ORIGINAL RESEARCH

Physician and Patient Perspectives on Inpatients' Understanding of Their Care and Mixed Messages During Hospitalization

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ABSTRACT

Introduction: Patient understanding, improved communication between providers and patients, and patient engagement have been linked to improved patient health outcomes. However, factors such as the complexity and ever-changing nature of the hospital environment as well as complex patient conditions limit the above communication, in turn decreasing patient understanding and engagement. We wish to elucidate clinician views on patients' understanding of their care during hospitalization, as well as patient and clinician perspectives on possible solutions for improving patients' understanding.

Materials and Methods: Within two urban academic hospitals, we administered a survey to randomly selected inpatients who were admitted to general medicine service and who were on or past the third day of their hospitalization. We also conducted semi-structured interviews with clinicians who were identified through purposive sampling. Primary data were collected from February 2020 to November 2021. Thematic analysis was performed in Dedoose software on all qualitative data. Solutions suggested by both clinicians and patients were of particular interest.

Results: Patients suggested the use of visual aids (e.g., documents, pamphlets, cards, whiteboards) to help them understand (1) who was on their care team and (2) care team members' roles; clinicians relatedly mentioned use of technology, especially to display real-time updates for patients to better understand their hospitalization.

Conclusions: Our study corroborates findings from the literature, warranting further examination of patients' understanding through similar surveys and/or measures and the development, testing, and evaluation of intervention(s) based on suggestions from this and other studies.

INTRODUCTION

Patient understanding is integral to quality care and positive patient outcomes and enables the patient to be a partner in their own care.[1-3] Multiple studies have linked improved communication to better health outcomes, decreased adverse events, and shorter lengths of stay.[4,5] In addition, improved communication between providers and patients is associated with gains in patient experience measures like pain management and overall patient experience scores.[6-9] A prerequisite for patient engagement in their own care is understanding who is in charge of their care and what the care plan is.

However, because hospitalization is an intimidating life event during which individuals feel unwell and may be in an unfamiliar setting, patients tend to have poor understanding of their conditions, medications, and details on how to adhere to their treatment plans.[10] Further, contextual factors exist that may limit patients' understanding, including the complexity of hospital care teams, the dynamic nature of inpatient care, and the complexity of particular patient conditions.[10,11]

Prior studies provide evidence on the importance of patients' understanding of their care, such as the usefulness of interdisciplinary rounds but also the difficulty in coordinating them, especially with high rates of hospital staff turnover. Furthermore, limiting factors in those studies include a lack of generalizability to different types of hospitals as well as identifying the forms of communication among individuals and groups in the hospital, which warrant further research on where, how, or why misunderstandings occur–especially the patient-provider perspective on how to improve patient understanding.[12,13] In this study, we examine clinicians' views on patients' understanding of their care and explore patient and clinician perspectives on possible solutions for improving patient understanding during hospitalization.

MATERIALS AND METHODS

Our present study is part of a larger research effort examining inpatients' understanding of their care at two urban academic hospitals. Specifically, we conducted a survey that asked hospitalized patients how well they understood aspects of their care including their care team, clinicians' roles, and care plan—which revealed significant variation in patients' understanding of their care.[14] In addition, as we broadened the study to include clinicians' perspective on patients' understanding of their care, our study thus comprised two parts: select questions from a survey administered to hospitalized patients and semi-structured interviews with hospitalists and physician assistants. The IRB institution at each site approved our study.

Survey Instrument

We designed the survey instrument and captured data using the electronic tool REDCap, hosted at each study site.[15,16] The survey instrument was refined through consulting relevant literature, cognitive testing with members of a patient and family advisory council,[17] and pilot testing with 14 inpatients. Eligible participants were inpatients admitted to general medicine services and on or past the third day of their hospitalization. Six hospitalist physicians and two other members of our study team administered surveys in-person or by phone from February 2020 to November 2021 (an extended period because of delays due to the COVID-19 pandemic). The survey asked patients about their care team, information they received about their care, and the overall care they received during their hospital stay.

