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ORIGINAL RESEARCH

How Often Are Hospitalized Patients and Providers on the Same Page With Regard to the Patient's Primary Recovery Goal for Hospitalization?

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BACKGROUND: To deliver high-quality, patient-centered care during hospitalization, healthcare providers must correctly identify the patient's primary recovery goal.

OBJECTIVE: To determine the degree of concordance between patients and key hospital providers.

DESIGN: A validated questionnaire administered to a random sample of hospitalized patients alongside their nurse and physician provider. Goals included: "be cured," "live longer," "improve/maintain health," "be comfortable," "accomplish a particular life goal," or "other."

SETTING: Major academic hospital in Boston, Massachusetts.

PARTICIPANTS: Adult patients admitted for more than 48 hours from November 2013 to May 2014 were eligible. When a patient was incapacitated, a legal proxy was interviewed. The nurse and physician provider were then interviewed within 24 hours.

MEASUREMENTS: Frequencies of responses for each recovery goal and the rate of concordance among the patient, nurse, and physician provider were measured. The frequency of responses across groups were compared using adjusted χ^2 analyses. Inter-rater agreement was measured using 2-way Kappa tests.

RESULTS: All 3 participants were interviewed in 109 of the 181 (60.2%) patients approached (or with proxy available). Significant differences in selected goals were observed across respondent groups ($P < 0.001$). Patients frequently chose "be cured" (46.8%). Nurses and physician providers frequently selected "improve or maintain health" (38.5% and 46.8%, respectively). All 3 participants selected the same goal in 22 cases (20.2%). Inter-rater agreement was poor to slight for all pairs (kappa 0.09 [−0.03-0.19], 0.19 [0.08-0.30], and 0.20 [0.08-0.32] for patient-physician, patient-nurse, and nurse-physician, respectively).

CONCLUSIONS: We observed poor to slight concordance among hospitalized patients and key medical team members with regard to the patient's primary recovery goal. *Journal of Hospital Medicine* 2016;11:615–619. © 2016 Society of Hospital Medicine

Patient-centered care has been recognized by the Institute of Medicine as an essential aim of the US healthcare system.[1] A fundamental component of patient-centered care is to engage patients and caregivers in establishing preferences, needs, values, and overall goals regarding their care.[1] Prior studies have shown that delivering high-quality patient-centered care is associated with improved health outcomes, and in some cases, reduced costs.[2–7] Payors, including the Centers for Medicare and Medicaid Services under the Hospital Value-Based Purchasing program, are increasingly tying payments to measures of patient experience.[8,9] As more emphasis is placed on public reporting of these patient-reported outcomes, healthcare organizations are investing in efforts to engage patients and caregivers, including efforts at establishing patients' preferences for care.[10]

In the acute care setting, a prerequisite for high-quality patient-centered care is identifying a patient's primary goal for recovery and then delivering care consistent with that goal.[11–13] Haberle et al. previously validated patients' most common goals for recovery in the hospital setting into 7 broad categories: (1) "be cured," (2) "live longer," (3) "improve or maintain health," (4) "be comfortable," (5) "accomplish a particular life goal," (6) "provide support for a family member," or (7) "other."[13] When providers' understanding of these recovery goals are not concordant with the patient's stated goals, patients may receive care inconsistent with their preferences; it is not uncommon for patients to receive aggressive curative treatments (eg, cardiopulmonary resuscitation) when they have expressed otherwise.[14] On the other hand, when patient goals and priorities are clearly established, patients may have better outcomes.[15] For example, earlier conversations about patient goals and priorities in serious illness can lead to realistic expectations of treatment, enhanced goal-concordant care, improved quality of life, higher patient satisfaction, more and earlier hospice care, fewer hospitalizations, better patient and

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family coping, reduced burden of decision making for families, and improved bereavement outcomes.[16–18]

Although previous studies have suggested poor patient-physician concordance with regard to the patient's plan of care,[19–24] there are limited data regarding providers' understanding of the patient's primary recovery goal during hospitalization. The purpose of this study was to identify the patients' Haberle goal, and then determine the degree of concordance among patients and key hospital providers regarding this goal.

METHODS

Study Setting

The Partners Human Research Committee approved the study. The study was conducted on an oncology and medical intensive care unit (MICU) at a major academic medical center in Boston, Massachusetts. The oncology unit was comprised of 2 non-localized medical teams caring for patients admitted to that unit. The MICU was comprised of a single localized medical team. Medical teams working on these units consisted of a "first responder" (eg, intern or a physician assistant [PA]), medical residents, and an attending physician. Both units had dedicated nursing staff.

