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ORIGINAL ARTICLE

Defining the patient experience in medical oncology

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Abstract

Purpose Higher patient satisfaction is associated with improved health outcomes, treatment adherence, and quality of life. The goal of this study was to explore oncology patients' perceptions on their hospital experience, focusing on the quality of care in medical oncology.

Methods A qualitative and quantitative study design was implemented with a sample of 58 patients at Smilow Yale New Haven Hospital. Data were collected from patient interviews and observation of rounds.

Results Two themes emerged: hospital experience and physician communication skills. Within hospital experience, subthemes identified include: attended to (49%), facility/staff (35%), nurses (33%), long wait time (29%), doctors (20%), coordination of care (18%), unnecessary medical procedures (10%), medications (6%), night awakenings (4%), pain (4%), not getting better (4%), and decreased mobility (2%). Within physician communication skills, subthemes identified include: involving the patient and/or family in the care process (41%), method of information sharing (18%), lack of coordination of care (15%), use of medical jargon (10%), attending to patient's needs (8%), and lack of patient's perspective (8%). Patients reported that effective engagement of patients in the care process and attending to patient-specific needs were desired qualities in their hospital experience as well as patient-centered communication with their physician. The quantitative data supported qualitative results with 72% of patients giving the highest score in overall satisfaction with their patient experience.

Conclusion Physician attentiveness or lack thereof is a defining aspect of the quality of patient experience and physician communication. The results are intended to inform clinical and operational interventions that care providers might incorporate into practice.

Keywords Oncology · Patient experience · Patient satisfaction · Physician communication

Introduction

Patient experience and satisfaction are inextricably linked to the perceived relationship a patient has with their physician [3, 15, 17, 19, 23, 24, 27, 40]. Patient satisfaction has been associated with patients reporting good communication with their physician [24]. The quality of the physician-patient relationship is of great importance in medical oncology, in which breaking bad news, discussing priorities, and conversations about prognosis and death are frequent topics [2, 39].

Studies of oncology patients have found patients experience significant levels of psychological distress [18, 28] which has been linked to decreased survival, suboptimal quality of life, and increased healthcare utilization [32]. Oncology patients have cited their relationship with their physician as highly impactful in their psychological adjustment to cancer [16, 18] and care experience [13], and a source of support in assisting with distressing events [30]. In particular, oncology patients are looking for communication with their physician that allows them to feel guided, build trust, and sustain hope [1]. In fact, research has shown that patients with higher levels of hopelessness, distress, and maladaptive coping reported feeling that their physicians were disengaged and less supportive [29]. The patient-physician relationship also affected perception of pain intensity [12], understanding of information, satisfaction with medical care, degree of hopefulness, and ensuing psychological adjustment [2]. Unfortunately,

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research has found that oncologists are frequently unaware of patients' personal preferences, life priorities, and quality of life [28]. Furthermore, oncologists are often unaware of the full range of patient concerns [1] and are unable to meet patient information and emotional needs [18]. These unmet patient needs can make the creation of a positive patient-physician relationship more difficult.

An inpatient admission to the oncology unit is often a stressful time for patients [14]. Most admissions are for uncontrolled symptoms and may signal progression of disease or declining performance status [38] such that further anti-cancer treatments could be limited. Furthermore, patients are not likely to be cared for by their primary outpatient oncologist during a hospital admission. Inpatient attendings may not have met the patient before the admission and, though they may be oncologists who are adept at managing the medical issues requiring admission, the relationship may be established for the first time during the admission.

The goal of this study was to explore oncology patients' perceptions of their inpatient hospital experience, focusing on quality of care. Using a qualitative and quantitative approach, oncology patients were interviewed to assess experience with physician communication, best practices, and recommendations for improvement. Additionally, physician daily rounds were observed and specific communication styles were studied.

Methods

A qualitative and quantitative study design was implemented to explore patients' perceptions of their hospital experience, focusing on quality of care.

Sample

Patients admitted to the inpatient medical oncology and hematology units of Smilow Cancer Center at Yale New Haven Hospital were considered for eligibility. Eligibility criteria included adult oncology patients admitted during December 2016–July 2017. Of the 191 patients eligible, 90 declined and 43 were excluded, resulting in a final sample of 58 patients. Exclusion criteria included the following: non-English speaking, medically incapacitated, or unavailable > 2 occasions. Yale University IRB granted an exemption for this project as it met criteria for Quality Initiative Research. Consent to be interviewed was obtained from each patient.