In this report, we focus on the following questions:

1) Would you find a document explaining the roles of your medical team members useful? (Yes/No)

2) What can we do to make who is in charge of your care clearer? (Free response)

3) What can we do to make the roles and responsibilities of the different members of your care team clearer? (Free response)

Qualitative Interviews

In addition to surveying patients, we developed a 9-question semi-structured interview guide to cover topics such as hospitalists' perception of patient knowledge on their care team and plan, the culture of their environment, rounding models, and other aspects of provider-patient communication. We used purposive sampling to invite hospitalists to participate in an interview, after which two members of our study team interviewed 8 individuals (6 hospitalists and 2 physician assistants) from Site 1 and 7 individuals (all hospitalists) from Site 2. Each interview was approximately 30 minutes in length and took place over Zoom. The interviews were audio-recorded and subsequently transcribed through Otter.ai.

Data Analysis

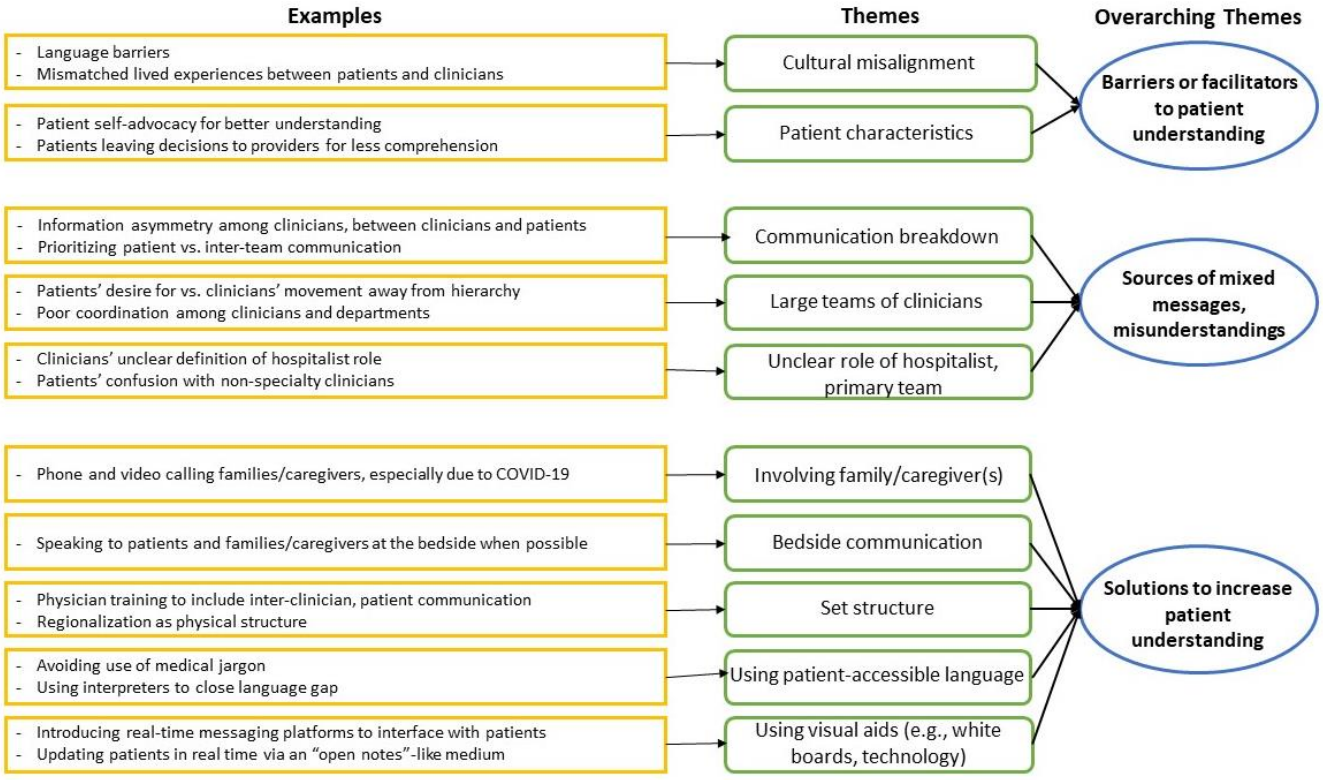
The first author performed thematic analysis on all qualitative data collected and discussed coded examples in detail with two other coauthors to further refine emergent themes. Our qualitative approach applied Braun & Clarke's phases of thematic analysis.[18] Specifically, we: 1) noted initial reactions and ideas from listening to interviews or reading patient responses; 2) coded notable features of the data in a systematic fashion; 3) collated codes into potential themes, gathering all data relevant to each potential theme; 4) reviewed themes to check relation to codes and general dataset; 5) defined and named themes, refining the specifics of each theme; and 6) selected compelling excerpts relating to the research questions and literature. Qualitative data analysis was performed in Dedoose.

