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Patient-centered communication during the disclosure of a dementia diagnosis

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Abstract

This study examined physician use of patient-centered communication during disclosure of a dementia diagnosis. Fifty-four patients (mean age = 74.13) and companions (mean age = 65.67; n = 34 spouses/partners, 12 adult children, 8 other) were diagnosed with very mild (n = 36) or mild (n = 18) dementia at an Alzheimer's Disease Research Center. Audio recordings of these triadic encounters were evaluated with the Roter Interaction Analysis System. Physicians utilized moderate but variable amounts of patient-centered behaviors including positive rapport building, facilitation, and patient activation ($p < 0.001$). Physicians far less frequently used emotional rapport building ($p < 0.001$). Physicians who demonstrated more patient-centered communication also exhibited greater positive affect ($p < 0.05$). The use of patient-centered behaviors and positive affect was more variable between physicians than within physicians, and may be more dependent on individual physician characteristics than dementia severity or age and gender of patients and companions.

Keywords

Alzheimer's disease; dementia; diagnostic disclosure; patient-centered communication; physician-patient relationships

INTRODUCTION

Most people want to know if their physician suspects dementia as a diagnosis¹, and professional practice guidelines are universal in recommending that a dementia diagnosis be disclosed²⁻⁵. These guidelines, while helpful, provide only a general outline about how to deliver a dementia diagnosis and overlook how diagnostic conversations might be individualized to address the needs of individual patients and family members⁶. Delivering a dementia diagnosis is a complex process, and each patient, along with their accompanying companions, may need different things from the physician.

In the general literature on medical communication, researchers have started to identify an optimal approach that allows physicians to achieve necessary medical objectives while attending to patient needs and concerns during their conversations⁷. In this "patient-centered" approach, physicians are encouraged to explore how patients feel about being ill, what they believe is causing their health problems, and how their problem affects daily functioning⁸. A patient-centered approach seeks a shift in balance from a physician-

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dominated interaction to one where physicians solicit patient perspectives and enhance patient feelings of partnership and understanding^{9, 10}. Patient-centered physician behaviors may include expressions of empathy, support, and reassurance¹¹. Using this approach, physicians cue the patient to share ideas and feelings, respond to their statements in a manner that acknowledges what has been stated, and encourage further patient expression⁹. Though specific in its focus on healthcare interactions, the patient-centered approach is consistent with a *person-centered* approach to dementia care in its emphasis on preserving the dignity of the person with dementia by acknowledging their continued central role in guiding their own care and life¹².

Patient-centered techniques have demonstrated benefits that support their use in medical communication, including increased patient compliance and satisfaction and decreased patient distress^{13, 14}. Physician behaviors such as demonstrating empathy and being warm and friendly during medical consultations have been associated with decreased patient pain and increased speed of recovery¹⁵. Despite these positive outcomes, patient-centered communication techniques are not used consistently in medical interactions. For example, one investigation of primary care visits by Roter and colleagues¹⁶ found that only 20% of medical visits followed a patient-centered approach that balanced biomedical and psychosocial talk. Results from that study also indicated that patient-centered communication is not consistent across types of patients, with healthcare interactions with older and sicker patients dominated by close-ended medical questions¹⁶. Furthermore, patient-centered communication has been found to be used less frequently with male patients as compared to female patients¹⁷.

Patient-Physician Communication in Dementia

Despite a larger body of literature examining patient-physician communication, only a few studies to date have evaluated medical interactions with dementia patients. One study of 30 patients receiving a dementia diagnosis used qualitative methods to document emotional reactions to an Alzheimer's disease (AD) diagnosis¹⁸. In another small ($n = 5$) qualitative study, one investigator summarized interpretations of a dementia diagnosis after observing the assessment and diagnostic disclosure conversation¹⁹. In one final study that did examine specifically the interaction between patients and physicians, Sugarman and colleagues (2007) documented that during informed consent procedures conversations occurred primarily between the physician and the companion, with patients speaking less.

