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Importance Of Communication In Medicine: Views On Bedside Rounding And Readmissions

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Importance of Communication in Medicine:
Views on Bedside Rounding and Readmissions

A Thesis Submitted to the

Yale School of Medicine

in Partial Fulfillment of the Requirements for the

Degree of Doctor of Medicine

by

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Yale School of Medicine Class of 2018

Yale School of Management Class of 2018

Abstract

Objectives: To study communication in medicine within the context of readmission rates and patient satisfaction, by assessing 1) the perspectives of primary care physicians (PCPs) and home care nurses (HCNs) on why older adults are readmitted to the hospital within 30 days of discharge, and 2) patient perceptions regarding the implementation and value of bedside rounding.

Design: Two studies were performed independently. 1) A qualitative study consisting of PCPs and HCNs of patients readmitted to the hospital within 30 days of discharge home. 2) A concurrent mixed methods study consisting of patients admitted to the inpatient medicine service who participated in bedside rounds.

Materials and Methods: 1) Semi-structured open-ended qualitative phone interviews, and 2) qualitative in-person interviews followed by surveys including 5-item Likert scales and open-ended written responses. For qualitative analyses, interviews were repeated until thematic saturation was achieved.

Results: 1) While PCPs and nurses both mentioned disease progression and multi-morbidity as contributors to readmissions, nurses further described other psychosocial factors like home environment and patient motivation. PCPs often ascribed responsibility for the readmissions to specialists, hospitalists, and emergency physicians. Nurses expressed frustration about the lack of both communication and working relationships between them and PCPs. 2) Patients described positive attributes of bedside rounds: meeting the medical team and understanding more about their illness. Although patients enjoyed undivided attention from physicians, distractions included too many participants in rounds, confusion about roles, and unclear expectations about the goal of rounds. Physicians sought to use patient-centered language, but 53% of patients stated that

medical jargon was still used. Male patients reported a statistically significant improvement in their understanding about the plan for the day and borderline significance regarding knowing who was responsible for their care compared to female patients. Conclusion: Communication between HCNs and PCPs, and between patients and hospital teams can be improved. There should be an explicit agreement on roles, responsibilities, and coordination among all providers caring for a patient. Moreover, well-conducted, patient-centered bedside rounds greatly enhance patient-physician rapport and foster patient understanding and satisfaction.

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Contents

Introduction

Communication is the foundation of healthcare delivery. Each year, there are over one billion outpatient visits in the United States.[1] While there are diverse ways of delivering care in real life, in medical school we are taught the basics of an ideal visit: the physicians greet the patient, elicit the concerns of the visit, ask open-ended questions initially, obtain history, conduct a physical, communicate an appropriate plan, and educate patients about the diagnosis and potential treatment options. During discussions about the next steps, physicians work diligently with patients in joint decision-making. Accordingly, it is not enough to be merely competent in medical knowledge to be a great physician. Rather, physicians need to possess an ability to communicate clearly and effectively with patients about the clinical situation and develop an actionable plan that is agreeable to the patient.[2] Reflecting the importance of interpersonal skills in medicine, medical schools have started offering courses that teach these principles. For example, during preclinical medical training years, Yale School of Medicine holds classes on how to ask open-ended questions, show empathy, and develop emotional rapport with patients.[3] These skills have been shown to drive improvements in health care.[4]

Improving doctor-patient communication leads to better health care outcomes. Multiple studies have shown the beneficial effects of clear communication on outcomes including illness severity, patient adherence, and health care use.[5–7] For example, patients with peptic ulcers who were educated about their medical record and were shown how to participate in the medical decision-making process self-reported greater satisfaction with care and fewer limitations in physical activities after two months.[8] Similarly, patients reported greater improvement in headaches during follow-up visits[9] and showed a tighter

control of hypertension[10] after thorough physician-patient dialogue during the initial visit. Moreover, the technique of teach-back, when the physician asks the patient to repeat what he or she learned during the discussion, has been shown to reduce noncompliance in asthma patients, particularly in increasing knowledge retention, medication plan adherence, and inhaler technique.[11] In fact, a randomized control study found that the asthmatic patients of pediatricians who were randomized to attend a continuing education program discussing communication skills, such as how to elicit a patient's concerns, reported fewer days with asthma symptoms and reduced health care use.[12]

On the other hand, poor communication leads to medical errors, malpractice, loss of the patient-doctor relationship, and physician burnout. In fact, it is estimated that at least 30% of medical errors are a result of communication breakdown.[13] The Joint Commission estimates that 80% of serious errors, which include errors leading to patient death, involve miscommunication between care providers during transfer of care.[14] While these serious errors tend to occur in the hospital setting, communication lapses occurred at similar rates in the hospital and in the community.[13] As such, poor communication can cause enormous stress for all physicians, although physicians who particularly feel undertrained in communicating with patients are affected the most. Physicians with lower confidence in communication skills were more likely to have poor relationships with patients, feel greater job stress, and develop burnout.[15,16]

Now is a critical time to improve healthcare communication, as electronic health records (EHR) are quickly changing the delivery of healthcare in the United States and reducing time for patient-physician communication. With the current forms of EHR, increased adoption and use have led to more paperwork and decreased time with patients.

Clinicians spend more than half of the workday interacting with EHR during and after clinic.[17] Even in the exam rooms, physicians only spend 53% of the time on direct clinical care, spending the other time largely on EHRs.[18] As physicians spend more time on clerical duties, such as billing, writing orders, and documenting visits according to insurance guidelines, physicians have become more dissatisfied with their work. A survey of U.S. physicians found that those using EHRs were less likely to be satisfied with the amount of time spent on clerical tasks, and were at higher risk of burnout (OR=1.29).[19] In the last several years, physician burnout has continued to increase, with more than half of US physicians admitting to suffering from burnout in 2014.[20,21] Moreover, from 2011 to 2014, physicians reported a decline in their satisfaction with work-life balance, the percentage of satisfied physicians falling from 49% to 41%.[20] While there have been other pressures on traditional physician practices such as reduced compensation structures, increased hospital consolidation, and a national focus on medical cost containment, this dramatic rise in burnout has not been seen in other industries, even when accounting for the number of hours worked. Circumstances in which physicians are inadequately trained or given inadequate time to communicate with patients can lead to dissatisfaction for both patients and physicians, resulting in reduced quality of care[22], decreased clinical effectiveness[7], and potentially deadly miscommunication[23].

I sought to explore the effects of communication in two different medical contexts, one in the outpatient community setting and one in the inpatient hospital setting. First, I strived to understand the problem of readmissions, when a patient who is discharged from the hospital is soon readmitted. In the community setting, home care

nurses (HCNs) and primary care physicians (PCPs) work together to ensure the continued safety of the patient after hospital discharge. Second, I looked to the inpatient hospital experience, focusing on bedside rounding. Bedside rounding represents a formal mechanism whereby the medical team can communicate with hospitalized patients about the care plan and clarify any questions. Specifically, I focus on the patient experience during bedside rounds in relation to patient satisfaction.