For the patient survey data, the first author primarily followed Steps 2-5 to group patient responses by theme and then calculated descriptive statistics.

RESULTS

Ninety-six patients at Site 1 and 76 patients at Site 2 (n = 172) completed the survey. Figure 1 shows the data structure we developed highlighting examples and themes from our qualitative analysis. Through inductive coding, we grouped themes into three broad categories representing considerations of patients understanding: barriers and facilitators of patient understanding, sources of mixed messages and misunderstandings, and solutions to increase patient understanding of their care. We provide clinician views on each of these broad areas and conclude this section with patients' understanding of their care and perspectives on possible solutions to enhance patient understanding.

Figure 1. Overarching themes, themes, and codes from clinician interviews.



1. Clinician views

1.1. Barriers to patient understanding

Multiple clinicians described generally poor levels of patient understanding despite perceiving a high value of communication among those in hospital medicine. Barriers and facilitators to patient understanding of their care included themes of cultural misalignment and patient characteristics. In particular, *cultural misalignment* includes language barriers between English-speaking care team members and non-English-speaking patients as well as different lived experiences between clinicians and patients. One interviewee described the tension between discomfort from and acknowledgement of this misalignment:

"But the part that's harder for me to grapple with is, you know, when you as a physician are representative of either their patients' or families' values—they feel like they see you, or they see themselves in you. So that cultural alignment... actually really matters a lot… And I do feel badly when I know that... there have been times where patients or families have told me or my care team, 'You don't understand because you're not... Black'... or 'You're not a foreign worker'... I think those are really important though, to grapple with and to just accept, you know, and not just like, brush under the rug."

In terms of *patient characteristics* either helping or hindering understanding, clinicians brought up the idea of patient self-advocacy several times: Several participants supported clinicians' efforts in "engaging and respecting" patients as "active participants rather than passive recipients of information." Furthermore, many supported efforts to encourage engagement among patients. One clinician expressed that patient engagement also includes patients being able to relay information about their living situation outside of the hospital:

"But I think that I would encourage them to really be engaged... because they know themselves the best and are therefore the center of what we're doing... we can make all these great plans, and then you know, you go and you find out that they're not going to work because there's something about them or their house or their family or their financial situation that's gonna basically impede whatever plan that we made from following through...the communication has to go both ways."

Concurrently, however, many clinicians noted that patients' conditions while hospitalized (e.g., mental decline and general illness) and varying degrees of health literacy may also hinder this active participation.

1.2. Sources of mixed messages and misunderstandings

Interviewees cited three main sources of mixed messages and misunderstandings, specifically communication breakdowns, large teams of clinicians, and the role of the hospitalist and primary team being unclear. One participant noted that consulting teams do not always speak with the primary team before speaking with a patient "because of different workflows and different rounding priorities;" this demonstrates the complexity of patient care coordination that is often not apparent to patients, leading to information asymmetry (i.e., *a communication breakdown*) among different clinicians and especially between providers and patients.

Multiple interviewees recognized that the numerous moving parts of a patient's hospitalization could serve to further confuse patients, often presenting as issues that stem from *large teams of clinicians*. For example, one hospitalist noted that although interdisciplinary rounds are helpful for the patient to see the whole team— and in particular to interact with the intern, which is important for "the professional development of the intern"—they are hesitant to imply a hierarchy of care team members despite it potentially helping patients remember care team members more easily. In addition, multiple participants expressed that misunderstandings are more likely to happen "when there's many consultants involved" and when patients receive "a different perspective from a variety of people in a way that feels frustrating or contradictory."