Data collection

Interviews

The interview guide was modified with permission from Banka and colleagues to meet the needs of our research question and to reflect the oncology setting [3] (Supplemental A). Fourteen questions were added, five questions were modified, and five questions removed. During interviews, patients were asked to assign a grade for the quality of a physician's communication skills according to their perceptions, A being always/perfectly, B as mostly, C as sometimes/occasionally, and D as never. Letter grade definitions were described to each patient during the interview. Validation of the adapted guide was not performed. Interviews were conducted in person using the adapted interview guide. The interview guide consisted of a 26-question script that included open-ended questions and 4-point Likert scale questions that assessed providers' performance in a variety of patient communication domains. The interviewer was trained in performing qualitative interviews by one of the authors with extensive qualitative research experience (JPH). All interviews were recorded. Interviews averaged from 5.5 to 29.5 min with all questions addressed.

Observations

One hundred five physician-to-patient interactions were observed by one of the authors (AOA) during morning rounds over a three-month period. Behaviors observed included the frequency with which the physician introduced him or herself and clarified roles of the team and how often the physician sat at the eye level of the patient. Observations of patient-physician interaction were done before patient interviews and were collected using an abbreviated form of the REDE checklist [42]. Data obtained were used to compare to patients' assessment of physician actions in the interview guide. Of the final 58 patients, 83% were observed directly by the author during morning rounds.

Analysis

Coding

Interviews were conducted by one of the authors (AOA) and analyzed by two coders (AOA and AK). Each transcript was reviewed using the constant comparative method. Each transcript was independently coded; then, consensus coding was performed in which two authors examined each transcript, identified themes, and reviewed discrepancies until agreement was reached. After several rounds of consensus coding, a preliminary coding structure was created and used for remaining coding. The final coding scheme was applied to all transcripts and reviewed by the second author. A third reviewer (JPH) with extensive qualitative research experience independently reviewed and coded transcripts to confirm accuracy of the final coding scheme. Content thematic analysis was used to identify themes and observe for systemic deficiencies.

Data organization

Quantitative data were created from the qualitative data. Frequency counts on polar questions (yes or no) and 4-point Likert scale questions were calculated. Frequency counts of the subthemes that emerged from the data served to triangulate with qualitative data.

Results

The majority of patients (53%) were over 60 years old and 52% were male; lung and gastrointestinal cancer were the most common diagnoses. Table 1 depicts patient demographic information.

Thematic saturation, defined as the point in data coding when no new codes emerged [37], was reached after two-thirds of the interviews were completed but a decision was made to code the complete sample. Two major themes emerged from the qualitative data consensus analysis: hospital experience (Table 2) and physician communication skills (Table 3). Each major theme had multiple subthemes. All patients made comments in at least one major theme. Representative quotes for each subtheme are depicted in Tables 2 and 3. Within each table, each row depicts a subtheme, the frequency, percent, and representative quotes of the subtheme by column.

Major theme 1: Hospital experience

Experience was defined as all components of the patient's hospital stay separate from the patient's interaction with physicians. Twelve subthemes emerged as defining the hospital experience: (1) attended to, (2) facility/staff, (3) nurses, (4) long wait time, (5) doctors, (6) coordination of care, (7) unnecessary medical procedures, (8) medications, (9) night awakenings, (10) pain, (11) not getting better, and (12) decreased mobility. All quotes for each subtheme are depicted in Table 2. Of the 58 patients interviewed, 49 elaborated with specific statements.

Within attended to, patients described varying amounts and quality of attentiveness received, with 35% of patients describing high-level attentiveness from physicians while 14% described less than desired level of attentiveness from physicians.

Facility and staff were emphasized as contributing factors to hospital experience by 35% of patients. Twenty-nine percent of patients provided high ratings of quality of Yale's facility and staff while 6% of patients described that they were dissatisfied with their care from Yale and its staff.

Table 1 Patient demographics

Domain	# of patients (%)
All	58 (100)
Gender	58 (100)
Male	30 (52)
Female	28 (48)
Age	58 (100)
0–20	0 (0)
21–40	2 (3)
41–60	12 (21)
61–80	28 (48)
81+	3 (5)
Unknown	13 (22)
Primary cancer diagnosis	58 (100)
Breast	4 (7)
AML/CLL	2 (3)
GI	14 (24)
GU	9 (16)
Head & neck	3 (5)
Lung	14 (24)
Lymphoma	5 (9)
Melanoma	3 (5)
Neuroblastoma	1 (2)
Unknown	3 (5)
Race	58 (100)
Caucasian	52 (90)
Black	4 (7)
Asian	1 (2)
Did not respond	1 (2)
Ethnicity	58 (100)
Non-Hispanic	53 (9)
Hispanic, Latino	1 (2)
Hispanic, other, South American	1 (2)
Did not respond	3 (5)
Language mainly spoken at home	58 (100)
English	51 (88)
Spanish	1 (2)
Other	5 (9)
Did not respond	1 (2)
Highest education level	58 (100)
8th grade or less	0 (0)
Some high school but did not graduate	1 (2)
High school graduate or GED	19 (33)
Some college or 2-year degree	11 (19)
4-year college graduate	11 (19)
More than 4-year college	12 (20)
No response	4 (7)

Nurses were frequently mentioned as specific influencers of patients' hospital experience with 33% of patients describing them as consistent sources of comfort and care.

