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Are we “missing the big picture” in Transitions of Care? Perspectives of Healthcare Providers Managing Patients with Unplanned Hospitalization

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Abstract

Background: Healthcare providers play a critical role in the care transitions. Therefore, efforts to improve this process should be informed by their perspectives.

Aim: The study objective was to explore the factors that negatively/positively influence care transitions following an unplanned hospitalization from the perspective of healthcare providers.

Methods: A qualitative study using semi-structured interviews conducted between February and September of 2016 at a single academic medical center. We enrolled fifteen healthcare providers from multiple disciplines involved in the management of patients experiencing an unplanned

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Declarations

Ethics approval and consent to participate: The University of Massachusetts Medical School Institutional Review Board approved this study.

Consent for publication: Each study participant provided a written informed consent.

Availability of data and materials: The data collected and analyzed during the current study are available from the corresponding author on reasonable request.

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hospitalization. Respondents shared their experiences with care transitions and identified factors within and outside of the discharging health facility that impede or facilitate this process. Transcribed interviews were analyzed using emerging themes from the interviews.

Results: We identified six themes and associated subthemes from the interviews on factors that influence care transitions. Three themes focused on factors within the discharging healthcare facility: untailored and overloaded patient discharge information, timing of the post-discharge care conversation, provider-to-patient and provider-to-provider miscommunication. The other three themes were related to external factors including caregiver involvement, having a safe and stable housing environment, and access to healthcare and community resources. Providers discussed how these factors positively/negatively influence the hospital-to-home transition.

Conclusions: Our study identifies factors within and outside the discharging healthcare facility that influence care transitions, ultimately affect patient-centered outcomes and provider satisfaction with delivered care. Strategies aimed at improving the quality of care transitions should address these barriers and actively engage healthcare providers who are pivotal in care transitions.

Keywords

Care transitions; healthcare providers; patient discharge; caregiver involvement; health care communication

Background

Care transitions refer to a set of coordinated actions aimed at ensuring the continuity of patient care as they transfer between hospital settings, different levels of care, health care providers and to and from home (Fitzpatrick & Kazer, 2012; Geary & Schumacher, 2012). There is broad consensus that an ineffective care transition poses a high risk for adverse medication related events, incomplete transfer of pertinent patient information, unscheduled hospital readmissions, and increased mortality (Forster et al., 2003; Kripalani, et al 2007; Jencks, Williams, & Coleman, 2009). Consequently, care transition redesign efforts aimed at improving the transition from inpatient to outpatient settings have been implemented with promising results such as improved patient outcomes, reduced hospital readmission rates, and cost effectiveness (Coleman et al., 2006; Jack et al., 2009; Naylor et al., 2004). Healthcare providers play a prominent role in managing hospitalized patients and executing the discharge process. However, since the inception of these innovative programs little research has focused on understanding the factors that may present barriers to, or facilitate effective care transitions from the perspective of healthcare providers.

During the care transition, patients encounter multiple healthcare providers who ideally collaborate to improve quality of care, engender positive patient experience and reduce healthcare costs (Berwick, Nolan, & Whittington, 2004). However, available data from a limited number of studies highlight the frustration patients and their caregivers experience in dealing with multiple providers due to poor communication and insufficient care-coordination between providers in the inpatient and outpatient settings (Arora et al., 2010; Bell et al., 2009). In addition, patient-level factors and their physical and social environment

may influence the quality of care transitions (Institute of Medicine, 2013). Though all transitions of care are fraught with pitfalls, however those around an initial unplanned hospitalization are perhaps more disruptive for patients and their families as they may lack the benefit of optimizing comorbidities, harnessing economic resources, and mobilizing social support in advance of hospital admission as they might for a planned hospitalization (Fuji, Abbott, & Norris, 2012).

We conducted this qualitative study to explore the factors influencing care transitions from the perspective of healthcare providers involved in the management of patients experiencing an unplanned hospitalization and coordinating various aspects of their subsequent care transitions. We included providers from diverse specialties and varying years of experience to achieve a multidisciplinary perspective.