Study Participants

All adult patients (>17 years of age) admitted to the oncology and MICU units during the study period (November 2013 through May 2014) were eligible. These units were chosen because these patients are typically complex and have multiple medical comorbidities longer lengths of stay, and many procedures and tests. In addition, a standard method for asking patients to identify a primary recovery goal for hospitalization aligned well with ongoing institutional efforts to engage these patients in goals of care discussions.

Research assistants identified all patients admitted to each study unit for at least 48 hours and approached them in a random order with a daily target of 2 to 3 patients. Only patients who demonstrated capacity (determined by medical team), or had a legally designated healthcare proxy (who spoke English and was available to participate on their behalf) were included. Research assistants then approached the patient's nurse and a physician provider (defined for this study as housestaff physician, PA, or attending) from the primary medical team to participate in the interview (within 24 hours of patient's interview). We excluded eligible patients who did not have capacity or an available caregiver or declined to participate.

Data Collection Instrument and Interviews

Research assistants administered a validated questionnaire developed by Haberle et al. to participants after 48 hours into the patient's admission to provide time to establish mutual understanding of the diagnosis and prognosis.[13] We asked patients (or the designated healthcare proxy) to select their single, most important Haberle goal (see above). Specifically, as in the original validation study,[13] patients or proxies were asked the following question: "Please tell me your most important goal of care for this hospitalization." If they did not understand this question, we asked a follow-up question: "What are you expecting will be accomplished during this hospitalization?" Within 24 hours of the patient/proxy interview, we independently asked the patient's nurse and physician to select what they thought was the patient's most important goal for recovery using the same questionnaire, adapted for providers. In each case, all participants were blinded to the responses of others.

Measures

We measured the frequency that each participant (patient/proxy, nurse, and physician) selected a specific Haberle recovery goal across all patients. We measured the rate of pairwise concordance by recovery goal for each participant dyad (patient/proxy-nurse, patient/proxy-physician, and nurse-physician). Finally, we calculated the frequency of cases for which all 3 participants selected the same recovery goal.

Statistical Analyses

Descriptive statistics were used to report patient demographic data. The frequencies of selected responses were calculated and reported as percentages for each type of participant. The differences in rate of responses for each Haberle goal were compared across each participant group using χ^2 analysis. We then performed 2-way Kappa statistical tests to measure inter-rater agreement for each dyad.

RESULTS

Of 1436 patients (882 oncology, 554 MICU) hospitalized during the study period, 341(156 oncology, 185 MICU) were admitted for <48 hours. Of 914 potentially eligible patients (617 oncology, 297 MICU), 191 (112 oncology and 79 MICU) were approached to participate based on our sampling strategy; of these, 8 (2 oncology and 6 MICU) did not have capacity (and no proxy was available) and 2 (1 oncology and 1 MICU) declined. Of the remaining 181 patients (109 oncology and 72 MICU), we obtained a completed questionnaire from all 3 interviewees on 109 (60.2% response rate).

Of the 109 study patients, 52 (47.7%) and 57 (52.3%) were admitted to the oncology and medical intensive care units, respectively (Table 1). Patients were predominantly middle aged, Caucasian, English-speaking, and college-educated. Healthcare proxies were frequently interviewed on behalf of patients in the MICU. Housestaff physicians were more often interviewed in the MICU, and PAs were interviewed only on oncology units. Compared to patient responders, non-responders tended to be male and were admitted to

TABLE 1. Patient Characteristics

Characteristics	All Patients	Admitted to Medical Intensive Care Units	Admitted to Oncology Units
Total, no. (%)	109 (100%)	57 (52.3%)	52 (47.7%)
Gender, no. (%)			
Male	55 (50.5%)	28 (49.1%)	26 (50.0%)
Female	54 (49.5%)	29 (50.9%)	26 (50.0%)
Age, y, mean ± SD	59.4 ± 14	59.7 ± 15	59.1 ± 13
Median	61	61	60
Range	21–88	21–88	22–85
Race, no. (%)			
White	103 (94.5%)	53 (93.0%)	50 (96.2%)
Other	6 (5.5%)	4 (7.0%)	2 (3.8%)
Language, no. (%)			
English	106 (97.2%)	56 (98.1%)	50 (96.2%)
Other	3 (2.8%)	1 (1.9%)	2 (3.8%)
Education level, no. (%)			
Less than high school	30 (27.5%)	17 (29.8%)	13 (25.0%)
High school diploma	27 (24.5%)	18 (31.6%)	9 (17.3%)
Some college or beyond	52 (47.7%)	22 (38.6%)	30 (57.7%)
Patient or caregiver interviewed, no. (%)			
Patient	68 (62.4%)	27 (47.4%)	48 (92.3%)
Caregiver	41 (37.6%)	30 (52.6%)	4 (7.7%)
Nurse interviewed, no. (unique)	109 (75)	57 (42)	52 (33)
Physician provider interviewed, no. (%); no. unique			
Attending	27 (24.8%); 20	15 (26.3%); 10	12 (23.1%); 10
Housestaff	48 (44.0%); 39	42 (73.7%); 33	6 (11.5%); 6
Physician assistant	34 (31.2%); 25	0 (0%); 0	34 (65.4%); 25

NOTE: **Abbreviations:** SD, standard deviation. *Patients were interviewed as part of a unique patient admission.

oncology units (see Supporting Table 1 in the online version of this article).