Readmission Rates

High rates of unplanned hospital readmissions represent a major burden to the health care system. Excess hospitalizations lead to adverse effects on many levels, from greater anxiety and stress for patients and their families, potential nosocomial infections and iatrogenic effects from the hospital, and unnecessary healthcare usage and expenditure. Of patients hospitalized in the United States who were admitted with Medicare, 19% of adults aged 65 or older and 24.1% of adults aged 18-64 were readmitted within 30 days of discharge.[24] In 2004, the estimated cost to Medicare of unplanned rehospitalizations was 17.4 billion dollars.[25]

Previous work has pointed towards numerous factors as predictors of unsuccessful discharge. Factors related to the patient include advanced age[26] and multiple comorbidities[27]. More general readmission factors include poor provider communication between the hospital and the primary care physician[28], delayed primary care visit after discharge[29], and lack of discharge planning upon leaving the hospital[30]. Correspondingly, numerous initiatives have attempted to address these causes of readmissions[31,32,33] and also to increase the resources surrounding the transition of care[25,34]. The current paradigm for

reducing readmissions may not address potential factors such as patient goals of care[35] and access to care.[36]

Moreover, these interventions are largely hospital-centric and do not address the outpatient setting where patients spend most of their time. Community providers like PCPs and home nurses can provide valuable perspectives on the reasons why older adults are readmitted to the hospital. Accordingly, I sought to better understand why older adults living at home with access to clinical resources continue to be readmitted.

Bedside Rounding

Osler stated that "it is a safe rule to have no teaching without a patient for a text and the best teaching is that taught by the patient himself."[37] Bedside rounds are essential for validating patient history, teaching physical examination skills, and modeling empathy and effective communication. Despite these benefits, the percentage of rounds held at the bedside declined rapidly from 75% in the 1960's to 8-25% today.[38–40] Proposed reasons for this decline include physicians' lack of comfort with bedside rounds, increased reliance on technology, patients' shorter lengths of stay, and resident physicians' work hour restrictions.[41] Physicians may also think that patients would be uncomfortable with complex medical theory[42] and group discussion of private information.[43] Due to perceived patient concerns about bedside rounding, some physicians preferred conference room rounding, where they could further guide discussion towards areas of expertise without patient involvement.[44]

A recent study that compared patient perspectives on bedside versus non-bedside rounds found no statistically significant differences in patient assessment of involvement in medical decision making, trust in physicians, and overall satisfaction; however,

patients reported increased compassion from the medical team with bedside rounds.[40]
Other studies showed that patient satisfaction was at least as high with bedside rounds
and that patients benefited educationally.[45–48] There remains limited literature regarding
the patient experience, perception, and perspective on bedside rounding. I sought to
assess patient perspectives about bedside rounds including the interaction with the
medical team and the format of bedside rounds.

Statement of Purpose

- To understand better why older adults living at home with access to clinical resources continue to be readmitted to the hospital, by using qualitative methods

- To explore patient perspectives about bedside rounds including the interaction with the medical team and the format of bedside rounds, by using mixed methods with qualitative interviews and surveys

Material and Methods

Outpatient: Readmission Rates

Participants

Participants were PCPs and HCNs of patients aged 65 and older who were readmitted to the hospital within 30 days of a prior discharge. These patients were recruited from the Coalition for Safe Transitions and Readmissions Reductions (Co-STARR) Program that took place at Yale New Haven Hospital, a 966-bed urban academic center. Patients who were readmitted to the hospital from November 2013 to March 2014 were consecutively sampled. Inclusion criteria included patients who were readmitted to the hospital within 30 days of being discharged home, aged 65 or older, qualified for Medicare, and having more than one risk factor for readmission by BOOST criteria, which are defined as the 8 P's (problem medications such as anticoagulant and narcotics, psychological conditions such as depression, principal diagnosis such as cancer, COPD, and heart failure, polypharmacy, poor health literacy, poor patient support, and prior non-elective hospitalization in the past 6 months, and palliative care needs).[49] Exclusion criteria included patients who declined to participate, were unable to participate due to cognitive impairment, were readmitted to a critical care unit, and could not speak English. Patients gave verbal consent to having their physician and home care nurse be interviewed during the repeat hospitalization. PCPs were identified by patients who consented to this study. HCNs were identified by the nursing agencies that the patients had been referred to as detailed on discharge instructions. PCPs and HCNs were interviewed over the phone and the conversations were subsequently transcribed. The Yale University School of Medicine Human Investigation Committee exempted the protocol as a quality improvement project.

Data Collection

One-on-one phone interviews were conducted with PCPs and home nurses. Participants were asked for demographic data such as length of practice, age, type of medical record system, and size of practice.

The interview guide elicited the participants' perceptions for patient readmissions using open-ended questions. The interview began with, "Why do you think this patient came back to the hospital?" After the initial question led to no further responses, probes were used to encourage more discussion including, "Tell me more" and "What do you think is the single most important factor in the patient coming to the hospital?". In the first few interviews, the theme of the relationship between the home care nurse and the primary care physician emerged. In accordance with qualitative research methods, this theme was probed in further interviews[50].

Interviews were audiotaped with the participants' permission and transcribed with all identifying information removed. Analysis began simultaneously with data collection. Early occurring themes became probes for later interviews. Interviews were conducted until we reached thematic saturation, the point at which no new information was obtained from more interviewing.[51]

Data Analysis

All transcripts were read in detail by the authors. An initial subset of transcripts was coded independently by the authors using the qualitative analysis software ATLAS.ti version 7 (Scientific Software Development, Berlin, Germany). The authors met to discuss the coding and agreed upon on a coding taxonomy for reasons for readmissions. Two authors then independently read and labelled the rest of the transcripts using the agreed-

upon codes. New codes were assigned when they did not fall under previously-discussed categories. In the end, all the authors reviewed and agreed with the coding scheme using the constant comparative method.[52]

Inpatient: Bedside Rounding

Participants and Setting

Participants were adults admitted to the general medicine teaching unit at Yale New Haven Hospital Saint Raphael Campus in New Haven, Connecticut. In-person interviews were conducted within 48 hours of admissions that occurred on 28 days between November 2014 and March 2015. In this convenience sample, participants were excluded if they were younger than 18 years, did not speak English as their primary language, were delirious, or declined rounds at the bedside. The rounding group was comprised of one or two teams that consisted of an attending, medical resident, intern, and medical student. The Yale University School of Medicine Human Investigations Committee approved the protocol, and all participating patients provided signed consent.

Data Collection

Each encounter with a participant included a semi-structured interview and a survey by a medical resident who was a co-investigator in the project. For the qualitative interview, interviews were audiotaped and transcribed. Question topics included experience with rounds, interactions with doctors, comfort levels, and degree of understanding their care. After the interviews, participants completed a written quantitative survey composed of statements assessing the level of agreement through a 5-point Likert scale and open-ended questions requesting numerical responses. The survey

also included demographic questions including age, gender and the highest level of completed education.

Data analysis

Two co-investigators independently reviewed all transcripts and then met to discuss codes assigned to small blocks of text until agreement was reached. Coding and subsequent analysis was completed using NVivo (Version 10, QSR International Pty. Ltd., 2012). Grounded theory, in which new theories can emerge spontaneously from gathered data[53], was used to analyze the interviews, develop the coding tree, and identify the themes.[51] Using the constant comparative method[51], interviews were analyzed and conducted until the point after which no new themes emerge from subsequent interviews. Agreement levels for survey questions were summarized by n(%) and further tested for association with patient gender or education level using a Chi-square test to determine the p-value (SAS software, Version 9.4, Cary, NC).