Long wait time for medications or staff assistance was described as a dissatisfactory component of the hospital experience by 29% of patients.

Doctors were described by 20% of patients as a source of "wonderful" care. Sixty-seven percent of comments about doctors were linked with nurses. In contrast, 52% of comments about nurses were made independent of doctors.

Coordination of care was frequently reported by patients to be a relevant component to their hospital experience. Twelve percent described confusing coordination of care while 6% reported pleasure at the quality of coordination of care provided.

Table 2 Hospital experience

Subthemes	# of patients (%)	Representative patient quotes
Attended to	17 (35)	"Everyone is very attentive, very concerned. Everyone has bent over backwards to make sure I'm comfortable. I have no complaints. I tell everyone I am so glad I am here."
	7 (14)	"sometimes I feel like the doctors do not talk or aren't as attentive as they should be and a lot of it comes from the nurses" "probably C [grade for how well doctors ask about needs], the nurses and PCAs probably ask more about needs" "I do not think they [doctors] were treating me right. They were more concerned with the situation but not in a sincerely caring way…nothing is personal or affectionate or really caring really" "I mean the doctors are great [but] you never see them. The nurses and PCAs do all the work…I even had some nurses who when I am having a bad day, are a shoulder to cry on. The doctors are like okay here nurse."
Facility/staff (e.g., Yale, Smilow, room)	14 (29)	"I think if you get a headache you should go to Yale. I do not care what the problem is, do not go to any other hospital anywhere on the planet. Go right to Yale. Do not pass go, do not collect $200. My opinion is you cannot get better treatment anywhere in the world." "they [staff] are over the top friendly. Over the top kind. They are just wonderful. Making the time here very pleasant."
	3 (6)	"…I had one bad day where the volunteer had an attitude and she did not want to walk me to the car"
Nurses	16 (33)	"…the nursing staff there is top notch. They are caring, they are professional. I cannot say enough about them to tell you the truth." "…the nurses, they have been great. Anytime I needed anything there was no hesitation, no nothing. They have been on top of it."
Long wait time	14 (29)	"we asked about a prescription for medical marijuana and it has taken a long time to get information on it" "I had an accident with diarrhea. The cleaning crew did not come until the next day and I had to use to the restroom, so I had to wipe down the area myself"
Doctors	10 (20)	"the doctors are wonderful" "[could not] appreciate more that they [doctors] are on a comfortable level so that you can feel comfortable enough to talk and they act concerned and caring and they do not just run in and run through the door…"
Coordination of care	3 (6)	"they check in with my primary oncologist. I like that they are coordinating my emergency care here with the rest of my care"
	6 (12)	"discharge did not feel that the planner did enough to help me and my family." "he [the doctor] came last minute to do it [a biopsy]. That frightened me that scared me…I would tell he should prepare better." "Having different doctors say we can do something for you and having their work reversed. Lack of departmental communication and the mindset, unable to think out of their own box." "not knowing who is in charge"
Unnecessary medical procedures	5 (10)	"we [patient and spouse] had a problem about putting a catheter and he was injured…he was not happy…he was so upset" "that there are too many unnecessary… [test and treatments] every 4 h at night when you are really not acute is too many" "a lot of techniques and procedures were interfering with each other…for the patient that is a problem."
Medications	3 (6)	"her [the patient] pills got you the patient] sick every time you [the patient] had them."
Night awakenings	2 (4)	"well they have to come in the middle of the night and check vitals"
Pain	2 (4)	"the pain it takes everything out of you"
Not getting better	2 (4)	"Not getting better. I am blotted. I am just…" "having to make too many decisions and not feeling well enough to do so"
Decreased mobility	1 (2)	"frustration in not walking around"