The third major point of confusion was *defining and understanding the roles of a hospitalist and broader primary team*. One participant admitted their struggles with explaining their role as a hospitalist, noting that they have "tried many different ways" such as "the extension of [a patient's] primary care doctor." We can infer that providers' difficulty in clarifying this role likely contributes to patients not understanding the role of a hospitalist. Furthermore, one clinician also believed that patients are more likely to understand care on other services, such as the surgical service, where "it's very clear...[the] surgeon is in charge" versus "on the medical service...especially when patients have a lot of consultants."

1.3. Solutions for patient understanding

Five themes emerged in relation to improving patient understanding of their care: involving family and/or caregivers as patient advocates, bedside communication, a set structure, using patient-accessible language, and using visual aids such as existing or new technology and whiteboards.

With regard to *involving family and/or caregivers as patient advocates*, clinicians were especially supportive of looping in others who can advocate on behalf of the patient. Interviewees also spoke favorably of face-to-face interactions (i.e., *bedside communication*) with patients and their families and/or caregivers as the prime way to communicate; for example, an interviewee remarked that "there's no substitute for spending time in the room," noting that "authentic conversation" occurs best in this way—with both patients and their families and/or caregivers—although it was harder to do so given the ongoing COVID-19 pandemic visitor restrictions. This direct interaction allows for more nuance and clarification than, for example, information coming from an electronic health record.

Set structure appeared in interviews as another solution to improve patient understanding. Several clinicians wished for "some sort of a structure in place" or an intervention that would be administered "in a systematized fashion." One participant suggested a structure that could "inform clinicians on how and when is the best time in the day to speak to patients and their families about the [care] plan" as well as more training for patient communication in general. On the other hand, many hospitalists at Site 1 lauded regionalization of general medicine teams across the hospital's units as a current facilitator for inter-clinician communication, in turn hopefully bolstering consistent clinician-patient communication.

To interviewees, using *patient-accessible language* would enhance patients' understanding of their care. For example, interviewees suggested involving interpreters and avoiding medical jargon.

The last solution widely mentioned was the *use of technology and visual aids*. One clinician suggested a patient-interfacing equivalent of physicians' open notes, and another suggested iPads to display, for instance, information about a patients' care team and upcoming procedures or meetings. In particular, many participants discussed the importance of real-time updates in order to further prevent patients' confusion. One suggested technology comparable to Uber, where a patient "can visualize [...] how long the wait is, and what's the next step." They further stated that this could give patients control over their care during the hospitalization, because "right now, they have no control over it."

2. Patient views on solutions to improve understanding

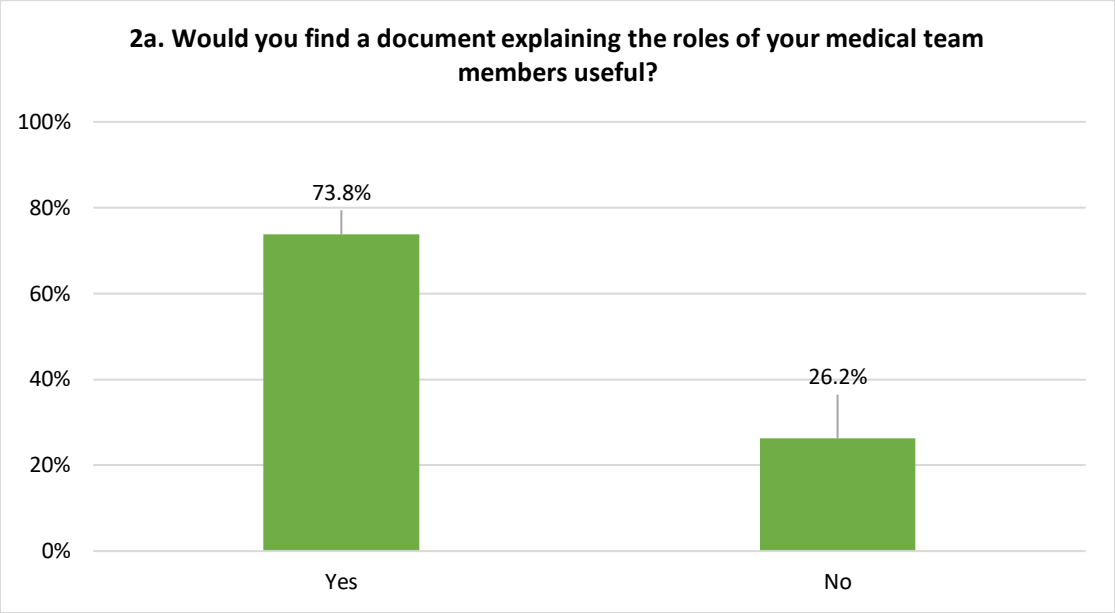
Patients were asked if they would find a document explaining the roles of their medical team members useful. Of the 164 patients who responded to this question, 121 (73.8%) said yes [Figure 2a].