Results

Readmissions Rates

Participant Characteristics

A total of 10 PCPs were interviewed. 14 PCPs were contacted by telephone for an interview. Of these, 4 PCPs declined due to lack of time. 10 HCNs were reached by telephone, all of whom agreed to participate and were successfully interviewed. The median size of the PCP practice was 2.5 MDs and 1 RN. The median size of the nursing agencies was 31 RNs.

Taxonomy of Reasons for Readmission

The factors for readmission were organized into patient-, provider-, or system-related reasons (**Table 1**).

Patient-level factors

PCPs primarily cited disease progression as the reason for readmission. PCPs pointed to various pathological processes such as general weakness, falls, cardiac issues, bleeding, GI, and cellulitis. Upon probing further for other potential reasons that were not linked to the disease process, many physicians still defaulted to the medical reason as the primary explanation of the readmission. Yet, in addition to the specific disease process, physicians acknowledged the role of multi-morbidity as evident in the complicated medical situations of the patients.

> She had fallen. She has diabetic neuropathy, used to be overweight, and has bad arthritis of her knees and has very limited mobility. She has chronic back pain and intermittent sciatica or intermittent radiculopathy. (PCP)

> Readmissions are happening because it is a geriatric age group, as well as, in my opinion, multiple diagnoses that they have, most of which are probably not curable either because of age or the chronic nature of it or the advanced stage of the disease. So, that is the probably the one single most [important] factor that defines it. (PCP)

> You have to see, what is the common factor in that readmission. It is the elderly patient. And multiple diagnosis and multiple comorbid conditions. Any doctor who diagnoses an 80 y.o. geriatric patient only 2 diagnoses, he probably missed another six of them. They need to go back and crosscheck and examine the patient again because there are always more than fewer diagnoses so if you carefully examine any geriatric patient. (PCP)

Many of the PCPs felt that the multi-morbidity and age-related illness of their patients led to inevitable hospital readmissions. Since the disease progression often resulted in acute episodes requiring medical attention, doctors frequently asserted these readmissions as non-preventable. Moreover, once the patient arrived at the hospital, the symptoms were often consistent with the initial presentation of severe illnesses, which

resulted in an extremely high level of risk requiring hospital admission or overnight

observation.

> I'm not sure that anything could have been done to prevent the readmission. She just has so many issues. (PCP)

> I did this sort of stuff in residency myself. He is not really a CHF patient that doesn't get daily weights or anything like that. I think he is a geriatric type that things seem to happen to him. (PCP)

> A little symptom warrants a CAT scan and an ultrasound. If they are not feeling well, they keep them overnight to observe them. A little testing can lead to the necessity of more testing, frequently. She is in that category because of the diagnoses she carries and the risk factors she carries as a result. That is kind of a recurring pattern for her, and probably for many of the people who are recurring frequent fliers. (PCP)

PCPs also mentioned the role of nonadherence. One patient was wholly non-

adherent to the suggested medical changes in diet and in taking the prescriptions, which

the physician ascribed to factors outside a physician's control such as a perceived lack of

determination and effort by the patient to stay healthy.

> And the other thing also is that the patient is completely noncompliant and it is mostly the patient's mistakes sometimes. I have patients that cannot control their diabetes, maybe eat a lot, or they smoke forever and they can never stop smoking no matter how much advice or medication or Chantix or nicotine patch that you tell them and give them, and they have progression of COPD and they end up in the hospital a million times and so on and so forth, so some factors have to be attributed to factors beyond the doctor's control, factors related to the patient, bad behavior or unhealthy behavior. (PCP)

PCPs noticed reasons attributable to patient context, including poor social support,

stress, and personality. One PCP cited the lack of a primary caretaker in the progression of

disease to led to multiple hospital readmissions.

> If she had family living with her, that would be nice. Might of helped her out with her nutrition a bit more, noticed that she wasn't able to take PO intake or the G tube was plugged. She could have came in and addressed that a little bit earlier. (PCP)

Similar to the PCPs, HCNs commented on issues such as non-adherence, patient context, multi-morbidity, and disease progression. In addition to these factors, HCNs also brought up some new factors including symptoms of disease, patient priorities, and patient self-management. HCNs spoke about the symptoms of the disease, specifically anxiety and stress, as factors that led to the readmissions.

> Unless there was an exacerbation there, I'm not sure. I think possibly anxiety with the pain and with the breathing. (HCN)

> She had a lot of stress in the house because her husband died not that long ago. She went on dialysis around the same time. I think he had a heart attack or something. There was a lot of stuff going on. A lot of stress. Her son came back to live with her with his wife and son. Because I think he was unemployed or something. As much as I think it was helpful to have him in the house, it was stressful too. There was a 5 y.o. in the house and daughter-in-law. They lived down in the basement I believe, but they would pop up and were around. It was good and bad in a way. I think she wanted him to be standing on his own two feet. She had a daughter who is a single parent and just had a baby. She was living in the house as well. As much as it was a comfort to have family around, she kind of worried about the circumstances. I think her declining health – she is just 71. She has had a lot going on. She was pretty vocal about it. She would talk about it. (HCN)

Unlike PCPs who did not elaborate when describing nonadherence, HCNs volunteered insight into the many precipitating factors in the patient's life that could have resulted in nonadherence, such as strong personal preferences and patient priorities.

> I think one of the reasons why she resists going to the hospital was she didn't want to keep going to the hospital because then she would not be able to be at home and be with her grandkids. Something of that nature. I don't remember exactly how she put it. (HCN)

> She was kind of noncompliant with her diet. She was supposed to be on a renal diet. She would eat all kinds of stuff, including really salty things. There was just no changing her on that. She used to be a caterer, really loves food. Her son lived in the house and also did catering. She has another son who owned a restaurant. They just kind of seemed to be the same. They are all the same on the food thing. That did not help much either. (HCN)

Since HCNs provide care at patient homes, they uniquely highlighted issues from the patient's home environment. One nurse suggested that the foul air at home contributed to the chronic obstructive pulmonary disease exacerbations.

> I don't want to be crude, but it smells like dirty feet when you walk in, if that can give you some idea of what it is like. She is not able to take care [of herself]. I think this is the way they live... I don't think it is the best for breathing. (HCN)

HCNs also recognized that oftentimes patients are not coming to terms with their prognosis and are not willing to consider palliative care, such that they continue to return to the hospital as the already severe disease worsens. On the flip side, HCNs spoke about patient self-management, in that some older adults decide to go to the hospital even without clear medical need.

> They have to [go to the hospital] to follow up on the problem. But that is kind of the problem I think. That is the only way you can follow up with their problems is by going to the ER. They are sick enough in other circumstances… Sometimes you get people who are more realistic about their prognosis and more willing to have palliative care. People hang in there. I think that does affect our readmission rates enormously. I really do. (HCN)

> I don't know if we are going to be able to keep her out… I think when she goes, she really feels like she has to. It just might be that they can't do anything for her, and so they don't really want her to keep coming in, but she gets to a point where she knows that she is in a little bit of trouble. (HCN)

Provider-level factors

Provider-level factors referred to factors related to providers such as emergency physicians, hospitalists, and specialists. PCPs frequently voiced a lack of participation in the decision to readmit the patient. Moreover, some PCPs felt that more frequent specialist visits could have potentially noticed and corrected the medical issue before readmission.