Table 3 Physician communication skills

Subthemes	# of patients (%)	Representative patient quotes
Involving the patient and/or family in the care process	11 (28)	"appreciate the way they [physicians] involve[d] me at each step of the care so I know what is going on" "she [the doctor] sits and asked personal questions, my reactions and feelings about the situation. I always felt like a person and not just another patient."
	5 (13)	"I believe you should talk to the patient…because I believe you should be asking her questions, telling her things because she is the one that will undergo those treatments" "the doctor just said it [the plan] and that was what she was going to do. She spoke with my daughters and not hardly with me." One spouse who was dissatisfied with her spouse's, the patient's, negative ratings of physicians on the quantitative component of the interview stated that, "most of the conversation is directed to me his wife. I would answer these questions [interview guide questions] differently." "it would have been helpful if they had communicated with the spouse" the doctor talked to me like I was trying to push what I wanted when she [the patient] was just out of it because the medication" "the doctors explain the plan "whether she [the patient] agrees with it or not."
Method of information sharing	7 (18)	"a lot of it [medical information] is TMI and my ability to absorb…but my own personal situation means I need a bit more understanding because I live alone." "I am so overwhelmed with information that any more time with my doctor would be stressful." "needed more repetition, more explanation and more time to digest it." "they [doctors] could be a bit more informative. Maybe I do not know as much about it as someone else would."
Lack of coordination of care	6 (15)	"lack of departmental communication and the mindset, unable to think out of their own box" "not knowing who is in charge" "Well the constant shifting around of you see one doctor and then he is done. I find that very hard because you feel that in a short period you will really get to know a doctor and then he will disappear and they are not very good at telling…they disappear and you never see them again. You feel confused"
Use of medical jargon	4 (10)	"sometimes they [doctors] get caught up in there you know what" "ask them a few questions [about what the words meant]" but that "if they [physicians] used big words they explained what it was." it sucks not being a doctor because you do not understand everything," after describing an experience with a medical student who "… was talking. She [the medical student] wasn't doing that in lay terms."
Attending to patient's needs	3 (8)	"my doctor is like my mom and I just felt that way when I came here. Just her demeanor, the way she talks to me, the way she explains things. I was a scared woman when I came in here and she just put me at ease."
Lack of patient's perspective	3 (8)	"it [making a meaningful connection] requires some perspective of the patient. They [doctors] have to try and understand what they [the patients] are dealing with." [the way a physician exited the room] "one of them said if you are done with me I can step out…it caught me off guard…when he came out with it, it wasn't great." "mindset of certain doctors who feel that this is it and they hear the word cancer and do not want to listen to what she [the patient] says and how she feels"

Thirty percent of patients described unnecessary medical procedures, medications, night awakenings, pain, not getting better, or decreased mobility to be sources of frustration and interruption within their hospital experience. See Table 2 for percent frequency of subthemes.

In general, patients commented that nurses, staff, and physicians made them feel cared for. Importantly, they emphasized the desire for being attended to and having organized, high-quality care in their hospital experience. Patients described the following subthemes exclusively in a negative context: long wait time, medical procedures, night awakenings, pain, not getting better, and decreased mobility, essentially noting discomfort with the administrative and psychosocial aspects of being an inpatient.

Major theme 2: Physician communication skills

Physician communication skills were defined as verbal and non-verbal components of exchange between patient and physician. Six subthemes emerged: (1) involving the patient and/or family in the care process, (2) method of information sharing, (3) lack of coordination of care, (4) use of medical jargon, (5) attending to patient needs, and (6) lack of patient's perspective. All quotes for each subtheme are depicted in Table 3. Of the 58 patients interviewed, 40 elaborated with specific statements.

Within involving patient and/or family in the care process, 28% of patients reported feeling adequately involved in their care while 13% of patients noted frustration with either their lack of involvement and over-involvement of family or their family's lack of involvement.

Within method of information sharing, 18% of patients reported feeling overwhelmed with the amount of material shared and preferred information that was provided in succinct briefings. Others noted the need for more information and repetition of information.

Lack of coordination of care was reported by 15% of patients to be a source of frustration due to changing doctors without notice, lack of clarity about who is in charge, and overall lack of communication amongst provider teams.

Ten percent of patients reported the use of medical jargon during communication with physicians, with all finding its use to be a language barrier due to their inability to "understand everything."

Patients noted attending to their needs to be an important quality in communication with physicians with 8% reporting feeling adequately tended to.

Patients reported that physician's lack of the patient's perspective was a crucial deterrent to quality communication. Specifically, 8% of patients noted that physician awareness and understanding of their perspective as it related to team dynamics and inpatient flow was frustratingly lacking.

In general, patients commented that effective engagement of the patient in the care process and attending to and understanding patient needs were important and necessary qualities in physician-patient communication while lack of such and disorganized coordination of care defined suboptimal physician-patient communication. Interestingly, the majority of patient comments on communication focused on aspects they found to be suboptimal.

Hospital experience and physician communication skills

Importantly, common subthemes of patient engagement, attending to patient needs, and coordination of care were described as determining aspects in overall patient satisfaction and quality analysis within both hospital experience and quality communication with physicians.

Quantitative and frequency data

Purpose

The purpose of quantitative data from observations and Likert scale questions were to observe how well patients' categorical assessment corresponded to observed actions during rounds or their qualitative assessment of care provided.

Observations and Likert scale-like physician action item questions

During morning rounds, physician teams were noted to introduce themselves and clarify individual roles in 56% of interactions. Similarly, 54% of the time the primary physician was observed to place him or herself at the patient's eye level during discussion.