Methods

Study design

This study utilizes data from a Patient Centered Outcomes Research Institute (PCORI) funded research designed to improve the quality of care transition measures with input from three stakeholder groups: providers, patients and caregivers. Findings from the patient and caregiver interviews are detailed elsewhere (Erskine et al., 2018; Shirley et al., 2018). Here, we report methods and results from the provider interviews with relevant insights as to the barriers and facilitators of care transitions.

Participant Selection and Setting

The study was conducted at a tertiary care hospital in central Massachusetts. The research coordinator conducted informational sessions with nurse managers and nurse practitioners to introduce the study and invite participation. In addition, two physician investigators in our study (DM, cardiology; HS, trauma/emergency surgery) provided a list of potential study participants using purposive sampling; and snowball sampling was also utilized whereby recruited participants suggested colleagues to be contacted. To avoid sampling bias due to perceived pressure to participate in the study, the investigators did not notify any colleagues of pending contact from study team members for recruitment. The investigators were not involved in any initial contact of potential interviewees, nor in any further contact once consented. Furthermore, we maintained anonymity of the study investigators when listed participants were contacted and separate research personnel conducted the semi-structured interviews. The two investigators who provided the lists of potential participants were part of the multi-stakeholder advisory committee that designed the semi-structured interview guide. None of the study authors were interviewed as study participants. In addition, to recruit patient care staff from wards (e.g., bedside nurses, patient care associates) our lead research coordinator conducted brief information session and left flyers in documenting areas to aid in recruitment. Nine participants were identified by the study cardiologist and trauma surgeon, five were recruited through snowball referral, and one participant responded to study advertisements displayed in the hospital. Inclusion criteria were: (a) involvement in the care of patients with unplanned hospitalization, providing discharge/follow-up services, and (b) willingness to participate in a semi-structured interview, lasting no more than one

hour. The research coordinator contacted 34 of 39 potentially eligible participants via electronic mail. Twenty enrolled in the study and 15 providers completed the interviews.

Data Collection

A semi-structured interview guide was developed from the care transitions concepts discussed in prior literature (Geary & Schumacher, 2012) by an iterative process with two clinicians/co authors (HS, DM) and input from a multi-stakeholder advisory committee comprising two patients, one caregiver and one hospital administrator. The interview guide asked respondents to describe the process of care transitions, factors influencing this process, and ways to improve transitions. The guide included open-ended questions, such as “Can you describe the information that is routinely provided to patients for the transition back to home? Do you feel that this is enough information for a successful transition or are there other things that you would want to provide?”, “What do you think are factors separate from the healthcare system that might affect the quality of transition?”. In addition, interviewers used probes to elicit detailed information regarding participants’ experience with care transitions.

Between February and September of 2016, two research associates conducted 12 face-to-face interviews and 3 telephone interviews (to enable participants complete their interviews at the time most convenient for them). In-person interviews were conducted in private offices at participants’ workplace with duration ranging from 18 to 48 minutes, and the telephone interviews lasted between 30 and 52 minutes. All interviews were audio-recorded, transcribed and imported into NVivo v.11.3.2 for subsequent coding and analysis (QSR International, Melbourne, Australia). Each study participant provided a written informed consent prior to the in-person or telephone interviews. The University of Massachusetts Medical School Institutional Review Board approved this study.

Data Analysis

To ensure transparency of our research methods and trustworthiness of our findings, analyst triangulation was achieved by three authors from diverse academic backgrounds (HA, physician; NE, MD/PhD candidate; JL, acute care nurse practitioner) and with varying qualitative research experience analyze the transcripts independently and subsequently meet frequently to develop the coding structure. The team performed line-by-line review of the transcripts and conducted data analysis using the constant comparative method with codes developed iteratively and refined based on the emerging themes from the data (Braun & Clarke, 2006; Glaser, 1965). Disagreements on the codes and emerging themes were resolved by an independent adjudicator/co-author (HS) with substantial clinical and qualitative research experience. A final coding scheme was developed and applied to all transcripts and we observed thematic saturation with no emergence of new themes and repetition of information from the participants. Codes from data analysis are presented in Table 1.

