships with physicians make patients feel understood and their concerns "known."³⁵ Alternatively, it could mean that close relationships with physicians inhibit patient and caregiver expressions of concern. Indirect evidence suggests physicians worry frank discussion of deteriorating health might impinge on the patient-physician relationship.²³ Patients might also suppress concerns about worsening health so that the relationship is not threatened. A final possibility is that patients' fears create a dependence on the physician, deepening the perceived patient-physician connection.

Third, patients' question-asking was associated with patients' perceptions of autonomy support, perhaps because patient question-asking is active, autonomous behavior. Patients and caregivers asked questions about a range of topics, including treatment options, prognosis, and expectations, putting physicians in response mode. That is, "answers" are expected from "questions"; physicians usually provide more information to patients who ask questions³⁴ which may give patients a sense of control over the direction and content of the consultation.

Finally, our results suggest a relationship between caregiver presence and patients' perceptions of physician support for their autonomy. These results may indicate that accompanied patients experienced less autonomy support from their physician because of the caregiver's mere presence or that there is a collective relational autonomy that transcends the individual.³⁶ The relationship between perceived autonomy support and accompaniment in the clinical encounter could also speak to fundamental differences between patients who have the social resources to bring a caregiver to a visit and those who cannot. Furthermore, the relationship between advancing patient age and decreased caregiver ratings of physician support for patient autonomy suggests that advanced age may be an important factor for accompanied patients. Our findings underscore the complexity of patient autonomy in advanced cancer as their capacities decline and the role of caregivers in supporting patient autonomy.^{37,38}

4.1 | Study limitations

This study has several limitations. The small sample size of 119 clinical encounters in 2 locations limits the degree to which these findings can be applied to other settings. This sample size also means that we cannot confidently draw conclusions about independent variables without statistically significant relationships to our outcomes. Additionally, the number of patients per physician in the recorded clinical encounters was small, 3 to 4. These small numbers meant we could not make comparisons among individual physicians. To assess our findings' generalizability, future studies should incorporate more oncologists and more patients per oncologist.

Our study also examines only 1 clinical encounter. Because these encounters are brief, examining multiple encounters involving the same participants will help establish consistency. Finally, our study examines patient and caregiver interactions with physicians, but we do not analyze patient and caregiver interactions with one another. More work should

be done to examine how patient-caregiver communication with one another influences patient and caregiver participation.

4.2 | Clinical implications

This study has implications for communication in advanced cancer visits. Our results affirm the importance of physician partnership-building with patients and caregivers. This communication provides a foundation for addressing negative emotions during end-of-life care discussions. But our results suggest that expression concerns may be complicated—while a close personal connection between patient and physician might reduce the need for expressing concerns, it might also inhibit the sharing of negative emotions. Physicians should also be aware of the potential inhibiting effects of caregivers. Our results suggest that accompanied patients perceive less autonomy support from physicians; physicians should actively seek to support the autonomy of accompanied patients when they want to and are capable of making their own decisions.

5 | CONCLUSION

In advanced cancer care, patient and caregiver communication is affected by ecological factors, including personal, physician, and situational characteristics that influenced patient and caregiver participation during consultations. The presence of a caregiver in advanced cancer visits adds complexity to this environment, but partnership building techniques may help promote patient and caregiver participation during these visits. Because advanced cancer visits may involve decisions that impact the patient's care and quality of life, encouraging patient and caregiver participation during these visits is paramount.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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TABLE 1

Participant characteristics

Characteristic	Patient	Caregiver	Physician
<i>n</i>	119	83	38
Female	66 (55%)	58 (70%)	12 (32%)
Race (white)	107 (90%)	76 (92%)	20 (53%)
Mean age	64	59	44
<i>Education</i>			
High school or less	39 (33%)		
Some college	49 (41%)		
Degree, post graduate	30 (26%)		
<i>Physician specialty</i>			
Breast			7 (18%)
Other			31 (82%)