Likert scale-like grades on quality of physician actions are shown in Table 4. C and D responses were grouped for simplicity of reporting. Across all questions, physicians received A (always/perfectly) grades < 80% of the time. Physicians had their lowest grade (graded C/D most frequently) on how well they communicate about treatment (15% C/D, somewhat/never). In all other questions, physicians received always/perfectly grades 72–79% of the time, with the highest score in the area of clarity of terminology (79%). Physicians received always/perfectly grade of 76% in sensitivity to physical and emotional needs. Seventy-five percent of patients gave always/perfectly grades in questions about educating the patient and family about their care. In the overall question on quality of patient experience, patients gave always/perfectly grade 72% of the time.

Amongst patients interviewed, they noted that the physician team always introduced themselves and described individual roles 72% of the time and that the primary physician placed him or herself at their eye level 43% of the time. Introducing team members and sitting at patient eye level are observations of attentiveness, a subtheme noted by patients to be of importance in determining satisfaction with hospital experience and physician communication. This discrepancy between observation and patient grades reveals that patients may significantly overestimate how often physician teams introduce themselves but are relatively accurate in recalling how often physicians sat with them. This observed inconsistency further supports the importance of attentiveness to patient satisfaction identified in the qualitative data.

Table 4 Physician action items Likert scale-like questions

Questions ("how well did…")	A ("always/ perfectly")	B ("mostly")	C/D ("sometimes/ never")
	# of patients (%)	# of patients (%)	# of patients (%)
Introduce themselves & describe roles ($n = 58$)	42 (72)	15 (26)	1 (2)
Communicate treatment plan, length of treatment & impact of treatment ($n = 58$)	34 (59)	15 (26)	9 (15)
Assess needs ($n = 58$)	44 (76)	7 (12)	7 (12)
Meet needs ($n = 52$)	38 (73)	10 (19)	4 (8)
Reply to questions & request promptly ($n = 58$)	42 (72)	13 (22)	3 (5)
Sensitive to physical & emotional needs ($n = 55$)	42 (76)	10 (18)	3 (5)
Understandable vocabulary ($n = 57$)	45 (79)	11 (19)	1 (2)
Educate you & your family about your care ($n = 55$)	41 (75)	11 (20)	3 (5)
Exit politely & describe the next steps ($n = 57$)	44 (77)	10 (18)	3 (5)
With your physician relationship in mind please rate your patient experience ($n = 58$)	42 (72)	14 (24)	2 (3)

*Patients who did not respond to question, or did not respond within response categories were omitted

Discussion

This study found that feeling attended to is important in shaping the patient experience. Specifically, having persistent attentiveness from physicians, a non-interrupted hospital environment, and organized, high-quality coordinated care defined a satisfactory hospital experience while suboptimal quality in any of these areas defined a dissatisfactory experience. Within physician communication, we found that having patient-centered care, which includes effective engagement of the patient, attending to patient needs, and understanding the patient perspective, defines quality communication while suboptimal quality in any of these areas defined dissatisfactory communication. All subthemes were noted less than 50% of the time, indicating that important areas of dissatisfaction were identified at this level and should be addressed. All subthemes described positively in hospital experience included either the concept of attentiveness or mention of select groups (i.e., nurses, doctors, and staff) who provided attentive care, thereby emphasizing that the most important aspect to creating a satisfactory hospital experience is engagement of the care team. Similarly, within the theme of physician communication skills, physician attentiveness to patient needs was highlighted as a contributing factor to high-quality communication. Along with attentiveness, nurses were found to be highly ranked in creating a satisfactory patient experience. Other studies have also found that nurses have been highly ranked as contributing to a satisfactory patient experience [27, 41].

Subthemes described as dissatisfactory, such as lack of coordination of care, involvement of the patient and/or family in the care process, method of information sharing, and medical jargon, were again related to physician inattentiveness. Research has shown that oncology patients want emotional support from physicians [19, 32], their families involved in their care [13], accessible information sharing, and to participate in the decision-making during the treatment process [6, 7, 20, 21, 26]. The discrepancy between patient communication needs and physician actions is not necessarily due to intentional neglect but possibly due to patient reliance on "ambiguous and indirect hints or cues" [32] to express emotion which may be difficult for providers to interpret. In addition, there is the common phenomenon of miscommunication in oncology in which information shared by the provider is believed to be complete or adequately explained but is in fact misinterpreted by patients [26].

Our findings emphasize the need of physician attentiveness that can appropriately recognize and respond to individual patient needs. It is important to note that patient satisfaction scales often show significant positive skew in responses [6, 7]. As a result, areas of dissatisfaction identified may be even more prevalent than reported here. Research has shown that there are many reasons for heterogeneity in information preferences, such as cross-cultural variation [9, 39], differences in processing large amounts of information [17], and variation in preferences of the patient and caregiver [28]. As such, oncologists must acknowledge this individual need if they want positive patient-physician relationships. Communication skills training, based on patient preferences, has been demonstrated to enhance the patient experience [19]. As a result, further research geared to creating a training program to create an environment that allows and encourages attentive individualized care can be designed to address our results. As patients also noted medical student communication style as shaping their perception of physician communication, medical students should be included in such communication training.