These studies are limited in number and feature small samples and broad, non-standardized assessments of behaviors. Two did not examine physician behaviors at all, and only one²⁰ utilized a well-developed interaction analysis system. Still other research on dementia diagnostic disclosure has used retrospective accounts from patients, caregivers, and physicians to characterize diagnostic conversations, but these accounts typically occur weeks or months after the visit occurred and are likely limited by reporter bias²¹. In addition, most of that research has focused on patient and caregiver reactions to a dementia diagnosis rather than the interaction per se. Evaluation of the actual medical encounter is especially important in the context of dementia care, as communication dynamics may be complicated by the patient's cognitive impairment as well as the presence of a companion²². In this setting, the physician faces the challenge of translating patient-centered communication from the typical physician-patient dyad to the physician-patient-companion triad. This triadic form of patient-centeredness includes communicating in a manner that respects the autonomy of a patient with potential impairment in understanding, as well as a companion who may be emotionally invested in the patient's wellbeing. If these types of patient-centered interactions are a goal in healthcare, a key first step is to identify the extent to which these practices are already in use, so that education and training efforts can be constructed to maximize their use.

The current study was designed to provide a focused, objective, and systematic evaluation of the ways in which a dementia diagnosis is shared with patients and caregivers, with an emphasis on documenting patient-centered practices. The first aim of the study was to characterize the extent to which physicians disclosing a dementia diagnosis adopt a patient-centered approach. The second aim of the study was to evaluate whether physicians use different degrees of patient-centered behaviors depending upon participant characteristics, such as age, gender, and disease severity. We addressed these aims by using a standardized interaction analysis system, a technique used to examine diagnostic conversations in the context of other diseases²³⁻²⁶, to evaluate physician use of patient-centered behaviors and positive affect during the disclosure of a dementia diagnosis.

METHODS

Participants

Videotapes of interactions among 54 patient-companion-physician triads were collected as part of a larger study focused on disclosure of a dementia diagnosis²⁷. The study was approved by the Washington University Human Research Protection Office. Participants were recruited through the Washington University Alzheimer's Disease Research Center (ADRC). Individuals interested in participating in research at the ADRC include those with and without memory complaints. Most participants volunteer after exposure to media reports or educational outreach; approximately 20% are from physician referrals²⁷. Individuals who expressed interest about enrolling in studies about healthy aging and dementia of the Alzheimer type (DAT) at the ADRC were told about the current study and contacted by telephone if they expressed interest in participating. Characteristics of the patients (age range 58 – 91 years) and companions (age range 43 – 86 years) appear in Table 1. All interactions analyzed in the current study were ones in which the patient and companion were told by the physician that dementia appeared likely in the patient. The majority of patients (85%) were diagnosed with dementia of the Alzheimer type (DAT). The physicians who conducted the evaluations and delivered the diagnosis ($n = 10$) had been working an average of 8.2 years in dementia care, with most specializing in neurology or geriatrics.

Procedure

Diagnosis—Patients were evaluated for dementia with a neurologic examination and separate semi-structured interviews with the patient and companion as previously described²⁸. At the conclusion of the assessment, the physician met with the patient and companion together to offer a diagnostic impression. This conversation was videotaped. Later, at a subsequent consensus conference with ADRC staff, the patient was assigned a Clinical Dementia Rating (CDR) to represent probable diagnosis and degree of impairment^{29, 30}: very mild dementia (CDR = 0.5) or mild dementia (CDR = 1). During the diagnostic feedback conversation, participants were told whether the physician believed that the patient had dementia but were not told the CDR.

Video Recordings—Each diagnostic feedback session was video recorded with a camera placed unobtrusively in the corner of the room. Recordings were later transferred from digital videotape to computerized digital audio files for subsequent coding.