Results

Participant Characteristics

The study participants (n=15) comprised physicians (n=6), nurse practitioners (n=6), nurses (n=2) and a patient care assistant (n=1). Participants were from diverse specialty including cardiology (n=7), trauma (n=3), hospital medicine (n=2), medical/surgical nursing unit (n=2), and palliative care (n=1) with 2–40 years of working experience. Most were female (n=12) and non-Hispanic White (n=14). Table 2 details the study participant characteristics.

Themes derived from the semi-structured interviews

Six themes emerged from the data. Three themes were related to factors within the discharging healthcare facility that influenced care transitions including: (1) comprehensiveness and clarity of patient discharge information; (2) timing of the post-discharge care conversation; and (3) communication breakdown. The other three themes were related to external factors, namely: (4) informal caregiver involvement; (5) the patient's home environment; and (6) accessibility to healthcare and community resources. Each theme and their associated sub-themes are discussed below and are presented with illustrative quotes.

Factors within the discharging healthcare facility that influence care transitions Comprehensiveness and clarity of patient discharge information

Participants noted two key issues with the patient discharge information that could impede a successful care transition. Providers (8/15) considered information-overload common, believing that patients often receive more information than they need, which may also have the effect of obscuring the most important details required for a smooth transition home. One provider mentioned:

“I think a lot of the stuff they ‘re provided is nonsense. There’s a ton of pages that are just totally meaningless....one of the things that happens is it’s almost like we give them too much information...that they don’t look at any of it. “ [Physician, ID #3007]

In addition, most providers (11/15) acknowledged that the discharge information was not tailored to specific patient needs; but was routinely prepared “mechanically” using a standardized format without considering what each patient would require for a successful care transition. A participant said:

“We don’t ask the right questions to figure out what they really need to succeed. Because, it’s basically been...legislated is not the right word. it’s basically been written into stone that you have to do x, y, and z and everyone is just trying to keep up with doing that no one stops to consider the intent of what that’s supposed to mean, right? It becomes so task-oriented that we ‘re missing the big picture sometimes.” [Physician, ID #3015]

Providers suggested providing relevant information suited for each patient, and designating a member of the team to review the discharge information with each patient and provide necessary clarifications before discharge. Other suggestions were diversifying the approach

to administering discharge information, and making the information available based on the patient's preferred learning style. Two illustrative quotes from providers:

"...Everybody learns differently, right? So it would be, in a perfect world, this assessment of learning styles and asking the patient, 'how do you like to receive this information. We can give it to you in multiple ways but how would you like to receive it?' And you would provide it to them based on their most comfortable learning style. " [Nurse Practitioner, ID#3003]

"....Making discharge information easier to read, bigger font, brighter with certain things bolded or highlighted would be more effective than just handing them a stack of 12 papers". [Nurse, ID#3001]

Timing of the post-discharge care conversation

There was disagreement between providers regarding the appropriate time to conduct the postdischarge care conversation. Two competing sub-themes identified were "early discharge conversation" as soon as the patient is admitted, and "delayed discharge conversation" after recovery from the acute phase of their illness. Whereas some providers (8/15) felt that early conversations served as facilitators of care transitions, others (5/15) were cautious given the possibility of being perceived as pushing the patient out when still acutely ill or while the diagnosis or intervention were still in question.

Illustrating the need for early post-discharge conversation, one participant mentioned that the discharge conversation should be:

"Literally, from day one and continuing throughout the hospital stay." [Nurse Practitioner, ID #3003].