The frequencies of selected Haberle recovery goals by participant type across all patients are listed in Table 2. Patients (or proxies) most often selected "be cured" (46.8%). Assigned nurses and physicians more commonly selected "improve or maintain health" (38.5% and 46.8%, respectively). "Be comfortable" was selected by nurses and physicians more frequently than by patients (16.5%, 16.5%, and 8.3%, respectively). The rate of responses for each Haberle goal was significantly different across all respondent groups ($P < 0.0001$). The frequencies of selected Haberle goals were not significantly different between patients or proxies ($P = 0.67$), or for patients admitted to the MICU compared to oncology units ($P = 0.64$).

Inter-rater agreement was poor to slight for the 3 participant dyads (kappa 0.09 [−0.03-0.19], 0.19 [0.08-0.30], and 0.20 [0.08-0.32] for patient-physician, patient-nurse, and nurse-physician, respectively). The 3 participants selected the identical recovery goal in 22 (20.2%) cases, and each selected a distinct recovery goal in 32 (29.4%) cases. Pairwise concordance between nurses and physicians was 39.4%. There were no significant differences in agreement between patients admitted to the MICU compared to oncology units ($P = 0.09$).

DISCUSSION

We observed poor to slight concordance among patients and key hospital providers with regard to identifying the patient's primary recovery goal during acute hospitalization. The majority of patients (or proxies), chose "be cured," whereas the majority of hospital providers chose "improve or maintain health." Patients were twice as likely to select "be cured" and half as likely to choose "be comfortable" compared to nurses or physicians. Strikingly, the patient (or proxy), nurse, and physician identified the same recovery goal in just 20% of cases. These findings were similar for patients admitted to either the MICU or oncology units or when healthcare proxies participated on behalf of the patient (eg, when incapacitated in the MICU).

There are many reasons why hospital providers may not correctly identify the patients' primary recovery goals. First, we do not routinely ask patients to identify recovery goals upon admission in a structured and standardized manner. In fact, clinicians often do not elicit patients' needs, concerns, and expectations regarding their care in general.[25] Second, even when recovery goals are elicited at admission, they may not be communicated effectively to all members of the care team. This could be due to geographically non-localized teams (although we did not observe a statistically significant difference between regionalized MICU and nonregionalized oncology care units), frequent provider-to-provider handoffs, and "siloed" electronic communication (eg, email, alphanumeric pages) regarding goals of care that inevitably leaves out key providers.[26] Third, healthcare proxies who are involved in decision making on the patient's behalf may not always be available to meet with the care team in person; consequently, their input may not be considered in a timely manner or reliably communicated to all members of the care team. We observed a large discrepancy in how often patients chose "be cured" compared to their hospital providers. This could be explained by clinicians' unwillingness to disclose "bad news" or divulge accurate prognostic information that causes patients to feel depressed or lose hope, particularly for those patients with the worst prognoses.[16,27,28] Patients may lack

TABLE 2. Primary Recovery Goal Reported by Patient, Physician Provider, and Nurse

Haberle Recovery Goal	Patient/Caregiver, no. (%), n = 109	Physician Provider, no. (%), n = 109*	Nurse, no. (%), n = 109
Be cured	51 (46.8%)	20 (18.3%)	20 (18.3%)
Be comfortable	9 (8.3%)	18 (16.5%)	18 (16.5%)
Improve or maintain health	32 (29.4%)	42 (38.5%)	51 (46.8%)
Live longer	14 (12.8%)	21 (19.3%)	12 (11%)
Accomplish personal goal	2 (1.8%)	0 (0%)	3 (2.8%)
Provide support for family	1 (0.9%)	1 (0.9%)	1 (0.9%)
Other	0 (0%)	7 (6.4%)	4 (3.7%)

NOTE: *Physician provider is defined as either a housestaff physician, physician assistant, or attending physician for the purposes of this study.

sophisticated knowledge of their conditions for a variety of reasons, including low health literacy, at times choosing to hope for the best even when it is not realistic. Additionally, there may be more subtle differences in what patients and hospital providers consider the primary recovery goal in context of the main reason for hospitalization and underlying medical illness. For example, a patient with metastatic lung cancer hospitalized with recurrent postobstructive pneumonia may choose "be cured" as his/her primary recovery goal (thinking of the pneumonia), whereas physicians may choose "improve/maintain health" or "comfort" (thinking of the cancer). We also cannot exclude the possibility that sometimes when patients state "be cured" and clinicians state "improve health" as the primary goal, that they are really saying the same thing in different ways. However, these are 2 different constructs (cure may not be possible for many patients) that may deserve an explicit discussion for patients to have realistic expectations for their health following hospitalization.