Measures

Physician Patient-Centered Behaviors and Affect—Audio from each feedback conversation was coded with the Roter Interaction Analysis System (RIAS)³¹, an observational coding system developed to characterize components of a medical interaction. The RIAS enables trained coders to categorize speech into small and mutually exclusive meaningful units. The system has been used in studies of oncology, end of life care, and

physician education³²⁻³⁴. Coding was conducted directly from the audio recordings by two raters after consultation with the RIAS developers and in accordance with the manual, which defines and provides exemplars for each code³⁵. The frequency of patient-centered physician behaviors and the extent of expressions of positive affect were assessed for each disclosure session. For this study, the coders concentrated on 15 patient-centered physician behaviors (see Table 2). A tally was incremented each time one of the 15 behaviors occurred during physician speech. Ambiguous speech units were coded by considering voice tone and emphasis, the patient's or companion's response, and the context of the statement. Physicians' statements were not distinguished as to whether they were directed toward the patient or companion, as both participants were present for all statements regardless of whether the physician intended to direct some speech towards a particular individual. Tape quality was rated at the conclusion of the session to ensure that each session was fully audible to the raters³⁵. Raters coded each audio file separately, and then codes were compared for accuracy and consistency. Discrepancies were resolved during a meeting between the two raters, who compared codes to the RIAS standards established in the manual. Interrater reliability was good ($r = 0.95$, $p < 0.01$). After the 15 RIAS behavior variables were tallied, they were summed into three composite variables: positive rapport building, emotional rapport building, and facilitation and patient activation^{31, 36} (Table 2). Positive rapport building includes behaviors meant to establish a warm rapport with the patient and demonstrate a shared understanding of a situation; emotional rapport building involves behaviors meant to establish a connection with the patient's emotional experience; facilitation and patient activation includes behaviors meant to encourage patient confidence and increase patient autonomy^{36, 37}.

After reviewing each interaction in total, the coders rated the physician on 5 RIAS global affect scales: interest/attentiveness, friendliness/warmth, responsiveness/engagement, sympathy/empathy, and hurried/rushed. Global affect ratings were determined by the vocal quality of the speaker as well as the content of the dialogue³⁵. Ratings for each affective domain were assigned on Likert scales ranging from 1 (low) to 6 (high) (Table 2). There was 98.5% agreement across the scales within 1 scale point, which is the criterion for agreement established by the RIAS developers³⁸. A positive affect composite variable was created by summing the global affect ratings; prior to summing the variables, hurried/rushed was reverse coded³⁹. Internal consistency for the positive affect variable was good (Cronbach's $\alpha = 0.90$).

Data Analysis

Descriptive statistics were used to evaluate the sociodemographic characteristics of the sample. Means and standard deviations were calculated for RIAS composites, individual behaviors, and the summary affect score. Associations between RIAS variables and patient and companion age and gender, and patient disease severity, were also examined. Associations between RIAS composite variables and sociodemographics were analyzed using simultaneous linear and binary logistic regressions; associations between the summary affect score and sociodemographics were analyzed using Pearson correlations. All of the statistical analyses were implemented with SPSS 13.0⁴⁰.

RESULTS

Overall, physicians exhibited use of a range of patient-centered communication (Table 2). Significant differences were detected in the average use of the three RIAS composite behaviors using a one-way analysis of variance (ANOVA), $F(2,159) = 34.72$, $p < 0.001$. Post hoc analyses indicated that physicians engaged in more positive rapport building (mean = 28.04, SD = 17.55, $p < 0.001$) and facilitation and patient activation (mean = 23.22, SD = 15.85, $p < 0.001$) per session as compared to emotional rapport building (mean = 6.59, SD =

5.63) (Figure 1). Although each of the 15 behaviors appeared at least once in the conversations that were analyzed, some individual disclosure sessions included no instances of select behaviors. Below we note verbatim examples of the RIAS codes to further characterize what physicians were saying to patients and companions.