Regarding delaying the post-discharge care conversation, two participants stated:

"As soon as the very acute period has passed....when the life-threatening things are gone." [Nurse Practitioner, ID #3005]

"I think not right away. I think a lot of people feel pushed out." [Patient Care Assistant, ID #3006]

Communication breakdown

All providers commonly described issues with communication breakdown within the health system and its negative effect on care transitions. Participants ascribed provider-to-patient miscommunication to time constraints and language barriers. Providers (10/15) indicated that the conversation with patients about their clinical condition and discharge plan was often conducted in a "rushed manner", and in follow-up visits, it became apparent that many patients do not understand the information they are provided in the hospital. Two providers mentioned:

"We don't necessarily have enough time to sit down and make sure you touch base with all the important people. " [Nurse Practitioner, ID#3012]

"It is always rushed. Its never a smooth process and the communication is always lacking. " [Patient Care Assistant, ID#3006]

In addition, providers (13/15) discussed language barriers as a prominent issue despite the presence of hospital interpreters. Respondents expressed their dissatisfaction with not understanding the patient's "actual feelings" which were difficult to translate, especially with the use of telephone interpreters. Participants noted that the identified communication barriers might affect patient's adherence with their treatment plan after discharge.

"I think language can be a big barrier. I've noticed recently that having an in-person interpreter helps immensely but they're not available for all language. When we use the phone interpreter for whatever reason it's not quite as clear and I feel like the patients...it always seems like there's something missing from the conversation so I feel like that can be a big impediment to them understanding what's going on.
" [Physician, ID#3008]

Meanwhile, providers attributed provider-to-provider miscommunication between inpatient and outpatient settings to work done independently of one another and lack of continuity in patient care (9/15). Providers (13/15) mentioned the need for direct communication between hospitalists and primary care physicians (PCP), especially updating the PCPs on notable changes in the patient's medications and management initiated by the in-patient team. Although the discharge summary should provide such relevant information, participants (7/15) mentioned that the discharge summary occasionally lacked key information regarding the patient's hospitalization course. An area of concern was inadequate medication reconciliation in the discharge summary with inconsistent doses and changes in medications not regularly updated or executed in an untimely fashion. An illustrative quote from a provider:

"Well, the big problem is with documentation. Even in the discharge summary, the meds aren't always accurate or if they are the patient isn't always taking the right meds so you read down and try to figure out why they're putting people on certain meds or certain doses.... The other thing that happens in the discharge summaries a lot is you have blanks. It will say 'social history- blank, medications on discharge- blank ' or it will be this regurgitation of labs and tests, all of which you can find in other places so it ends up being a useless document. " [Nurse Practitioner, ID#3014]

External factors influencing care transitions

Informal caregiver involvement—All providers acknowledged that having a caregiver during the patient's hospital stay and at discharge facilitated care transitions. Most providers (11/15) mentioned that involving caregivers in the post-discharge care discussion enhanced patients' adherence with their treatment plan as they provided an extra set of ears during the discharge conversation, motivated patients and kept them accountable, often reminding patients of the need for adherence with their treatment in order to stay healthy. Furthermore, some providers (5/15) opined that caregivers' familiarity with the patient (their loved ones) aided in identifying minor symptom changes or other issues not anticipated by the providers especially in caring for the elderly. Two providers elaborated on caregiver involvement as follows:

“...It’s so important that they have someone to support them while they’re in the hospital and to help them be compliant with their treatment plan after they leave.” [Nurse Practitioner, ID #3012]

“To help them out, keep them on the right path, if they ‘re more knowledgeable in some areas... A family member knows you. For the elderly, they might have different reactions to certain things, like maybe they don’t get a temperature. Maybe they get confused and family members can recognize something’s not right, and know that quicker than someone else who doesn’t know you as well.” [Patient Care Assistant, ID #3006]

The patient's home environment

Providers (8/15) considered the patient’s home environment important for a successful transition. Two providers noted the difficulty encountered in caring for patients with transient or unstable housing situation. Such patients were less inclined to return for follow-up appointments or refill their medications, as the basic need of a “roof over their head” was not yet addressed. Furthermore, providers (11/15) noted safety of the physical environment at home an important concern in avoiding readmissions, with particular concerns about preventing falls among patients who were not stable enough to climb the stairs at home. Two participants mentioned:

“Making sure they will be safe at home... they will make it in one piece... is one of the things that ensures a successful transition and helps to reduce readmission. “ [Physician, ID#3002] “... The physical location the patient is being discharged to, this encompasses the safety of the home with respect to violence, the safety of the home with respect to the physical environment, stairs, etc., whether they’re isolated or have people around. “ [Physician, ID#3004]

Accessibility to healthcare and community resources

Providers described how patient’s access to the healthcare facilities and other community resources could influence their follow-up care and transition process. Most providers (11/15) noted that patients living in remote geographic locations experienced difficulty accessing food stores for healthy meals, getting prescriptions filled at pharmacies, and returning for their follow-up appointments. In addition, providers (13/15) reported that patients with poor transportation access often missed their clinic visits, which negatively affected their transition process. Illustrative quotes from two providers:

“To the extent that people who live far out, they are very reluctant to come in unless they absolutely have to. If they live in the city, people can take buses and that makes it easier to appointments or to get their meds. The logistics of getting here when you live far away is hard. “ [Nurse Practitioner, ID#3014]

“If a patient can’t drive and is relying on someone else or on public transportation to get to and from appointments or to pick up medications or even just to shop for food and doesn’t have that access it’s a big problem. “ [Physician, ID #3015]

Discussion

Our study highlights factors within and beyond the direct control of the discharging healthcare facility that influence care transitions for patients experiencing an unplanned hospitalization. Providers identified barriers to this process as information overload in the discharge instructions, a lack of personally tailored messages, provider-to-patient and provider-to-provider miscommunication. Respondents emphasized the importance of caregiver involvement, stable housing, safety of patient's home environment, and access to healthcare and community resources as factors that promote successful care transitions. These perspectives of healthcare providers are critical in developing interventions to improve the effectiveness of care transitions, which have been shown to influence patient outcomes and overall healthcare costs (Coleman et al., 2006; Jack et al., 2009; Naylor et al., 2004).

The Centers for Medicare and Medicaid Services (CMS) and Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requires patient discharge instructions as one of the core measures for accreditation and public reporting (JCAHO, 2007). The patient discharge information should ideally contain pertinent clinical information and clear instructions to empower patients in managing their health successfully in their home. Yet previous studies show that most patients do not completely understand or recall the discharge instructions they receive, with reduced patient satisfaction and compliance (Clarke et al., 2005; Maloney & Weiss, 2008). Our study participants noted barriers associated with the patient discharge instructions ranging from information overload to personally untailored messages. These findings are consistent with findings of prior qualitative studies, wherein patients and providers buttress the need for clear, concise and readily available patient information which ultimately impact transitional care quality and patient recovery process (Maloney & Weiss, 2008; Rhudy, Holland, & Bowles, 2010). Providers in this study made a number of recommendations to improve the discharge information by focusing more on patient needs and their preferred modality of receiving the discharge instructions rather than a reliance upon a mechanized template. Providers suggested the use of pictorial representations or audiovisual devices for more interactive learning, methods that have been shown to improve the comprehension of discharge instructions (Katz, Kripalani, & Weiss, 2006; Zeng-Treitler, Kim, & Hunter, 2008). Taken together, our findings and those from previous research emphasize that some mandates, though intentioned to positively influence care, such as the one requiring discharge information and making it a reported process measure, may in fact hamper care if the process to meet the mandate ignores patients as individuals. Future efforts to streamline the contents, diversify the presentation styles, and personalize discharge materials are warranted.