TABLE 2

Descriptive statistics

Pre-Consultation	N	Mean	Range	Standard Deviation	Cronbach's Alpha
The human connection (THC)	119	58.6	39-64	5.4	.862
Peace, equanimity, and acceptance in the cancer experience (PEACE)	119	17.4	10-20	2.6	.882
McGill quality of life measure (MQOL)	119	79.4	28-110	18.9	.882
General physical well-being (GP)	119	15.4	7-29	5.1	.882
Perceived efficacy in patient-physician interaction (PEPPI—patient)	119	23.1	16-25	2.1	.800
Participation Behavior	N	Mean	Range	Standard Deviation	Interrater Reliability
<i>Patient</i>					
Expressions of concern	115	1.3	0-17	2.5	.88
Assertive responses	115	3.5	0-18	3.7	.92
Questions	115	3.7	0-39	7.6	.98
<i>Patient and caregiver</i> (average caregiver percentage of behavior)					
Expressions of concern (10%)	105	1.4	0-17	2.7	.76
Assertive responses (7%)	105	3.8	0-20	4.0	.78
Questions (29%)	105	12.6	0-43	9.8	.92
<i>Physician</i>					
Partnership building	115	4.5	0-20	3.6	.80
Supportive talk	115	2.9	0-19	3.7	.78
Post-Consultation	N	Mean	Range	Standard Deviation	Cronbach's Alpha
Health care communication questionnaire (HCCQ—patient)	119	23.3	0-20	3.4	.96
Health care communication questionnaire (HCCQ—caregiver)	77	22.4	0-20	4.6	.96

TABLE 3

Mixed model results for ecological predictors of patient and caregiver communication behaviors

Ecological Factor	Patient Expressions of Concern <i>N</i> = 115		Patient Assertive Responses <i>N</i> = 115		Patient Questions <i>N</i> = 115		Patient + Caregiver Expressions of Concern <i>N</i> = 105		Patient + Caregiver Assertive Responses <i>N</i> = 105		Patient + Caregiver Questions <i>N</i> = 105	
	Estimate (95%CI)	<i>P</i> -Value	Estimate (95%CI)	<i>P</i> -Value	Estimate (95%CI)	<i>P</i> -Value	Estimate (95%CI)	<i>P</i> -Value	Estimate (95%CI)	<i>P</i> -Value	Estimate (95%CI)	<i>P</i> -Value
Demographics												
Patient gender (male)	0.43 (−0.43, 1.29)	0.3243	0.345 (−1.08, 1.78)	0.6277	0.53 (−2.96, 4.02)	0.7637	0.431 (−0.55, 1.41)	0.3820	0.48 (−1.07, 2.03)	0.5373	−0.20 (−4.54, 4.15)	0.9272
Patient age	0.01 (−0.02, 0.04)	0.576	−0.02 (−0.07, 0.03)	0.4684	−0.05 (−0.17, 0.08)	0.4588	0.017 (−0.02, 0.06)	0.3774	−0.01 (−0.07, 0.05)	0.7631	0.02 (−0.15, 0.18)	0.8288
Patient race (white)	−0.19 (−1.57, 1.20)	0.7895	1.13 (−1.07, 3.33)	0.3073	2.265 (−3.16, 7.69)	0.4074	0.195 (−1.48, 1.87)	0.8161	1.08 (−1.48, 3.65)	0.4019	3.58 (−3.71, 10.87)	0.3290
Patient education	−0.56 (−1.40, 0.28)	0.1866	0.33 (−1.04, 1.69)	0.6346	0.82 (−2.52, 4.16)	0.626	−0.514 (−1.48, 0.45)	0.2894	0.54 (−0.96, 2.04)	0.4704	3.55 (−0.68, 7.78)	0.0984
Patient marital status (partnered)	0.12 (−0.75, 0.98)	0.787	0.89 (−0.50, 2.29)	0.2056	−0.61 (−4.04, 2.82)	0.7236	0.294 (−0.71, 1.30)	0.5594	1.27 (−0.29, 2.82)	0.1075	1.00 (−3.41, 5.39)	0.6544
Patient accompanied	−0.42 (−1.89, 1.05)	0.5673	−0.47 (−2.86, 1.92)	0.6961	−2.03 (−7.90, 3.84)	0.4918						
Site (NY)	0.55 (−0.41, 1.50)	0.2513	−0.19 (−1.83, 1.45)	0.8157	−3.52 (−7.49, 0.45)	0.0804	0.655 (−0.46, 1.77)	0.2421	−0.55 (−2.37, 1.27)	0.5405	−7.94 (−12.97, −2.90)	0.0029**
Measures												
Peace, equanimity, and acceptance in the cancer experience (PEACE)	−0.07 (−0.24, 0.09)	0.3761	0.13 (−0.14, 0.39)	0.3368	−0.43 (−1.08, 0.23)	0.1964	−0.044 (−0.24, 0.16)	0.6571	0.10 (−0.21 0.41)	0.5197	−0.53 (−1.40, 0.34)	0.2238
The human connection (THC)	−0.12 (−0.20, −0.04)	0.0046**	0.05 (−0.08, 0.18)	0.4852	−0.20 (−0.52, 0.12)	0.2226	−0.144 (−0.24, −0.05)	0.0035***	0.04 (−0.11, 0.19)	0.5640	−0.15 (−0.57, 0.27)	0.4786
General physical well-being (GP)	0.01 (−0.07, 0.08)	0.8809	0.00 (−0.12, 0.12)	0.9871	0.05 (−0.25, 0.35)	0.7343	−0.024 (−0.11, 0.06)	0.5756	−0.00 (−0.13, 0.13)	0.9956	0.24 (−0.14, 0.61)	0.2089
Physician behaviors												
Partnership building	0.17 (0.06, 0.28)	0.0033**	0.56 (0.38, 0.75)	<.0001***	0.39 (−0.06, 0.84)	0.0895	0.20 (0.07, 0.32)	0.0030***	0.62 (0.42, 0.82)	<.0001***	0.61 (0.05, 1.17)	0.0346***
Supportive talk	0.01 (−0.10, 0.12)	0.8841	0.03 (−0.15, 0.21)	0.7683	−0.153 (−0.59, 0.28)	0.4854	−0.03 (−0.15, 0.09)	0.6225	0.02 (−0.17, 0.22)	0.8060	−0.18 (−0.73, 0.38)	0.5264