Positive Rapport Building

The most frequent positive rapport building behavior was physician agreement with the patient/companion (mean = 13.83 instances per session) using statements such as “Yes,” “I agree,” and “Absolutely.” Physicians were also relatively frequent in showing approval toward the patient or companion (mean = 9.89), which included comments such as, “You are doing the right things” and “I have to commend you on the excellent work you are doing.” The physicians laughed or told jokes with moderate frequency (mean = 4.31).

Facilitation and Patient Activation

Physicians most frequently exhibited facilitation and patient activation through use of back channeling (mean = 9.54) to signal interest and attentiveness to the speaker without taking the floor, such as, “Mm hmm,” “Okay,” and “Yeah.” The physicians were moderately frequent in confirming their own understanding of a situation with questions such as, “Do I have that right?” They also asked for patient and companion understanding (mean = 5.24) with questions including, “Does that make sense to you?” and “What was I saying that might be the reason why the memory is changing?” Less frequent did the physicians ask for the patient or companion’s opinion (mean = 2.63); when this did occur, it usually took the form of the physician inquiring, “Any questions or thoughts?” Physicians rarely asked for reassurance that the patient would comply with a request (mean = 0.04), or for permission to give the patient information or proceed with the session (mean = 0.04).

Emotional Rapport Building

In contrast to the other behaviors, physicians were relatively infrequent in their use of emotional rapport building behaviors. They rarely offered statements of reassurance or optimism (mean = 3.80), which included evaluative statements such as, “Your performance on a lot of our testing today was great,” and “It looks to me like you’re going to be around for a long time.” Physicians were infrequent in expressing concern or worry by saying things such as, “I am a little bit worried about your driving” (mean = 1.67). They demonstrated very few instances of expressing empathy (mean = 0.41) or legitimizing patient or companion feelings (mean = 0.26). Physician also rarely engaged in self-disclosure (mean = 0.43) or conveyed a sense of partnership with the patient or companion (mean = 0.04).

As a group, physicians were quite varied from one another in their use of positive rapport building, emotional rapport building, and facilitation and patient activation techniques (Figure 1). Between-physician variability was determined by calculating the mean frequency of each composite for each physician and calculating the standard deviation of those means. This was compared to within-physician variability, which was determined by obtaining the standard deviation of each composite behavior per physician and calculating the average of these standard deviations. There was greater variability between physicians in the use of facilitation/patient activation (average $SD = 11.46$), positive rapport building (average $SD = 13.45$), and emotional rapport building (average $SD = 4.49$) than within physicians (average $SD = 8.75, 8.96, 2.81$, respectively). Additionally, individual physicians were relatively consistent in their use of patient-centered behaviors across all three composite variables. One-tailed Spearman’s rank correlations were significant between facilitation and patient activation and positive rapport building ($\rho = 0.67, p < 0.05$), facilitation and patient activation and emotional rapport building ($\rho = .71, p < 0.05$), and positive rapport building and emotional rapport building ($\rho = 0.81, p < 0.01$), suggesting that if a physician tended to

use a relatively frequent amount of positive rapport building, she was also relatively frequent in her use of facilitation and patient activation and emotional rapport building. One-tailed Spearman's rank correlations between physician positive affect ratings and positive rapport building ($\rho = 0.93, p < 0.01$), emotional rapport building ($\rho = 0.86, p < 0.01$), and facilitation and patient activation ($\rho = 0.77, p < 0.05$) were also significant, suggesting that physicians who engaged in greater amounts of patient-centered behaviors also tended to exhibit higher positive affect. Individual disclosure sessions varied in length from 3.93 to 33.52 minutes (mean = 14.76). There was greater variability in session length across physicians (average $SD = 7.50$ minutes) than within physicians (average $SD = 3.06$ minutes), further suggesting that each physician adopted a relatively similar style across interactions.