There is limited research as to the ideal time to engage patients in the post-discharge care conversation and its impact on health outcomes. Most providers in this study preferred to initiate the post-discharge care conversation early, which is consistent with prior literature describing the discharge planning process as a non-isolated event that begins at admission and continues through the hospital stay (Waring et al., 2018). However, some providers preferred to delay the conversation to avoid patients feeling rushed out the door. One solution to this dilemma is to perform an assessment of patient readiness to be engaged in

the post-discharge care conversation throughout the hospitalization then utilizing a patient-centered approach in discussing the post discharge care plan at a time that is appropriate for any given patient's condition. More research is needed to evaluate patient experiences during hospitalization and appropriately assess patients' preferred time for engagement in the post-discharge care conversation and its influence on the quality of care transitions. This would be particularly important in the subset of patients addressed in our research who experienced an initial unplanned hospitalization and could not plan ahead for any anticipated post-discharge needs.

Insufficient time to discuss discharge instructions with patients was one key factor in provider- to-patient miscommunication identified in the present study. Prior studies acknowledge that providers, especially physicians, have limited time to spend with their patients making it difficult to establish personal relationships thus resulting in reduced patient satisfaction and adherence to treatment plans (Dugdale, Epstein, & Pantilat, 1999; Robbins et al., 1993). The use of a multidisciplinary team approach with nurses, clinical pharmacists, dietitians, social workers and case managers could help in-patient providers manage their time more efficiently and provide patients with ample opportunity to understand and ask questions about their condition and care plan (Dugdale, Epstein, & Pantilat, 1999). Furthermore, given that most physicians would prefer to engage and spend time with their patients rather than with cumbersome electronic documentation and increasingly onerous regulatory requirements that are only peripherally related to patient care, efforts, such as the use of scribes to reduce the time needed for electronic documentation (Gidwani et al., 2017; Sattler, Rydel, Nguyen, & Lin, 2018), should be undertaken to empower physicians to lead conversations with their patients. This approach may also mitigate a key weakness in care transitions that we identified from patients and informal caregivers in the same study, namely difficulty identifying who was in charge of their care (Erskine et al., 2018; Shirley et al., 2018).

Existing research has shown the negative effects of language barriers including poor healthcare access and worsened health status (Fiscella et al., 2002). Hospital translation services have been shown to reduce language related communication barriers, but errors notably occur among untrained or ad-hoc interpreters with untoward clinical consequences and decreased satisfaction with care (Glenn, 2005). In our study, providers reported language barriers as a key issue in provider-to-patient miscommunication. Furthermore, providers noted particular difficulty and less satisfaction with the use of telephone translation services, which does not always convey how the patient truly feels. Given that increasing number of health systems are turning to telephone interpreters for cost-savings (Masland, Lou, & Snowden, 2010), the longer-term costs on adverse outcomes and poor satisfaction scores should be measured in making over-arching decisions on how patients who are not native English-speakers will benefit from equity in communication with their care teams and how disparities in communication efforts might adversely affect care transitions.

Ineffective communication between healthcare professionals is recognized as a leading cause of medical errors, hospital readmissions and harm to patients (Dossa, Bokhour, & Hoening, 2012; Leonard, Graham, & Bonacum, 2004; Woolf et al., 2004). In this study,

communication breakdown between inpatient and outpatient providers was attributed to providers working independently of one another and delayed completion of discharge summaries. Similarly, results from a meta-analysis showed that communication deficits between in-patient and PCPs were attributable to suboptimal completion and delivery of discharge summaries, with only 12%–34% of discharge summaries available to the outpatient care teams at the time of patient's follow-up visit (Kripalani et al., 2007). Electronic health records (EHRs) have been lauded by some, as a strategy to improve communication between providers by increasing access to health information and facilitating transfer of necessary patient information between healthcare settings (National Transitions of Care Coalition, 2010). However, a lack of interoperability among competing EHRs systems and concerns with security of protected health information have resulted in delayed information sharing and information “silos” which preclude effective provider-to-provider communication (National Transitions of Care Coalition, 2010). While on the surface, miscommunication might seem to be the result of provider actions alone, it is clear that system changes, in particular in the competitive modern healthcare environment are needed to allow providers the ability to engage effectively with their outpatient colleagues and thus optimize care transitions.