Patients defined wait time, medical procedures, medications, night awakenings, pain, not getting better, and decreased mobility as frustrating aspects of their hospital experience. These subthemes can be grouped together under the umbrella term of hospital environment, which include the administrative and psychosocial aspects of being an inpatient. The overall negative view of the hospital environment is unsurprising as research has found that administrative aspects such as noise and quality of pain control were important features that influenced the patient experience [27].

Amongst oncologists, a wide array of communication skills has been strongly linked to patient satisfaction in the literature. In particular, some communication skills have been shown to interfere with the creation of patient-centered care. Those communication skills included "broadcasting" in which physicians share information in long uninterrupted monologs [10], minimal use of questions to assess psychosocial health of patients [18], exclusive use of close-ended questions, and avoidance strategies [35]. The variety of suboptimal communication skills likely reflects the fact that up until the late 1990s, oncologists self-reported insufficient communication skills training [16]. As a result, intervention efforts to improve physician communication with patients have become more widespread and include interventions such as perspective training, integrated case conference, and intensive psychosocial and communication skills training (CST) [4, 5, 19, 33, 34]. Notably, CST programs have been repeatedly shown to improve communication skills of oncology clinicians [35] in addition to their attitudes and beliefs towards addressing certain topics such as psychosocial issues [25]. The positive results of such interventions show that increasing physician awareness of patient needs can significantly improve patient satisfaction [4, 5, 19, 33, 34].

Our results align with recommendations from existing empirically validated and widely used communication skills training programs such as VitalTalk and Comskil. VitalTalk offers online communication tools, including training courses and checklist, in addition to in-person physician workshops to assist physicians in improving their communication skills. Comskil programs aim to train physicians and other healthcare professionals in how to effectively communicate with patients with cancer via program modules typically taught in small-group workshops in a format that emphasizes role plays with simulated patients [22]. VitalTalk's communication tools [11] used for discussing prognosis, serious illness, and goals of care [40], and the Comskil Model [8] collectively recommend incorporation of patient preference when information sharing, minimizing jargon, and responding to patient displayed emotion. All of these were areas reported by our patients to be lacking and provide opportunity to enhance training aimed at improving the patient experience.

Quantitative data asking patients to assess how well physicians performed, resulted in an average of 70% A (perfectly) grades overall except in communication about treatment where only 59% of patients gave a perfect grade. This finding supports the qualitative interviews, suggesting communication was lacking as part of the patient experience. In general, we found the grades assigned corresponded with the qualitative analysis.

Research has shown the value of sitting in improving the patient-physician relationship [31, 36]. We observed half of the time physicians sat (54%) and that the majority of patients remembered those efforts (43%). As a result, effort needs to be made to encourage and facilitate physician sitting during patient interactions. Furthermore, observations revealed that patients focused on aspects that are meant to build a close patient-physician relationship: team introductions and sitting. Interestingly, patients even overestimated the frequency of these behaviors, further supporting the importance of those aspects to them.

Agreement in themes from the qualitative-quantitative approach shows effectiveness of methods in exploring patients' perceptions on quality of care. The study intends to inform clinical and operational practices physicians can incorporate into their patient relationships. These data are being incorporated into the Academy of Communication in Healthcare Relationship-Centered Communication Workshop for MDs and RNs at YNHH.

Limitations identified in the study include single-institution study, inability to include non-English speaking patients, narrow patient demographics, such as having a predominantly older age patient population, variable interview length, and non-response bias all of which decrease generalizability of results. Interestingly, in shorter interviews, patients still provided expanded qualitative descriptions of their perception of their care; however, they provided more immediate descriptions (i.e., less pauses) and used more succinct descriptors.

Conclusions

Our study demonstrated that physician attentiveness or lack thereof is a defining aspect of the quality of the patient experience. It is an important quality in communication and patients perceived, in this study, that their needs were not being fully addressed. Based on these results, the following are practices that physicians can incorporate into daily operations to improve patient satisfaction: (1) partner with nursing colleagues to work as a team to develop effective communication skills in patient attentiveness, (2) sit at eye level of patient, (3) decrease use of medical jargon, and (4) utilize reiterative inquiry about patient preferences for method of information sharing and desired family involvement.

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Compliance with ethical standards

IRB exemption was granted for QI research. Informed consent was obtained from each participant.

Conflict of interest Ashley Odai-Afotey, Janet Hafler, and Andrea Kliss have no conflict of interest to disclose. Dr. Tara Sanft has a consulting/advisory role on and honoraria status for biotheranostics and received funding from them.