Prior to conducting multivariate analyses, we examined the physician variables for univariate normality. One-sample Kolmogorov-Smirnov tests of the behavioral and positive affect composites indicated that the variables were normally distributed. Binomial logistic regression analyses, controlling for session length, demonstrated that there was no relationship between the three RIAS composite variables and the dependent variables of patient dementia severity or patient/companion gender; omnibus tests of model coefficients indicated $p > 0.10$ for all analyses. Pearson correlations demonstrated no relationship between physician positive affect and dementia severity ($r = 0.02, p > 0.90$) or patient ($r = -0.22, p > 0.10$) or companion gender ($r = 0.21, p > 0.10$). Hierarchical linear regressions, controlling for session length, were conducted between the three RIAS composites and the dependent variables of patient and companion age; three companions were excluded due to missing information on age. The analyses demonstrated no relationship between patient ($\Delta R^2(3, 49) = 0.03, p > 0.60$) or companion ($\Delta R^2(3, 46) = 0.01, p > 0.90$) age and the three behavioral composites. Pearson correlations indicated no relationship between positive affect and patient ($r = -0.21, p > 0.10$) or companion ($r = 0.12, p > 0.90$) age.

DISCUSSION

Patient-centered communication is recommended in conversations with patients, and may be particularly important when communicating with dementia patients and their families. In the current study, overall, physicians exhibited some patient-centered behaviors during the disclosure of a dementia diagnosis, but many of these behaviors were infrequent. Most frequent was the use of positive rapport building behaviors, followed by facilitation and patient activation. In these situations, physicians are attempting to establish a shared understanding with the patient and actively solicit the patient's perspective. These techniques may be beneficial when working with people with dementia; they allow the physician to monitor the patient's comprehension of important information as well as to encourage patient independence. In contrast, least frequent was the use of emotional rapport building. Given the sensitive and life-changing nature of the diagnostic information being disclosed, as well as the implications it has for future patient health and caregiver responsibility, the low frequency of emotional behaviors was unexpected. The use of emotional rapport building techniques, such as demonstrating empathy, may be of particular importance in dementia care, as they have been associated with positive outcomes in patients with other diseases. For example, prior research with cancer patients has demonstrated that higher ratings of physicians on empathy behaviors are associated with greater patient satisfaction, higher self-efficacy regarding their ability to cope with the disease and treatments, and lower emotional distress⁴¹. Likewise, use of empathy during conversations about HIV risk has been associated with reduced patient anxiety⁴². Taken together, these findings suggest an important role for emotional rapport building in medical communication regarding serious diseases.

The physicians in the present study may have faced several challenges that resulted in relatively less emotional rapport building. The diagnosis of dementia may be a solemn event, and some physicians may find it difficult to integrate expressions of emotion and empathy when they are communicating this difficult news. Further, the presence of cognitive deficits may affect the patient's ability to comprehend the implications of a dementia diagnosis, and physicians may consequently spend more time clarifying biomedical information rather than engaging in emotional communication. It is worth noting that the diagnostic feedback sessions in the present study occurred at a clinic specializing in Alzheimer's disease and other dementias, where the physicians provide relatively structured feedback that may not capture the variability of diagnostic consultations in the community. Most people rely on primary care physicians to screen for the development of dementia⁴³, where the physician may have established rapport with the patient prior to concerns about possible dementia; in that context, emotion-oriented communication may be more common. In our sample, the research-oriented role of the physician may have resulted in fewer emotional rapport building behaviors such as establishing a sense of partnership in making decisions.

The presence of a companion during the feedback also may be related to the physician's use of patient-centered communication, particularly facilitating behaviors. For example, if the physician determines that the companion can understand the information being provided, he or she may be less likely to ask about their understanding. The patients in the current study were also actively seeking evaluation of their cognition and were subsequently diagnosed relatively early in their disease progression. It may be possible that physicians do not utilize patient-centered behaviors such as emotional rapport building until patients and caregivers are experiencing and demonstrating overt distress associated with more severe symptoms, or as physicians are delivering more dire news regarding the patient's prognosis and ability to live independently. Patient-centered communication might be more important in future medical visits when the disease is in more advanced stages.