In short, our results underscore the importance of having an open and honest dialog with patients and caregivers throughout hospitalization, and the need to provide education about the potential futility of excessive care in situations where appropriate. Simply following patients' goals without discussing their feasibility and the consequences of aggressive treatments may result in unnecessary morbidity and misuse of healthcare resources. Once goals are clearly established, communicated, and refined in hospitalized patients with serious illness, there is much reason to believe that ongoing conversation will favorably impact outcomes.[29]

We found few studies that rigorously quantified the rate of concordance of hospital recovery goals among patients and key hospital providers; however, studies that measured overall plan of care agreement have demonstrated suboptimal concordance.[20,30,31] Shin et al. found significant underestimation of cancer patients' needs and poor concordance between patients and oncologists in assessing perceived needs of supportive care.[20] It is also notable that nurses and physicians had low levels of concordance in our study. O'Leary and colleagues found that nurses and physicians did not reliably communicate and often did not agree on the plan of care for hospitalized patients.[30] Although geographic regionalization of care teams and multidisciplinary rounds can improve the likelihood that key members of the care team are "on the same page" with regard to the plan of care, there is still much room for improvement.[26,32–34] For example, although nurses and physicians in our study independently selected individual recovery goals with similar frequencies (Table 2), we observed suboptimal concordance between nurses and providers (36.8%) for specific patients, including on our regionalized care unit (MICU). This may be due to the reasons described above.

There are several implications of these findings. As payors continue to shift payments toward value-based metrics, largely determined by patient experience and adequate advance care planning,[9] our findings suggest that more effort should be focused on delivering care consistent with patients' primary recovery goals. As a first step, healthcare organizations can focus on efforts to systematically identify and communicate recovery goals to all members of the care team, ensuring that patients' preferences, needs, and values are captured. In addition, as innovation in patient engagement and care delivery using Web-based and mobile technology continues to grow,[35] using these tools to capture key goals for hospitalization and recovery can play an essential role. For example, as electronic health record vendors and institutions start to implement patient portals in the acute care setting, they should consider how to configure these tools to capture key goals for hospitalization and recovery, and then communicate them to the care team; preliminary work in this area is promising.[10]

Our study has several limitations to generalizability. First, the study was conducted on 2 services (MICU and oncology) at a single institution using a sampling strategy where research assistants enrolled 2 to 3 patients per day. Although the sampling was random, the availability of patients and proxies to be interviewed may have led to selection bias. Second, the sample size was small. Third, the patients who participated were predominantly white, English-speaking, and well educated, possibly a consequence of our sampling strategy. However, this fact makes our findings more striking; although cultural and language barriers were generally not present in our study population, large discrepancies in goal concordance still existed. Fourth, in instances when patients were unable to participate themselves, we interviewed their healthcare proxy; therefore, it is possible that the proxies' responses did not reflect those of the patient. However, we note that concordance rates did not significantly differ between the 2 services despite the fact that the proportion of proxy interviews was much higher in the MICU. Similarly, we cannot exclude the possibility that patients altered their stated goals in the presence of proxies, but patients were given the option to be interviewed alone. Patients may also have misunderstood the timing of the goals (during this hospitalization as opposed to long term), although research assistants made every effort to clarify this during the interviews. Finally, our data-collection instrument was previously validated in hospitalized general medicine patients and not oncology or MICU patients, and it has not been used to directly ask clinicians to identify patients' recovery goals. However, there is no reason to suspect that it could not be used for this purpose in critical care as well as non–critical care settings, as the survey was developed by a multidisciplinary team that included medical professionals and was validated by clinicians who successfully identified a single, very broad goal (eg, "be cured") in each case.

CONCLUSION

We report poor to slight concordance among hospitalized patients and key hospital providers with regard to the main recovery goal. Future studies should assess whether patient satisfaction and experience is adversely impacted by patient-provider discordance regarding key recovery goals. Additionally, institutions may consider future efforts to elicit and communicate patients' primary recovery goals more effectively to all members of the care team, and address discrepancies as soon as they are discovered.

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