> Well, you have to understand that I don't admit to Yale. He will be admitted through the hospitalists. (PCP)

I really was not involved at all… It pretty much presented to the emergency room with this, and I was not a party to the decision. (PCP)

Perhaps if urology could get their hands on them in an outpatient setting to fix those ER visits… If I had to point a finger at somebody, maybe urology. If they could replace his foley in the outpatient setting, that might have some importance too. (PCP)

The single most [important] factor is that she had a second totally different problem... You would really need to talk to cardiology to figure out if there was any way they could figure out that this was going to happen at the time of her first discharge. (PCP)

Difficulties in communication were brought up as well by PCPs and HCNs. Several PCPs pointed to the lack of effective communication with the hospital about the course of treatment during the hospital stay. While the PCPs requested more concrete information from the hospitalists, PCPs often found that HCNs contacted them too frequently.

The majority of the time, more noninformative. They are trying to transfer the risk and responsibilities to someone else rather than giving real information and concern regarding something going wrong or something needing to be changed. So, at least 8 out of the 10 calls are a waste. (PCP)

HCNs spoke about their lack of communication with the PCP about patient care. When updating PCPs about transition of care, medications, follow-up appointments, and clinical observations, sometimes nurses do not even know the PCP's contact information. One HCN shared no working relationship with the PCP at all, such that the nurse only spoke to the PCP second-handedly through the secretary.

If you are talking about the healthcare team, very rare that we get to know the primary care doctor… we talk with the secretary, because they are dealing with a lot of patients. So if you are talking about a working relationship, it is very minimal. (HCN)

System-level factors

System-level factors mentioned by PCPs included poor hospital preparation for discharge and by HCNs included insurance and payers, lack of patient financial

responsibility, premature discharge, and lack of patient information. While PCPs did not characterize any discharge as premature, one physician stressed the importance of a thorough physical examination at discharge. The PCP cited the importance of clearly communicating discharge instructions and arranging appointments with the appropriate specialists.

> Patients need to be thoroughly examined on the day of discharge and go over the medications in an appropriate manner and give the proper instructions and make the follow-up appointment with the respective specialties. (PCP)

HCNs mentioned insurance as a potential reason for the high rate of readmissions as well. The little to no financial cost for patients who decide to go to the hospital could lower the barrier to readmission. One HCN stated that the lack of personal financial costs could lower the threshold at which patients decide to go to the hospital.

> Whenever they [patients] have multiple fee sources, they don't get any bills at all. So it doesn't come into their mind that someone has to be responsible for the bills. (HCN)

While PCPs mentioned the role of specialty care, HCNs pointed to the perceived early and premature discharge from the hospital. Many HCNs felt patients were discharged too early and were objectively too weak to return home, inevitably precipitating an eventual return to the hospital.

> Is she really capable of managing her medications? Was there an assessment in the hospital documenting does the patient knows her medications? Does she know when to take it? Is she able to prepare it? Is she able to pay for her meds? Things like that… is not being done in the hospital setting. (HCN)

Lastly, HCNs voiced frustration over the perceived lack of discharge information from the hospital. Some nurses felt that they did not have enough medical information on the patient prior to the home visit, including the past medical history, medication list, and hospital diagnosis.

Because HIPAA and they probably don't know who they are talking to on the other end. They will tell me if she was there and she was admitted, but they won't always tell me what she was admitted with. Sometimes they do, sometimes they don't. But I can ask the office to check. Because we could be talking about this, and it could be an exaggeration of her COPD for all I know. (HCN)

The last several times had been due to back pain and more recently she was almost pain free which we have no idea why, but I don't always get all the information from the hospital. What she has told me they had told her, where there were like fragments. I don't know if this was specifically what it was, but I'm picturing fragments of bone. I'm not sure. (HCN)

Bedside Rounding

On days when the interviews occurred during the study period, a total of 89 patients were admitted to the teaching floor and 51 patients (57%) experienced bedside rounds (**Figure 1**). 6 patients declined bedside rounds, and 32 patients were unable to have bedside rounds due to dementia, worsening medical condition, or not speaking English. Of those remaining, 38 patients participated in this study. Of the 13 patients who did not complete the subsequent survey and interview, 5 patients declined, 3 patients had a worsening medical condition, 2 patients could not read English, and 3 patients were away from the room. Of the 38 participants, 16 were female and 22 were male. Ages ranged from 18 to 88 years, and 74% of patients were older than 50 years ago. The level of education ranged from 8th grade or less to more than 4 years of college.

Qualitative Results (Table 2)

We identified the following themes and included representative quotes to highlight patient perspectives (**Table 2**).

Bedside rounds enhance patient-physician dialogue and provide much-needed attention to patients

Patients viewed bedside rounds as helpful for both themselves and round attendees. Physicians enlightened the patient about their condition, used language that

was largely understandable to the patient, and engaged in face-to-face dialogue that permitted the patient to ask questions and voice opinions: "I like it when people are looking at me and I am looking at them and I like when doctors talk to me, not at me." Patients viewed themselves as able to correct miscommunications immediately with the medical team.

Patients also saw rounds as an appropriate venue to develop trust with a new medical team. They frequently mentioned the ability to meet and spend time with the medical team: "I prefer bedside rounding because of the fact that I am not out of the loop or anything." Patients frequently praised thorough explanations from physicians and prized the opportunity to ask the physician direct questions and receive truthful answers: "Because then I can participate, understand, and not feel as though anything may be hidden from me."

Patients appreciated physicians providing them with undivided attention on bedside rounds. By spending time at the bedside and allowing time for conversation, physicians became physically and mentally present: "What I like was eye contact… eye contact with everybody in here who spoke."

Lack of preparation and loss of attention can lead to patient discomfort

While bedside rounds helped foster patient-doctor relationships, bedside rounds seemed impersonal when there were too many participants, team members' roles were not clarified, and listeners were distracted: "They just sat around and as I said, they looked very bored." One patient disliked how she was not informed beforehand about bedside rounding, including the number of participants and discussion expectations: "Just when they first walked in, it was really awkward… Ah, like hello, what is going on here."

Patients appreciated the use of common language instead of jargon: "They were using doctor terms and I really appreciate if they reduce to layman terms and explain what it means."

Optimal number of participants on rounds depends on room size and patient preferences

Patients held wide-ranging views on the optimal number of round participants. Some respondents mentioned that there were too many people, small rooms precluded a comfortable environment, and too many voices did not leave enough time for patient questions. "I had to interrupt to be able to make my voice known. It's fine, but maybe as they are too many; you lose a lot in the translation and they don't have enough time to spend with the patient." Further, patients felt anxious with too many attendees: "if it is too many people, I get nervous." Despite being aware that the hospital is an academic teaching institution, some patients still did not appreciate medical trainees on rounds: "I mean I want a regular doctor, I don't want you know, someone there who is teaching. It is my business and it's just too many people."