Another key finding from the current study is that the use of patient-centered behaviors appears to be more variable across physicians than within physicians. That is, physicians, as individual clinicians, tend to adopt a relatively consistent style when interacting with patients. This may be a reflection of their individual training, practice philosophy, and general personality alone or, more likely, in some combination. We found that the use of patient-centered behaviors was not associated with participant disease severity, age, or gender, further evidence that physicians tend to use a consistent style across patients and companions. Another recent study with patients who exhibited symptoms of depression also found that physician personality traits such as openness to feelings are associated with the use of patient-centered techniques, independent of patient presentation⁴⁴. Adopting a consistent style is not necessarily disadvantageous, but an overadherence to one approach may limit a clinician's flexibility in responding to the idiosyncratic needs of patients and companions for information and emotional support. For instance, some studies have suggested that older adults tend to want their physician to take a more authoritative role, although there is likely wide variability based on personal preference⁴⁵. Particularly in the case of dementia consultations – when the patient's symptoms may vary, when their disease is at different points in its progression, and when the people who accompany them can range in their relation to the patient and in their own needs during the conversation – physicians may need to modify their approach to diagnostic disclosure. This may be further complicated if a companion prefers a patient-centered approach, but more severe cognitive impairment in later stages of disease necessitates a more authoritative physician style.

To our knowledge, this is the first investigation of how physicians communicate a dementia diagnosis to patients and companions. Our study is also novel in that it focuses on the

medical interaction, rather than relying on retrospective impressions from physicians, patients, or companions collected after the diagnostic feedback session. At least two outstanding questions remain from this study. First, is there a genuine benefit to patient-centered behaviors? And second, can physicians be trained to increase their use of patient-centered communication skills? Regarding the latter question, previous work by Roter and colleagues³³ has suggested that physicians can be taught to understand and implement a variety of patient-centered techniques, including demonstrating empathy, asking for patient understanding, and conveying reassurance. Physicians also can learn to identify more effectively symptoms of distress, including depression, anxiety, somatization, and social isolation³³, which may be particularly useful in the context of revealing a dementia diagnosis. Additional work is necessary to evaluate whether all physicians are able to learn new communication techniques, and how the process likely interacts with individual personality, preference, and philosophy about healthcare communication. Regarding the first question, prior research has demonstrated that patient-centered communication may be associated with greater patient satisfaction and lower patient anxiety^{46, 47}. Further work is necessary to evaluate whether patient-centered behaviors during conversations about dementia influence patient or companion outcomes. Important outcomes may include proximal outcomes such as patient/companion satisfaction with the physician, comprehension of the diagnosis and treatment recommendations, and perceived credibility of the information that was received. It is also possible that patient-centered behaviors could have an impact on how much information patients and companions retain during an understandably stressful diagnostic conversation. These factors may subsequently affect more distal outcomes, such as depression, anxiety, or compliance with treatment and care recommendations. In previous research, the significant effects of patient-centered communication on psychological outcomes occurred in visits that only included a patient and a physician, and more research may be necessary to find out if and how the presence of a companion influences physician behavior.

Study Limitations

The present study evaluates the extent to which physicians engaged in patient-centered behaviors, but it does not consider the frequency of these behaviors relative to other physician behaviors. Follow-up studies should consider how often these behaviors occur relative to other medically oriented tasks and whether this ratio affects psychological or other behavioral outcomes. Additionally, the current research was conducted in an Alzheimer's disease research clinic and may not reflect the variability of dementia diagnostic disclosure seen in primary care and other specialty clinics. The present study was also limited in that it did not evaluate individual physician disposition or personality. However, our findings of relative consistency using patient-centered behaviors within physicians, along with other work indicating that physician personality is related to the use of patient-centered communication⁴⁴, suggests that future studies should evaluate the extent to which personality traits influence physicians' ability or willingness to adapt their style for individual patients. Finally, several other outcomes of interest that may be relevant to dementia were not evaluated in this study, including patient and companion ratings of satisfaction with the visit and their perceived understanding of the diagnosis that was received. These and other proximal outcomes are important variables that may be affected by patient-centered communication and require further attention in subsequent studies.