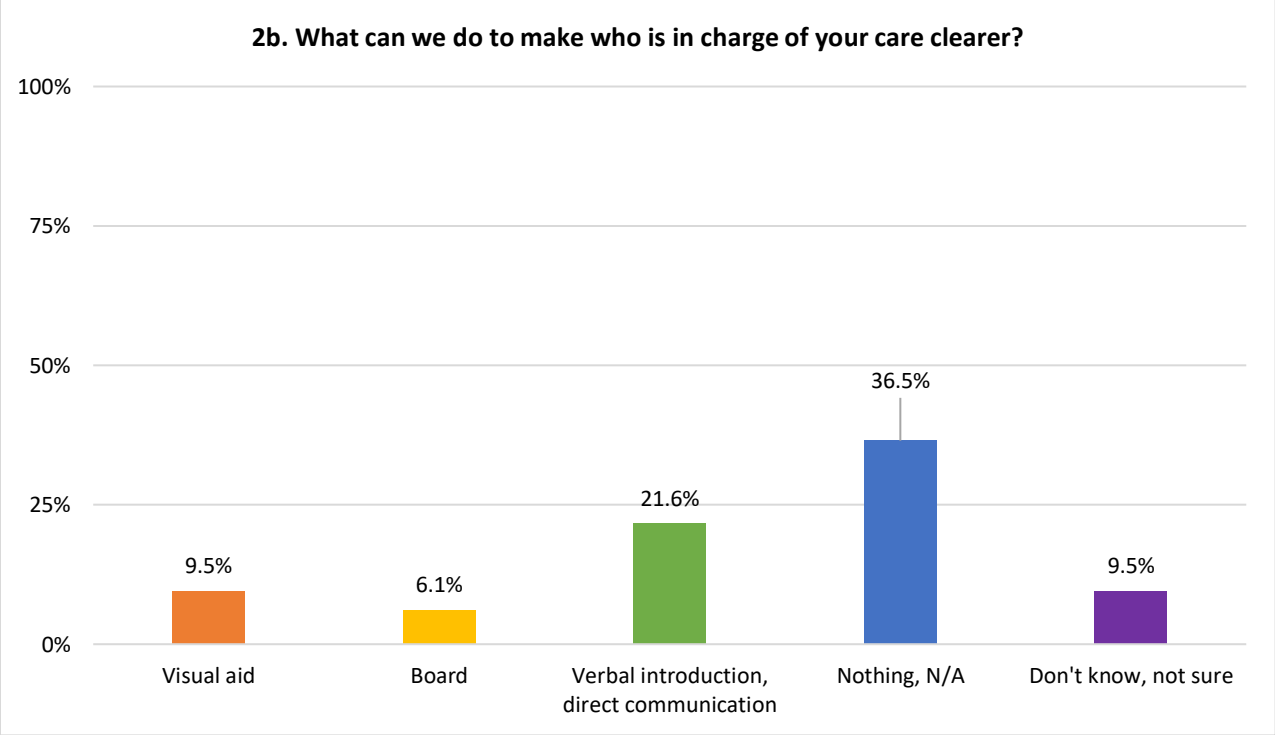
Fourteen of 148 (9.5%) patients who responded to a question asking how to help clarify who is in charge mentioned a visual aid (e.g., a diagram, list, or cards); 9 (6.1%) also suggested updating the existing whiteboard in their rooms, and 32 (21.6%) stressed the importance of directness and verbal introductions from members of their care team. Fifty-four (36.5%) patients responded "N/A" and 14 (9.5%) patients did not know how to clarify who is in charge (i.e., said "I don't know") [Figure 2b].