There is increasing awareness of the need for healthcare providers and policy makers to “go beyond the walls of the hospital” in order to develop tailored care plans for patients that take into consideration the external forces that influence care transitions (Boutwell, et al., 2011). However, quality indicators of care transitions focus mainly on factors within the healthcare system without taking into account the crucial role of external factors. Providers in this study elaborated upon factors outside the discharging healthcare facility that influence care transitions. Informal caregivers, they reported, support comprehension and adherence of the discharge plan while providing more attuned recognition of subtle changes in patient's well-being. Similarly, in previous research among healthcare professionals, caregivers were described as “indispensable intermediaries” during care transitions (Bragstad, Kirkevold, & Foss, 2014), given the extent of their engagement in planning and implementing care transitions, providing care, and helping patients navigate the healthcare system (Jeffs et al., 2017). Although caregivers play an important role in patient's recovery (Bragstad, Kirkevold, & Foss, 2014; Jeffs et al., 2017), providers should ensure caregivers are not overburdened with the responsibility of caring for their loved one and that they maintain their own health. Interestingly, only one provider in this study noted the likely burden on caregivers. Thus, our findings have revealed yet a lesser addressed issue in care transitions, namely - addressing caregiver burden and ensuring they maintain their own health while assisting their loved one's care transition.

Following hospital discharge, patients are expected to adhere with instructions regarding medication use, dietary changes, and follow-up appointments. However, as highlighted by our study and in prior literature, when faced with housing insecurity or transportation challenges, patients may be unable to adhere to their post-discharge care (Best & Young, 2009). The safety of patient's home environment was another important consideration noted by providers in this study. In particular, weakness or decrement in agility after admission were posited by providers to subject patients to risk of injury and potential readmission due to falls. Indeed, the immediate post-discharge period has been shown to be a notably high-

risk time for adverse events such as falls, which have higher incidence among patients discharged home compared to the community dwelling population without a recent hospitalization (Davenport et al., 2009; Mahoney et al., 1994; Mahoney et al., 2000). In addition, geographic location and transportation access were highlighted in this study as influencing care transitions. Poor transportation access is a recognized barrier to healthcare leading to rescheduled or missed appointments and delayed care, with patients in remote areas more likely to experience transportation difficulties (Skinner & Slifkin, 2007; Probst, Laditka, Wang, & Johnson, 2007). Improving transportation access may require collaboration between health policy makers and transportation experts to offer patient-centered and cost-effective solutions for improving transportation access (Syed, Gerber, & Sharp, 2014). Furthermore, modern technological innovations, such as telehealth with videoconferencing and remote monitoring may address transportation barriers by reducing patient's travel needs (Rutledge et al., 2017; Syed, Gerber, & Sharp, 2014). The implementation of telemonitoring especially for patients with chronic diseases may be less burdensome for follow-up, reduce the likelihood of missed appointments and improve patient's adherence with their post-discharge care. Our findings buttress public health/societal issues outside of the health system that providers should be mindful of when preparing patients for discharge. Ultimately, however, hospital case managers and social workers need strong communities and willing community partners to breed successful care transitions.

Study strengths and limitations

Given the qualitative research design used in this study, our findings are primarily exploratory and do not provide conclusive evidence on the care transition process. This study was conducted among providers in a single academic health center, restricting the generalizability of our findings beyond this setting. However, the inclusion of providers from varying clinical specialties and years of experience provide diverse perspectives that lend credibility to our findings. Furthermore, owing to time and budgetary constraints, we did not include various other non-bedside nursing and treatment team staff, namely dietitians, physiotherapists, and social workers, whose day to day efforts necessarily impact discharge planning and whose insight might have changed our findings on care transitions. There is also the possibility of social desirability bias with providers being more likely to provide positive feedback on care transitions, however, the use of prompts for both negative and positive experiences reduced the likelihood of sharing only positive experiences. Nevertheless, in a complex health system with rising costs due to poor care transitions, obtaining first-hand stakeholder input serves to strengthen our capacity to design process improvements and our data provide an insightful starting point.