While fewer bedside round attendees appeared to enhance the perception of patient privacy, some patients valued the educational aspect of rounds and sought to include anyone who was involved with patient care or wanted to learn. One patient had an open-door policy: "I would say anybody come in… they are doctors and nurses." However, more participants heightened patient anxiety during physical examination by reproducing pain or embarrassing the patient with repeat examinations: "A little uncomfortable. It's my butt they are checking out. It is a little bit embarrassing." In the

quantitative answers, patients responded that the optimal number of bedside rounding attendees averaged six (answers ranged from two to no limit).

Patients prefer bedside rounding compared to hallway rounding

Nearly all patients preferred bedside rounding compared to rounding in the hallway, except one patient who was indifferent, due to concerns about privacy and informational transparency from the medical team. For instance, one patient said: "I don't want nobody to hear my stuff in the hallway, because of confidentiality. So it is just better that they do it here [bedside]." Moreover, patients cannot hear the discussion in the hallway, and may feel that the medical team is hiding information from the patient or feel left out: "Because then I can participate, understand, and not feel as though anything may be being hidden from me." For some patients, the answer to this question seemed obvious as patients wanted to be a part of the discussion: "I am the patient and that [the bedside] is where it should be done."

Rounds in a multiple-bed patient room raises the issue of confidentiality

Some patients were concerned with the presence of neighboring patients during rounds: "Some things that were discussed were pretty confidential… just seems odd that [it] just occurred between the stranger in the next bed." Yet, many patients felt that rounding in a 2-bed hospital room was acceptable. As substantiated by quantitative data, which is shown further in the section below, while 26 (68%) patients agreed or strongly agreed that it is acceptable to have bedside rounds in a 2-bed room, 12 (32%) patients remained undecided, disagreed, or strongly disagreed (**Table 3**).

Patients do not have a clear idea regarding the purpose of bedside rounds

There were diverse thoughts about the purpose of bedside rounds. Many patients felt that the purpose of bedside rounds was for patient care, but others mentioned educating the patient, understanding how the patient feels, and updating the patient: "[the purpose of rounds is to] come up with a solution for what needs to be done that makes me feel better." One patient thought that rounds provided medical education but served no patient purpose. Other patients mentioned that rounds allow for team communication and doctor-patient teamwork. Some did not identify a purpose: "I really don't know. I really don't." A patient even thought that rounds hasten recovery.

Quantitative Results (Table 3)

Of all participants, 97.5% agreed or strongly agreed that the team introduced themselves when they came into the room, and 73.7% felt that the team explained their roles during rounds. 78.9% felt that at the end of bedside rounds, they knew who was responsible for their care. All participants reported feeling respected by the doctors during rounds.

52.6% of participants felt that doctors used medical jargon that they could not understand. 92.1% felt that they could ask questions. By the end of rounds, 76.3% reported understanding the plan for the day and 57.9% reported having a good understanding of their medical condition.

68.4% of patients felt that it was acceptable to have bedside rounds in a 2-bed room and 94.7% felt that their privacy was respected and maintained during the rounds. On a 5-point Likert scale, the average response to the statement "I feel that it is acceptable to have bedside rounds in a 2-bed room" was 3.66 out of 5 (**Table 4**). Some average responses to other statements were a full point higher, such as the average of 4.6

out of 5 for the statement "At the end of the bedside rounds I knew who was responsible for my care" (**Table 4**).

Statistical analysis: Effects stratified by gender and education

Gender impacts the reported understanding of the plan for the day and understanding who is responsible for medical care

Compared to female patients, 34.6% more male patients reported strongly agreeing or agreeing with the statement "after bedside rounds, I had a good understanding of the plan for the day" (p-value = 0.02). Similarly, compared to female patients, 28.4% more male patients reported strongly agreeing or agreeing with the statement "At the end of the bedside rounds I knew who was responsible for my care" (p value = 0.05) (**Table 3**).

Education level may impact the patient's degree of concern over multi-person patient rooms

When stratified by educational level, patients who attended high school or less were 60% more likely to agree or strongly agree with the statement: "I feel that it is acceptable to have bedside rounds in a 2-bed room" compared to patients with some college education or more (**Table 3**). This difference was not statistically significant in this small study (p-value = 0.08).

Discussion

Readmissions Rates

To my knowledge, this study is the first to explore factors in hospital readmission from the complementary perspective of HCNs and PCPs. The study revealed posthospitalization factors that may contribute to readmissions and are likely widespread.[54] These factors include patient-level factors such as patient priorities, multi-morbidity, disease progression, and nonadherence, along with system-level factors such as premature discharge, lack of patient information, and lack of patient financial responsibility. In addition to these factors, by interviewing the outpatient care team of the HCNs and PCPs, I was able to elicit unique provider-level factors including the ambiguous responsibility of PCPs, specialists, and hospitalists in readmission, the lack of relationships between PCPs and HCNs, and different perspectives of HCNs and PCPs regarding reasons for readmission. Although limited to a small group of patients and providers in one setting, this study suggests that inadequate articulation of responsibilities, care fragmentation, and miscommunication among community health providers may contribute to readmission.

Historically, PCPs were responsible for hospital admission, but PCPs identified specialists, hospitalists, and emergency physicians as the responsible providers. It is not certain whether these other clinicians acknowledge or accept this responsibility. The tendency for PCPs to defer responsibility suggests uncertainty over their roles and responsibilities. Because older adults see an average of five specialists[55] who manage their care, it is important to establish explicitly the roles of specialists and PCPs in

providing care and preventing readmission. As demonstrated by data in this study, the lack of clear roles for specialists and PCPs may contribute to the reason for readmissions.

The diffusion of provider responsibility regarding readmissions may have occurred due to the emergence of the hospitalist. Decades ago, PCPs took care of patients both in and out of the hospital, called upon specialists as consultants, and oftentimes knew hospital workers by name. As PCPs were gradually phased out of the hospital, hospitalists filled the need for an inpatient provider. Less time spent by physicians in the hospital led to reduced communication between hospital-based physicians and PCPs and created specialized community-focused roles for PCPs. As such, PCPs often put responsibility for hospital readmissions on other healthcare providers like specialists, hospitalists, and emergency physicians. In regard to this study, this reasoning could explain why many PCPs pointed to other physicians when asked about who was responsible for their patients' readmissions.

While PCPs work with HCNs in the outpatient setting, HCNs and PCPs mentioned poor working relationships and inadequate communication. PCPs stated that they lacked time to speak with HCNs, who in return spoke about inadequate support from PCPs. The results of previous surveys targeting the general community in which HCNs and PCPs expressed general dissatisfaction with communication support these results.[56,57] However, in the context of reducing readmissions, poor communication has been implicated in hospital settings[58] and nursing homes[59] but remains underappreciated in the community.

Because HCNs spend much time with patients in their homes, they can uniquely identify readmission factors. HCNs identified worsening symptoms, poor home environments, challenging patient priorities, and inappropriate self-management strategies that PCPs did not identify. Moreover, by developing patient relationships

during several visits per week, HCNs can effectively negotiate the care plan and develop insights that positively impact clinical care.[60–62] HCNs offer a distinct perspective in understanding the patient context and promoting patient health.

Yet, poor working relationships between PCPs and HCNs prevents community providers from addressing these concerns collaboratively. Many HCNs find it hard to reach PCPs. Survey data suggests that more than 50 percent of physicians seldom spoke with HCNs, and they often asserted that nurses should be more independent and proactive regarding patient management instead of deferring to a physician.[56] Further, half of physicians reported that they do not carefully review any received written home care nurse updates.[57] The lack of established and effective channels of communication between HCNs and PCPs may hamper comprehensive clinical care.