* *P* < .05.
** *P* < .01.

.100' > d

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TABLE 4

Mixed model results for ecological predictors of patient and caregiver perceptions of autonomy support

Ecological Variable	Patient Health Care Communication Questionnaire Score (HCCQ) <i>N</i> = 119		Caregiver Health Care Communication Questionnaire Score (HCCQ) <i>N</i> = 77	
	Estimate (95%CI)	<i>P</i> -Value	Estimate (95%CI)	<i>P</i> -Value
Behaviors				
Combined patient and caregiver questions	-0.14 (-0.22, -0.06)	0.0016**	0.09 (-0.10, 0.28)	0.3327
Combined patient and caregiver expressions of concerns	-0.14 (-0.43, 0.16)	0.353	0.62 (-1.06, 2.29)	0.4567
Combined patient and caregiver assertive responses	0.17 (-0.06, 0.40)	0.0687	0.29 (-1.28, 1.85)	0.7096
Physician partnership building	0.03 (-0.19, 0.25)	0.7774	0.10 (-0.21, 0.40)	0.5276
Physician supportive talk	0.00 (-0.19, 0.19)	0.9798	0.03 (-0.26, 0.32)	0.8267
Patient demographics				
Age	-0.03 (-0.08, 0.01)	0.1742	-0.08 (-0.17, 0.01)	0.0645
Race (white)	0.49 (-1.50, 2.48)	0.6237	-3.23 (-7.60, 1.15)	0.1419
Gender (male)	-0.27 (-1.63, 1.09)	0.694	1.89 (-0.21, 4.00)	0.0762
Site	1.40 (-0.44, 3.17)	0.1345	2.48 (-0.04, 5.00)	0.0503
Accompanied	-2.53 (-4.74, -0.32)	0.0253*		

* *P* < .05.** *P* < .01.