Conclusions

We have highlighted factors that influence care transitions from the perspective of healthcare providers. Despite ongoing programs to improve care transitions, reduce readmissions and improve patient centered outcomes, barriers to successful care transitions persists within the healthcare system and beyond the walls of the hospital. For safe and effective care transitions, healthcare providers should be actively engaged, and programs should be

implemented to address varying factors within the healthcare facilities such as improving the discharge process with instructions tailored to patient's needs, promoting effective provider-to-patient and provider-to-provider communication, promoting caregiver involvement, and consideration of external factors such as stable housing, safe home environment, and accessibility to healthcare and community resources.

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List of Abbreviations

CMS	Center for Medicare and Medicaid Services
EHR	Electronic health record
JCAHO	Joint Commission on Accreditation of Healthcare Organizations
PCP	Primary Care Physician
PCORI	Patient Centered Outcomes Research Institute

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Study Highlights

- Facilitators and barriers to care transition exist in and out of healthcare system
- Clear and concise patient discharge information facilitates care transition
- Provider-provider and provider-patient miscommunication hinder transitions of care
- Caregiver involvement, safe housing, accessible resources promote care transition
- Providers should be actively engaged in interventions for effective transitions

Table 1.**Codes from Qualitative Data Analysis**

Code and numeric assignment	Description of Code
1.0 DISCHARGE PROCESS	
1.1 Timing of discharge conversation	When providers initiate conversation about discharge.
1.2 Discharge information provided to patients	The discharge information made available to patients while on admission in the hospital. This may be the patient discharge information; whether the information is tailored to meet each patient's needs.
1.2.1 Accuracy and clarity	
1.2.2 Final Diagnosis	
1.2.3 Tailored for each patient	
1.2.4 Not tailored for each patient	
1.3 Route of Discharge information	The mechanism by which patient discharge information is provided to the patients.
1.3.1 Written	
1.3.2 Verbal	
1.3.3 Video	
2.0 COMMUNICATION	
2.1 Provider - Patient	How the communication between providers, provider and patients; may influence the care transition process.
2.2 Provider - Provider	
3.0 CAREGIVER ON BOARD	
3.1 Caregiver Availability	Caregiver's availability, involvement and readiness for patient's discharge.
3.2 Caregiver Involvement	How the involvement of primary care givers including spouse, children, siblings or friends; influences the care transition process.
3.3 Caregiver Readiness and Preparedness for discharge	
4.0 COMMUNITY LEVEL FACTORS	
4.1 Geographic location	How patient's residential area (urban, rural) may affect the care transition process.
4.2 Transportation Access	How access to transportation services may influence patient's care transition and follow-up visits to the clinic.
4.3 Food security	How the patient's food access and security influences the care transition process.
4.4 Housing Status	The nature of patient's residence and how this may influence recovery at home.
5.0 AREAS FOR IMPROVEMENT	
5.1 Health Care factors	Part of the care transition process which is lacking or inadequate and needs to be improved upon
5.2 Patient Level factors	
5.3 Caregiver factors	
5.4 Community level factors	

Table 2.

Characteristics of study participants

Characteristic	Total N=15
Female	12 (80.0%)
Race/ethnicity	
Non-Hispanic Whites	14 (93.3%)
Asian	1 (6.7%)
Provider role	
Physician	6 (40.0%)
Nurse Practitioner	6 (40.0%)
Nurse	2 (13.3%)
Patient Care Assistant	1 (6.7%)
Health care specialty	
Cardiology	5 (33.3%)
Trauma	3 (20.0%)
Hospital Medicine	2 (13.3%)
Medical/Surgical Nursing unit	2 (13.3%)
Cardiac surgery	2 (13.3%)
Palliative care	1 (6.7%)
Duration involved in health care	Range: 2–40 yr. Mean: 17.1 yr.