Improving communication between nurses and physicians produces benefits. One attempt to improve communication between HCNs and PCPs was the INTERACT study, a readmission reduction initiative that employed a communications protocol for nursing home nurses to determine when to contact PCPs.[59] Although not blinded or adequately powered, the INTERACT study suggested a 50% overall reduction in readmissions due to improved communication.[63] Similarly, providing a home care nurse communication guide led to clearer explanations to physicians in depression care of older adults.[64] Providing improved means of communication between the outpatient care provider team may allow for better delivery of care.

This study's results support the need for an explicit agreement on roles, responsibilities and coordination among all providers caring for a patient—concepts that accountable care organizations and patient-centered medical homes espouse. Recently

introduced care transitions and care coordination payments by the Centers for Medicare and Medicaid Services (CMS) may provide incentives to improve communication and coordination among outpatient providers. Implemented in 2013, the Transitional Care Management codes incentivized better care by paying for non-face-to-face care, such as phone conversations, after a patient is discharged. Over one billion dollars have been set aside to improve inter-professional communication to reduce readmissions. Because readmissions represent a marker of poor care, improving the delivery of outpatient care may strengthen overall care. This study highlights a fragmented system of community providers and calls for new community provider–focused initiatives to improve the care of this vulnerable population.

Strengths of this study include open-ended questions that helped capture the range of participant responses. Limitations include the fact that this study included nurses and physicians from a single geographical location. Further studies can assess the generalizability of these findings to other populations. Moreover, future studies can quantify the effect of communication in the outpatient community between HCNs and PCPs on readmission rates. The introduction of programs facilitating communication between all medical professionals—including nurses and physicians—may become a major focus in the coming years.

Bedside Rounding

Bedside rounds traditionally served as the backbone of communication between the inpatient medical team and the patients, as well as for medical student education. Over time, the prevalence of bedside rounds has decreased. While the medical literature has generally evaluated bedside rounding from the perspective of trainee education, there

have been several studies from the perspective of patients using surveys and interviews[39,40,48,65]. To our knowledge, we present the results of the first mixed-methods study on patient preferences for bedside rounding.[66]

Ramirez et al randomized patients to bedside or non-bedside rounds and, based on survey responses, found no differences in the levels of patient satisfaction and trust in the medical team.[40] In a qualitative study, Fletcher et al interviewed patients at the Veteran's Administration hospital and found that patients valued sharing information, seeing evidence of caring, involvement in teaching, bedside manner, and knowing team members.[67] Our mixed-method research builds upon these findings. Many patients preferred bedside rounds and mentioned the importance of face-to-face discussion with and undivided attention from physicians. In our study, 58% of patients reported a better understanding of their medical condition and 100% reported feeling respect from the doctors, consistent with results from another study.[45]

When attending physicians were asked about reasons for the decreasing prevalence of bedside rounds, they cited patient-specific barriers such as lack of patient privacy, poor patient understanding of disease, patient discomfort with physical examination, and language barriers.[43] I found these physician assumptions to be unfounded. Most patients felt comfortable about discussing sensitive information while sharing the room with another patient. By avoiding jargon and using language understandable to the patient, we found that patients reported understanding their illness better after rounds. While physicians were correct in assuming patients to be wary of repeated physical examinations, patients appeared to value physician interactions over these concerns.

Given these findings that patients prefer bedside rounding, the decline in the percentage of bedside rounding may be attributed to attitudes of residents and medical trainees. In support of trainee aversion to bedside rounding, two studies found that the overwhelming majority of medical students and house staff favored presentations away from both the inpatient hospital room[47] and the outpatient exam rooms[46]. These different preferences hint at opposing views regarding the optimal location of rounds.

Previous research suggests that a physician's full attention is important to patients.[67] A qualitative study that explored bedside interactions from the patient perspective found the categories of information exchange, evidence of caring, involvement in education, knowing the team, and bedside manner to be important.[67] This previous study highlighted the importance of team member introductions to the patient, the patient's role in teaching, and caring for the patient. Our research supports these findings as many patients mentioned the importance of face-to-face discussion with the physician and deeply valued undivided attention from physicians. Well-conducted, patient-focused bedside rounds help build a patient-centered culture on the wards.

With these different expectations of bedside rounds, I offer this summary of patient expectations. Patient experience is enhanced by adequately preparing patients prior to rounds (e.g., explaining the purpose and structure of bedside rounds), limiting participation to six or fewer attendees, introducing all participants and explaining roles, using patient-centered language with prompt explanation of medical jargon, and allowing adequate time for patient input and physician response. Clinicians must also remain sensitive to topics discussed in a two-bed room. Prior to the completion of rounds, the

team should ensure that the patient has a better understanding of their medical condition and plan.

Compared to female patients, more male patients reported understanding the medical plan and appeared to better know the physicians responsible for their care. Despite these results, it remains unclear whether patients truly understood their plan of care or the identity of the responsible physician, as this difference was based on self-reported questionnaires. Recent economics literature suggests that women tend to be less sure about the accuracy of their answers and select less extreme choices on surveys when compared to men[68]. These differences in self-reporting could be interesting to explore further.

Limitations of this study include that the research was performed at a single institution and that interviewer bias could have occurred, since one resident conducted the interviews and distributed surveys; however, we conducted interviews until thematic saturation was reached. It is feasible that the author's medical background may have prevented the appreciation of themes that would be more evident when approached through a non-medical lens. We excluded patients who did not speak and read English, so we may not have been able to capture some cultural nuances. Statistical limitations include the lack of random selection and a small sample size that is not powered to detect statistical differences with sub-analysis. Lastly, as several patients declined participation, our results may be skewed.

Concluding Discussion

These studies demonstrate the importance of clear communication in medicine through an exploration of the relationships between PCPs and HCNs and between patients and medical teams. In the process of investigating the reasons why older adults are readmitted to Yale New Haven Hospital, I discovered that the outpatient system of care was fragmented. Although HCNs and PCPs are on the same team, namely both caring for the patient after hospital discharge, they did not communicate effectively with one another. The lack of a working relationships was evident in HCNs who were routinely unable to reach PCPs, and also in the different responses about the reasons for readmission for the same patient. Then, when I looked at patient preferences for bedside rounds, patients clearly voiced a preference for time to meet and engage in dialogue with the medical team. While there has been a shift to hallway rounding or conference rounding, patients reported greater satisfaction and understanding of the plan of care when the medical team performed bedside rounds. In both these cases, drawn from the outpatient and inpatient settings of medicine, I found that clear, concise, and effective communication seems to improve outcomes.