References

1. Back AL, Arnold RM, Baile WF, Tulsky JA, Fryer-Edwards K (2005) Approaching difficult communication tasks in oncology. CA Cancer J Clin 55:164–177
2. Baile WF, Buckman R, Lenzi R, Glober G, Beale EA, Kudelka AP (2000) SPIKES-A six-step protocol for delivering bad news: application to the patient with cancer. Oncologist 5:302–311
3. Banka G, Edgington S, Kyulo N, Padilla T, Mosley V, Afsarmanesh N, Fonarow GC, Ong MK (2015) Improving patient satisfaction through physician education, feedback, and incentives. J Hosp Med 10:497–502
4. Bayona J, Goodrich TJ (2008) The integrative care conference: an innovative model for teaching at the heart of communication in medicine. Teach Learn Med 20:174–179
5. Blatt B, LeLacheur SF, Galinsky AD, Simmens SJ, Greenberg L (2010) Does perspective-taking increase patient satisfaction in medical encounters? Acad Med 85:1445–1452
6. Bredart A, Bouleuc C, Dolbeault S (2005) Doctor-patient communication and satisfaction with care in oncology. Curr Opin Oncol 17:351–354
7. Bredart A, Razavi D, Robertson C, Didier F, Scaffidi E, Fonzo D, Autier P, de Haes JC (2001) Assessment of quality of care in an oncology institute using information on patients' satisfaction. Oncology 61:120–128
8. Brown RF, Bylund CL (2008) Communication skills training: describing a new conceptual model Academic medicine. J Assoc Am Med Coll 83:37–44
9. Butow PN (2009) Giving and using information: what we know and don't know. Patient Educ Couns 77:149–150
10. Chhabra KR, Pollak KI, Lee SJ, Back AL, Goldman RE, Tulsky JA (2013) Physician communication styles in initial consultations for hematological cancer. Patient Educ Couns 93:573–578
11. Childers JW, Back AL, Tulsky JA, Arnold RM (2017) REMAP: a framework for goals of care conversations. J Oncol Pract 13:e844–e850
12. Corli O, Martoni AA, Porcu L, Roberto A, Pinto C, Torri V, Guglieri I, Zagonel V, Oncology ESP (2016) Non-clinical factors influencing pain intensity in cancer patients: socio-cultural-economic status, awareness of disease and the relation with the oncologist. Eur J Intern Med 33:E18–E19
13. Datta SS, Tripathi L, Varghese R, Logan J, Gessler S, Chatterjee S, Bhaumik J, Menon U (2017) Pivotal role of families in doctor-patient communication in oncology: a qualitative study of patients, their relatives and cancer clinicians. Eur J Cancer Care 26
14. Dougherty M (2010) Assessment of patient and family needs during an inpatient oncology experience. Clin J Oncol Nurs 14:301–306
15. Doyle C, Lennox L, Bell D (2013) A systematic review of evidence on the links between patient experience and clinical safety and effectiveness. BMJ Open 3:e001570
16. Fallowfield L, Jenkins V (1999) Effective communication skills are the key to good cancer care. Eur J Cancer (Oxford, England : 1990) 35:1592–1597
17. Fallowfield LJ (2008) Treatment decision-making in breast cancer: the patient-doctor relationship. Breast Cancer Res Treat 112(Suppl 1):5–13
18. Ford S, Fallowfield L, Lewis S (1996) Doctor-patient interactions in oncology. Soc Sci Med(1982) 42:1511–1519
19. Fujimori M, Shirai Y, Asai M, Kubota K, Katsumata N, Uchitomi Y (2014) Effect of communication skills training program for oncologists based on patient preferences for communication when receiving bad news: a randomized controlled trial. J Clin Oncol : Off J Am Soc Clin Oncol 32:2166–2172
20. Hagerty RG, Butow PN, Ellis PA, Lobb EA, Pendlebury S, Leighl N, Goldstein D, Lo SK, Tattersall MH (2004) Cancer patient preferences for communication of prognosis in the metastatic setting. J Clin Oncol 22:1721–1730
21. Harder H, Ballinger R, Langridge C, Ring A, Fallowfield LJ (2013) Adjuvant chemotherapy in elderly women with breast cancer: patients' perspectives on information giving and decision making. Psycho-oncology 22:2729–2735
22. Hartung TJ, Kissane D, Mehnert A (2018) COMSKIL communication training in Oncology-adaptation to German cancer care settings recent results in cancer research Fortschritte der. Krebsforschung Progres dans les recherches sur le cancer 210: 191–205
23. Isaac T, Zaslavsky AM, Cleary PD, Landon BE (2010) The relationship between patients' perception of care and measures of hospital quality and safety. Health Serv Res 45:1024–1040
24. Janssen AL, MacLeod RD (2010) What can people approaching death teach us about how to care? Patient Educ Couns 81:251–256
25. Jenkins V, Fallowfield L (2002) Can communication skills training alter physicians' beliefs and behavior in clinics? J Clin Oncol : Off J Am Soc Clin Oncol 20:765–769
26. Jenkins V, Solis-Trapala I, Langridge C, Catt S, Talbot DC, Fallowfield LJ (2011) What oncologists believe they said and what patients believe they heard: an analysis of phase I trial discussions. J Clin Oncol : Off J Am Soc Clin Oncol 29:61–68
27. Jha AK, Orav EJ, Zheng J, Epstein AM (2008) Patients' perception of hospital care in the United States. N Engl J Med 359:1921–1931
28. LeBlanc TW, Bloom N, Wolf SP, Lowman SG, Pollak KI, Steinhauser KE, Ariely D, Tulsky JA (2018) Triadic treatment decision-making in advanced cancer: a pilot study of the roles and perceptions of patients, caregivers, and oncologists. Support Care Cancer : Off J Multinatl Assoc Support Care Cancer 26: 1197–1205
29. Meggiolaro E, Berardi MA, Andritsch E, Nanni MG, Sirgo A, Samori E, Farkas C, Ruffilli F, Caruso R, Belle M, Juan Linares E, de Padova S, Grassi L (2016) Cancer patients' emotional distress, coping styles and perception of doctor-patient interaction in European cancer settings. Palliat Support Care 14:204–211
30. Mehnert A, Lehmann C, Graefen M, Huland H, Koch U (2010) Depression, anxiety, post-traumatic stress disorder and health-related quality of life and its association with social support in ambulatory prostate cancer patients. Eur J Cancer Care 19:736–745
31. Merel SE, McKinney CM, Ufkes P, Kwan AC, White AA (2016) Sitting at patients' bedsides may improve patients' perceptions of physician communication skills. J Hosp Med 11:865–868
32. Porter LS, Pollak KI, Farrell D, Cooper M, Arnold RM, Jeffreys AS, Tulsky JA (2015) Development and implementation of an online program to improve how patients communicate emotional concerns to their oncology providers. Support Care Cancer : Off J Multinatl Assoc Support Care Cancer 23:2907–2916
33. Roter D, Rosenbaum J, de Negri B, Renaud D, DiPrete-Brown L, Hernandez O (1998) The effects of a continuing medical education programme in interpersonal communication skills on doctor