CONCLUSION

The present study demonstrates that physicians adopt a range of patient-centered techniques during disclosure of a dementia diagnosis, though notably absent are behaviors to offer emotional support. Questions remain about why some physicians are more likely than others

to use patient-centered behaviors or why many of the behaviors occur infrequently. More research is needed to evaluate physician characteristics associated with their use of patient-centered techniques, along with the effects of using patient-centered communication on outcomes important to patients and companions. In addition, follow-up studies could examine the use of patient-centered techniques in other care settings where dementia diagnostic disclosure may be more variable. When physicians are sharing information about a dementia diagnosis, they have an opportunity to guide patients and companions through a difficult process, and we can do more to help physicians be effective.

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Figure 1.
Comparison of within-physician and between-physician variability in the use of patient-centered behaviors.
Note: N=8 physicians; two physicians who completed one visit each were excluded. Symbols denote individual physicians.

Table 1

Characteristics of physicians, patients, and companions.

	Physicians (n = 10)		Patients (n = 54)		Companions (n = 54)	
	M/n	SD/%	M/n	SD/%	M/n	SD/%
Age (yrs.)	—	—	74.13	8.34	65.57	12.50
Female	4	40%	33	61.1%	38	70.4%
White	8	80%	51	94.4%	50	92.6%
Education (yrs.)	—	—	14.37	3.13	14.85	2.65
ADRC Experience (yrs.)	8.20	7.30	—	—	—	—
Specialty						
Neurology	5	50%	—	—	—	—
Geriatrics	4	40%	—	—	—	—
Geriatric Psychiatry	1	10%	—	—	—	—
Diagnostic outcome						
CDR 0.5 (very mild dementia)	—	—	36	67%	—	—
CDR 1.0 (mild dementia)	—	—	18	33%	—	—
Dementia Type						
Dementia of the Alzheimer Type	—	—	46	85%	—	—
Frontotemporal Dementia	—	—	2	4%	—	—
Diffuse Lewy Body Disease	—	—	1	2%	—	—
Medication-Induced Cognitive Dysfunction	—	—	1	2%	—	—
Unclear	—	—	4	7%	—	—
Relationship to patient						
Spouse/Partner	—	—	—	—	34	63.0%
Child	—	—	—	—	12	22.2%
Other family	—	—	—	—	7	12.9%
Friend	—	—	—	—	1	1.9%

Table 2

Physician RIAS variables

Patient-Centered Behaviors	Mean	SD
Positive Rapport Building	28.04	17.55
Shows Agreement or Understanding	13.83	9.68
Shows Approval	9.89	6.15
Laughs, Tells Jokes	4.31	4.53
Facilitation and Patient Activation	23.22	15.85
Back Channels	9.54	11.51
Checks for Understanding	5.74	4.33
Asks for Understanding	5.24	6.85
Asks for Opinion	2.63	1.77
Asks for Reassurance	0.04	0.27
Asks for Permission	0.04	0.19
Emotional Rapport Building	6.59	5.63
Reassures, Encourages, or Shows Optimism	3.80	3.48
Concern/Worry	1.67	2.73
Self-Disclosure	0.43	0.94
Empathy Statements	0.41	0.88
Legitimizing Statements	0.26	0.65
Partnership Statements	0.04	0.19
Affect Ratings		
Positive Affect	18.68	3.32
Interest/Attentiveness	3.77	0.68
Friendliness/Warmth	3.77	0.76
Responsiveness/Engagement	3.77	0.76
Sympathetic/Empathetic	3.54	0.79
Hurried/Rushed	3.17	0.90

Note. RIAS physician behavior variables are tallied each time the behavior occurs during the interaction; RIAS affect ratings are scored from 1-6 and averaged between two raters.