Clear communication in medicine can be promoted in several ways. First, financial incentives can promote provider-provider interactions over the phone during handoffs. CMS has begun to compensate physicians for non-face-to-face time, such that physicians may feel that speaking with HCNs does not result in the lost opportunity cost of seeing another patient. Second, communication can be improved with better platforms for exchanging healthcare information. The integration of EHR allows for more accessible and reliable medical information. Patients should not carry the burden of

always remembering and relaying important medical information correctly at any hour of the day. The interoperability of medical records across the United States health system ought to be a highly desired goal.[69] Accordingly, since the start of the Health Information Technology for Economic and Clinical Health (HITECH) Act, over $26 billion has been invested in healthcare information technologies by the federal government, including payments to hospitals and physicians adopting EHR.[70] Third, teaching medical trainees to be compassionate and empathetic to patients can produce patient-centered physicians. By not presuming any information, but by asking open-ended questions and being sensitive to patient needs, physicians can truly listen to the patient. Last, streamlined protocols such as SBAR (Situation, Background, Assessment, and Recommendation)[71] have been shown to improve nurse-physician communication[72] and reduce unexpected deaths[73]. Since there is considerable variability in how often nurses notify physicians,[74] it is also important to determine the optimal timing for conveying information.

Improvements in communication conduits can result in enhanced productivity, reduced healthcare costs, decreased physician burnout, and greater patient satisfaction. While current EHRs seem to burden physicians with extensive chart documentation and data searching, future upgraded versions of electronic records may decrease redundancies, allow for quick access to previously hard-to-find information, and ultimately provide more time for patient care. Even in home care settings, home care nurses are increasingly given access to point-of-care EHR for its potential improvement in healthcare efficiency.[75] Regarding healthcare costs, clear communication and effective consent processes are vital for reducing communication-related malpractice.[13] Moreover, hospital reimbursements are increasingly tied to quality metrics including patient

satisfaction scores, so, poor communication skills result in lost revenue. Last, physicians who are burned out report providing worse care.[21,23] Although there is a focus on combating burnout by selecting for grit[76,77] in medical trainees, it is clear that increased clerical support improves the quality of life of physicians and leads to physician satisfaction.[78]

It is increasingly evident that effective communication improves health outcomes, but the way to accomplish this aim is not clear. Balancing between the right amount of information and too much information is difficult. While most interventions focus on the communicator, the skill of good listening is just as critical. In the same way that radiologists can miss a gorilla while reading a CT scan through "inattentional blindness,"[79,80] there may be inattentional deafness in medical conversations. Based on our studies of bedside rounding and outpatient provider communication, it is evident that improving communication is pivotal to the goal of providing higher quality care. In the context of increased information from EHRs, time pressures, and administrative burdens, I recommend that physicians and healthcare professionals seek ways to become patient-focused listeners and ultimately clearer communicators.
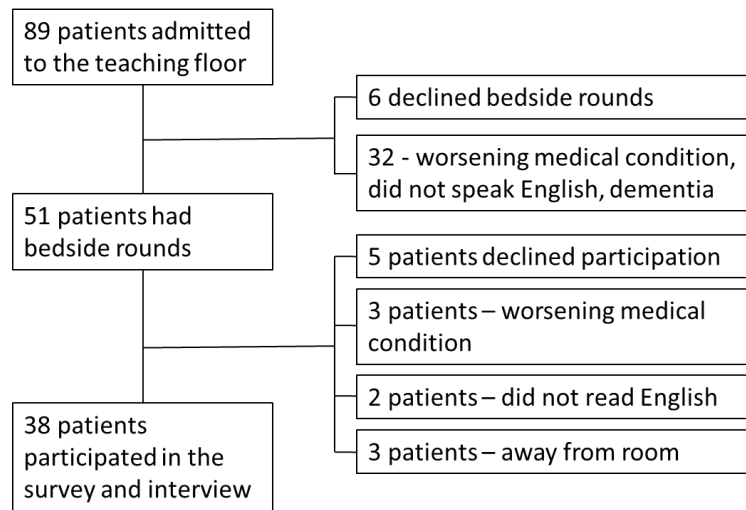
Figure 1. Overview of the participants in this research study, broken down in terms of the number of patients admitted, the number of patients experiencing bedside rounds, and the number of patients who completed the survey and interview.

PRIMARY CARE PHYSICIANS		HOME CARE NURSES	
Theme	Exemplary Quotation	Theme	Exemplary Quotation
Patient-level factors			
Multi-morbidity	Multiple diagnosis and multiple comorbid conditions… most of which are probably not curable either because of age or the chronic nature of it or the advanced stage of the disease. Any doctor who diagnoses a 80 y.o. geriatric patient only 2 diagnoses, he probably missed another six of them.	Multi-morbidity	She has multiple diagnoses of CHF [congestive heart failure], COPD, diabetes, lives alone, on nebulizers, oxygen, also a platform walker.
Disease progression	I think it is the nature of the illness that is the primary consideration [in readmissions].	Disease progression	Because if they are going in with injury, it is not really because of anything that we are doing. It is really because of the disease process… they have plenty of comorbidities.
Nonadherence	I have patients that cannot control their diabetes, maybe eat a lot, or they smoke forever and they can never stop smoking no matter how much advice or medication or Chantix or nicotine patch…, and they have progression of COPD and they end up in the hospital a million times.	Nonadherence	She was supposed to be on a renal diet. She would eat all kinds of stuff, including really salty things. There was just no changing ... She used to be a caterer, really loves food. Her son lived in the house and also did catering…another son owned a restaurant... They are all the same on the food thing.
Patient context (social support, stress, personality)	If she had family living with her, that would be nice. Might of helped her out with her nutrition a bit more, noticed that she wasn't able to take PO [oral] intake or the G[astrostomy] tube was plugged. She could have came in and addressed that a little bit earlier.	Patient context (social support, stress, personality)	She definitely had anxiety around [her husband] dying that way. Her son came back to live with her with his wife and son. Because I think he was unemployed… There were so many issues, like with a lot of people, so she had anxiety that way.
		Symptoms of disease	I know her pretty well, and most of the time her recent admissions were more for pain than they were for breathing.
		Home environment	I always had her [as a patient] due to her breathing... I don't want to be crude, but it smells like dirty feet when you walk in… she is not able to take care. I think this is the way they live… It would be nice to see her in a nice clean place that I would feel would not contribute at all.
		Patient priorities	She doesn't like taking pain medications. So I think some of the medications in the past maybe has made her not feel quite right or make her tired, but that is not the case with the tramadol.

		Patient self-management	It just might be that they [the hospital] can't do anything for her, and so they don't really want her to keep coming in, but she gets to a point where she knows that she is in a little bit of trouble [and goes to the hospital].
Provider-level factors			
Responsibility of emergency physician	I really was not involved at all… It pretty much presented to the emergency room with this, and I was not a party to the decision.	Lack of communication with PCP	Yeah they [PCPs] do not go to the phone. Not all of them, but most of them... We talked to secretary. "Hold On" or "… I'll call you back" and then they'll say "The doctor says "Blah Blah Blah."
Responsibility of hospitalist	Well, you have to understand that I don't admit... He will be admitted through the hospitalists.		
Responsibility of specialist	If I had to point a finger at somebody, maybe urology. If they could replace his foley in the outpatient setting, that might have some importance too [to prevent the readmission].		
System level factors			
Premature discharge	Most of the readmissions that I see are because they are discharged too soon.	Premature discharge	The patient are so weak, you are like, "Who sent you home?"… [The doctor] says, "They were stable, and that is why this patient got discharged." So I'm staring at the patient… she could barely keep her eyes open, she can't get up to walk like she did before… Why would you send someone like that home?
Poor hospital preparation for discharge	Patients need to be thoroughly examined on the day of discharge and go over the medications in an appropriate manner and give the proper instructions and make the follow up appointment with the respective specialties.	Lack of patient financial responsibility	I think that whenever people are on Title 19 they go very easily to the hospital… They don't get any bills at all. So it doesn't come into their mind that someone has to be responsible for the bills and second-guess it about going.
		Lack of patient information	Because HIPAA [Health Insurance Portability and Accountability Act] and they [hospital staff] probably don't know who they are talking to on the other end. They will tell me if she was there and she was admitted, but they won't always tell me what she was admitted with.