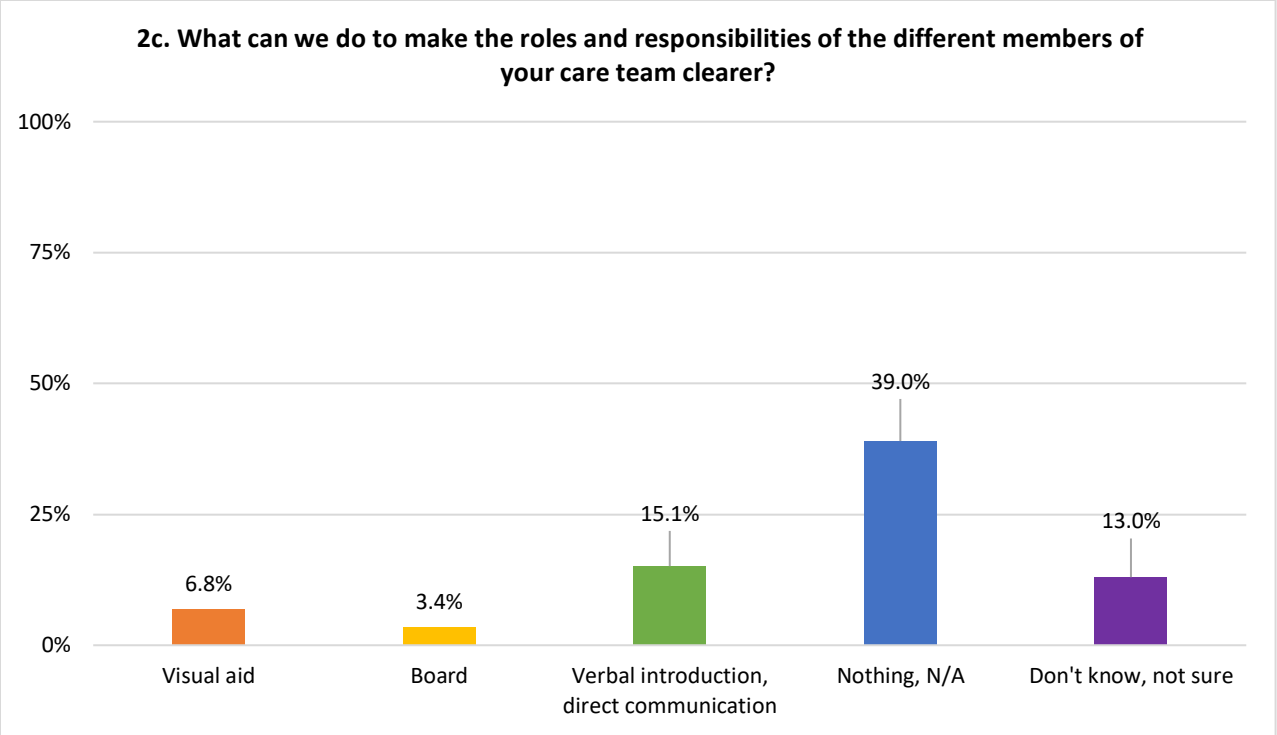
To clarify roles and responsibilities of patients' care team members, 10 patients (6.8% of 146 respondents to this question)

again mentioned a visual aid such as a pamphlet or the names and pictures of care team members on paper, 5 (3.4%) asked for care team members to describe their roles and responsibilities on the white board in their rooms, and 22 (15.1%) requested a verbal introduction and/or direct communication. A sizeable proportion (39.0%) of patients had no suggestions, while 13.0% of the 146 participants were unsure of how to clarify roles and responsibilities [Figure 2c].