practice and patient satisfaction in Trinidad and. Tobago Medical education 32:181–189
34. Smith RC, Lyles JS, Mettler JA, Marshall AA, Van Egeren LF, Stoffelmayr BE, Osborn GG, Shebroe V (1995) A strategy for improving patient satisfaction by the intensive training of residents in psychosocial medicine: a controlled, randomized study. Acad Med 70:729–732
35. Stiefel F, Barth J, Bensing J, Fallowfield L, Jost L, Razavi D, Kiss A (2010) Communication skills training in oncology: a position paper based on a consensus meeting among European experts in 2009. Ann Oncol : Off J Eur Soc Med Oncol 21:204–207
36. Swayden KJ, Anderson KK, Connelly LM, Moran JS, McMahon JK, Arnold PM (2012) Effect of sitting vs. standing on perception of provider time at bedside: a pilot study. Patient Educ Couns 86:166–171
37. Urquhart C (2013) Grounded theory for qualitative research: a practical guide
38. Vandyk AD, Harrison MB, Macartney G, Ross-White A, Stacey D (2012) Emergency department visits for symptoms experienced by oncology patients: a systematic review. Support Care Cancer : Off J Multinatl Assoc Support Care Cancer 20:1589–1599
39. Watts KJ, Meiser B, Zilliacus E, Kaur R, Taouk M, Girgis A, Butow P, Goldstein D, Hale S, Perry A, Aranda SK, Kissane DW (2017) Communicating with patients from minority backgrounds: individual challenges experienced by oncology health professionals. Eur J Oncol Nurs : Off J Eur Oncol Nurs Soc 26:83–90
40. Weng HC, Hung CM, Liu YT, Cheng YJ, Yen CY, Chang CC, Huang CK (2011) Associations between emotional intelligence and doctor burnout, job satisfaction and patient satisfaction. Med Educ 45:835–842
41. Westbrook JI, Duffield C, Li L, Creswick NJ (2011) How much time do nurses have for patients? A longitudinal study quantifying hospital nurses' patterns of task time distribution and interactions with health professionals. BMC Health Serv Res 11:319
42. Windover AK, Boissy A, Rice TW, Gilligan T, Velez VJ, Merlino J (2014) The REDE model of healthcare communication: optimizing relationship as a therapeutic agent. J Patient Exp 1:8–13

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