Table 1. Perceptions of Primary Care Physicians and Home Care Nurses Regarding Reasons for Hospital Readmission

Table 1: Perceptions of Patients on Bedside Rounds	
Theme	**Exemplary Quotation**
Patient centered communication	
Using language understandable to the patient	They used a lot of words I did not understand, but I mean they explained it to me after these words.
Rounds should occur with the patient	Because I am the patient and that is where it [rounds] should be done.
Lack of attention during rounds	They just sat around and as I said, they looked very bored
Need to involve the patient	It is very impersonal if you are standing out there and talking about… like you are fixture and you should be involved in your own decisions and care.
Importance of eye contact	What I like was eye contact… for me that's important and that eye contact with everybody here who spoke.
Knowing the medical team	It [Bedside rounding] makes me a bit more personal with the doctors. I can get to know them better
Need to obtain patient permission prior to rounds	Just when they first walked in, it was really awkward… ah, you know, like hello, what is going on here.
Interactive clinical discussion	
Transparent medical thought process	I like the idea that I could hear what they were thinking might yet the problem, what possible solution this might be taking, what things they would have to think about and check up on.
Updating the patient about the situation	For the patient, it makes them more comfortable to see the doctors working.
Awareness of space limitations	Small rooms, very crowded, the nurse had trouble getting in and out… four out of five just really kind of see and hear and don't say or do anything, so a couple less is alright.
Allowing for questions	If I don't understand, I can ask my direct question.
Number of people on rounds	
Multiple opinions lead to better care	I like the idea that I get probably like I said more heads, more opinions, more thoughts because I noticed with this group that was here, someone over here was saying something, but he was kind of disagreeing and I like that, you know that way of getting different opinions

Multiple physical examinations are annoying	If you have one doctor who did the initial exam, he/she should be able to say "okay Mr. M has an abscess on his leg... Finally when the team comes in, all they have to say is okay Mr. M we are gonna do this… every time you take the blankets of off me, I get cold again and then I have to warm up so.
No limitation on round participants given interest	As long as they are learning, it does not matter the number, whether they are seven or seventeen. They were all bouncing ideas of each other and with me and I thought it was a wonderful discussion.
Too many participants limit questions	I would say four to six because then you get a chance to make your own voice known… and then the doctor would have enough time to answer those patients
More participants increase privacy concerns	I would say three [participants]… just keep it you know more confidential.
2-bed rooms increase privacy concerns	The guy in the next bed was probably not a problem because I will probably never see him again… some things that were discussed that were pretty confidential and private and it just seems odd that just occurred between the you know stranger in the next bed.
Too many participants are intimidating	I think it is more like intimidating… a smaller group is better.
Purpose of Rounding	
Educate the patient	I mean they were kind, they answered my questions to my you know to my what would I could and how I can understand it and they were just really good,
Educate the medical trainees	It's for the young and not for me because they have to learn. That's why he showed them I have a rash, he showed them where it is, and he called what it was… I don't know what he meant, but he should try to teach them… that's what a teaching hospital does.
Educate the residents and physicians	I think a lot of it is for the doctors, to train their staff.
Follow patient progress and develop clinical plan	They were checking the morning to see the progress and formulated a plan from there.
Information capture from patient	Team working together and they learn from each other as much as they learn from the patient and as much as the patient learns from the doctors as to what is the problem

Table 2. Themes and Representative from Qualitative Inquiry of Bedside Rounds

Strongly Agree or Agree by Statement. n (% of category)	Total	Gender			Education Level		
Statement	Total (n=38)	Male (n=22)	Female (n=16)	P-value	High school or less (n=19)	Some college or more (n=19)	P-value
The team introduced themselves when they came into the room	37 (97.4%)	22 (100%)	15 (93.8%)	0.42	18 (94.7%)	19 (100%)	1.00
The team clearly explained their roles in care	28 (73.7%)	18 (81.8%)	10 (62.5%)	0.27	15 (78.9%)	13 (68.4%)	0.71
At the end of bedside rounds I knew who was responsible for my care	30 (78.9%)	20 (90.9%)	10 (62.5%)	0.0498*	13 (68.4%)	17 (89.5%)	0.23
I felt respected by doctors during bedside rounds	38 (100%)	22 (100%)	16 (100%)	NA	19 (100%)	19 (100%)	NA
Doctors paid close attention to what I was saying during bedside rounds	37 (97.4%)	22 (100%)	15 (93.8%)	0.42	18 (94.7%)	19 (100%)	1.00
Doctors used medical jargon or words I did not understand during rounds	20 (52.6%)	12 (54.5%)	8 (50%)	1.00	12 (63.2%)	8 (42.1%)	0.33
I feel my privacy was respected and maintained during bedside rounds	36 (94.7%)	21 (95.5%)	15 (93.8%)	1.00	19 (100%)	17 (89.5%)	0.49
Being in a 2-bed room keeps me from speaking openly during rounds	6 (15.8%)	3 (13.6%)	3 (18.8%)	0.68	3 (15.8%)	3 (15.8%)	1.00
I feel that it is acceptable to have a bedside rounds in a 2-bed room	26 (68.4%)	17 (77.3%)	9 (56.3%)	0.29	16 (84.2%)	10 (52.6%)	0.08
After bedside rounds, I had a good understanding of the plan for the day	29 (76.3%)	20 (90.9%)	9 (56.3%)	0.02*	14 (73.7%)	15 (78.9%)	1.00
After bedside rounds, I had a better understanding about my medical condition	22 (57.9%)	12 (54.5%)	10 (62.5%)	0.74	9 (47.4%)	13 (68.4%)	0.32
I had an opportunity to ask questions during bedside rounds	35 (92.1%)	21 (95.5%)	14 (87.5%)	0.56	17 (89.5%)	18 (94.7%)	1.00
* Statistically significant with p-value < 0.05							

Table 3. Survey Results Based on Strongly Agree or Agree vs. Neutral, Disagree, and Strongly Disagree to Statements

Average Agreement of Patients to Selected Statements

5-point Likert scale, 1=strongly disagree to 5= strongly agree

Statement	Average
Interaction with Doctors	
At the end of the bedside rounds I knew who was responsible for my care	4.6
The doctors used medical jargon or words I did not understand during bedside rounds	3.97
Comfort Level	
Being in a 2-bed room keeps me from speaking openly during bedside rounds	2.24
I feel that it is acceptable to have bedside rounds in a 2-bed room	3.66
Understanding Your Care After Bedside Rounds	
After bedside rounds, I had a good understanding of the plan for the day	3.87
After bedside rounds, I had a better understanding about my medical condition	3.37
I had an opportunity to ask questions during bedside rounds	4.32

Table 4. Average Agreement for Selected Statement. Means are computed from Likert Scale 1-5.

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