Figure 2a-c. Patient solutions for improving their understanding of care.







DISCUSSION

Our results not only corroborate existing studies on patients' understanding of their care, but they also suggest further intervention opportunities to better this understanding. Clinicians in our study expressed that their patients have poor understanding due to factors such as complex care coordination among large teams of clinicians, cultural misalignment between patients and their doctors, varying levels of patient engagement, and unclear roles of clinicians (especially those of the hospitalist and primary team). Our study participants highlighted solutions that could integrate into clinical operations and, in many cases, align with existing workflows; in particular, 74% of survey respondents did want a document explaining their care team members' roles.

Our research highlights sources of mixed messages during hospitalization—primarily communication breakdowns that relate to role and hierarchical differences in and size of the care team, as well as clarifying roles and responsibilities. Research on communication breakdowns discusses care team roles as a contributing factor: Much of this is descriptive in nature, with care team members discussing their workflows and what issues they may encounter among themselves and their fellow clinicians.[19-21] For example, one clinician in our study described an ad hoc strategy for reducing miscommunication where hospitalists "ask consultants not to… directly communicate without a primary team member being there, too" so that patients can receive a consistent message from multiple members of their care team. Although this is one perceived way to reduce miscommunication, consultants could generally be educated to speak with patients using phrases like the following: "I need to talk with your primary team, but I'm going to suggest this method of treatment."

Fewer studies suggest how to address the breakdowns among care team members as interventions to improve patient understanding. Authors have suggested inter- or transdisciplinary team approaches—which highlight (1) involvement of patients and family caregivers as well as (2) more cohesive clinician collaboration— rather than the classic multidisciplinary approach where care team members work more independently of one another.[22] However, these are more cultural shifts being described rather than suggestions of interventions to implement. Other research shows why care team role clarity is important, how it can build trust between provider and patient, and how it can ultimately serve to encourage better communication between patients and clinicians.[23] To this body of work, our study reinforces what communication issues and misunderstandings often occur in the hospital setting and further elucidates metrics to measure patient understanding as well as patient- and provider-suggested solutions to help clarify aspects of hospitalization.

Our study also casts light on the patient's role in understanding their own care, including their inclination for self-advocacy. The hospital environment and clinician engagement can further bolster the patients' role and proclivity to engage in their own care. Prior research describes how clinicians can support patient engagement by addressing health literacy and cultural competency to communicate more effectively with patients.[24] For example, similarly to Graham & Brookey,[25] our clinicians suggested not using jargon and instead using patient-friendly language and teach-back. Our study also highlights the important role that family and caregivers have and ways to better engage them in the care plan. If family caregivers cannot be physically present during bedside rounds, at the least they can be called (and put on speakerphone) so they can join the conversation.

Other suggestions from our clinicians, and patient agreement with the potential solutions they were given in the survey, lend themselves to possible interventions that could be administered in these hospitals. Similar to interventions in prior studies, clinicians supported technology-based solutions such as the use of electronic health records and open notes, especially patient- rather than provider-facing.[26,27] In particular, one clinician suggested that hospitals could take advantage of popular technological innovations in developing or using an existing "Uber"-type application for patients and clinicians to track care team and patient actions in real time. Other suggested interventions were not digital in nature, such as a physical brochure explaining care team member roles and better use of existing whiteboards in patients' rooms (although the latter are only useful if continuously updated).

Our study has some limitations. Our small sample size and study sites of urban academic hospitals limit the generalizability of our findings, as patients and clinicians at hospitals in other geographic areas may have different suggestions for patient understanding based on their own resources and culture. Future directions for research include: (1) further examination of patients' understanding through a similar survey with similar metrics at other hospital sites; and (2) the development of intervention(s) from these patient and clinicians' suggestions, their testing, and evaluation at these sites and in other hospitals.

Notes

Conflicts of Interest: None declared
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