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Assessment of the Patient-Centered and Family-Centered Care Experience of Total Joint Replacement Patients Using a Shadowing Technique

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In 2030, when baby boomers reach 65 years of age and represent 18% of the population, it is anticipated that 67 million adults will have a diagnosis of arthritis increasing the demand for total hip and knee arthroplasty. With the growing emphasis on patient- and family-centered care, the aim of this project was to assess the patient experience of patients and families throughout the entire spectrum of the total joint replacement service line care at a university regional trauma hospital. A shadowing methodology as defined by the Institute for Health Improvement was utilized. Eight patient/family groups undergoing total joint replacements were shadowed. The mapped care experience included time, caregiver, activity, shadower observations, and impressions. Findings revealed inconsistencies in the delivery of patient- and family-centered care. Communication and interactions were predominantly provider-centric, with a focus on care routines versus the patient and family, and anticipation that care would be medically directed.

Arthritis is a major cause of morbidity throughout the world with a strong influence on health and quality of life (Centers for Disease Control and Prevention [CDC], 2010). In the United States, arthritis has been reported as the most common cause of adult disability for well over a decade. The scope of this problem is substantial when one considers that more than 50 million American adults have been diagnosed with some form of arthritis. Half of all adults older than 65 years experience arthritis (CDC, 2011). By 2030, when all baby boomers will reach 65 years of age and represent 18% of the population, it is anticipated that 67 million adults will have a diagnosis of arthritis (Hootman & Helmick, 2006). Primary total hip arthroplasty is estimated to grow by 174% (572,000 procedures) and estimates for primary total knee arthroplasty growth are as high as 673% (3.48 million procedures).

Osteoarthritis is the most common form of arthritis affecting more than 27 million U.S. adults (Lawrence et al., 2008). This disease is characterized by degeneration of cartilage and its underlying bone as well as bony overgrowth leading to pain and joint stiffness (CDC, 2011). Although any joint may be affected, it appears most typically in the knees, hips, hands, and spine. The disease can be progressive resulting in significant joint dysfunction, pain, and limitation of movement. The World Health Organization identified that osteoarthritis is the "fourth leading cause of years lived with disability worldwide" (Leskinen, Eskelinen, Huhlala, Paavolainea, & Rimes, 2012). The early course of the disease is generally gradual with treatment calling for weight control, physical therapy, and good patient education. As the disease progresses and pain significantly impacts functional ability, total joint replacement is most typically the surgical intervention of choice.

There has been record growth in the volume of joint replacement surgeries performed in the United States. The Healthcare Cost and Utilization Project Projections Report on Mobility/Orthopedic Procedures # 2012–03, conducted by the Agency for Healthcare Research and Quality, shows that the number of hospital discharges with primary hip replacement for osteoarthritis increased from 43,000 discharges per quarter in 2003 to 65,500 discharges per quarter in 2010, with primary knee arthroplasty for osteoarthritis increasing from 94,500 discharges per quarter in 2003 to 155,000 discharges per quarter in 2010 (Steiner, Andres, Barrett &

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Steiner, 2012). This trend is projected to continue for both hip and knee replacement surgery.

This phenomenal growth has drawn attention from the Centers for Medicare & Medicaid Services (CMS). The development of approaches that emphasize patient satisfaction, and optimize clinical outcomes, and efficiency will be essential in meeting the needs of the total joint replacement surgical patient. Clinical service line management is one such approach. The clinical service line requires a coordinated multidisciplinary team approach with the patient and family at the center of care delivery.

Project Context

In 2012, a regional trauma center located in central New Jersey contracted with a service line consultant, Marshall Steele Associates (MSA) to develop a business and implementation plan for a total joint clinical service line. Benchmark data focused on clinical complication rate, length of stay, operating room efficiency, patient satisfaction, and assessment of functional outcomes of surgery. The organization proceeded to implement the MSA approach to orthopaedic service line development. The MSA approach focuses on approaches and systems that emphasize quality, efficiency, and ongoing functional patient outcomes (Steele, 2009). It is expected to improve patient satisfaction because of the improvement in quality, efficiency, and outcomes. With the growing emphasis on patient- and family-centered care (PFCC) and its importance to the patient experience, the aim of this project was to assess the patient experience of patients and families throughout the entire spectrum of total joint replacement service line care.

Review of the Literature

The CMS is addressing the quality of care by rewarding hospitals on the basis of adherence to best practice guidelines and how well hospitals enhance patients' experiences of care (CMS, 2012). Enhancing the experience of care has brought the model of PFCC to the limelight.

PATIENT- AND FAMILY-CENTERED CARE

Although the term *patient centeredness* is frequently seen in recent literature, the term was first mentioned by Balint (1969). He referred to the need for physicians to build a physician–patient relationship by seeing each patient as having a unique experience of illness. The Institute of Medicine, in its report "Crossing the Quality Chasm," (2001) called for patient-centered care as one of its six domains of quality. The report defined patient centeredness as encompassing the qualities of compassion, empathy, and responsiveness to the needs, values, and expressed preferences of the individual patient. A growing body of literature shows that development of partnerships with patients and interventions aimed at improving the patient experience are linked to improved health outcomes. Patients who are more involved in their care are better able to manage complex chronic conditions (Coleman, Austin, Brach, & Wagner, 2009; Epstein, Fiscella, Lesser, & Strange, 2010).

The PFCC approach "recognizes and addresses family needs and preferences, and integrates family caregivers as partners in care" (Feinberg, 2012). It is a model of care structured to involve the patient and family in their own healthcare process decisions. In 2001, the Institute of Medicine recognized this model as being respectful of and responsive to individual patient preferences, needs, and values along with ensuring that patient values guide all clinical decisions (Warren, 2012). The Institute for Healthcare Improvement (IHI) defines *Patient and Family Centered Care* as putting the patient and family at the heart of every decision and empowering them to be genuine partners in their care. The IHI (2013) suggests that this model can help raise patient satisfaction scores, improve outcomes, and reduce costs by changing hospital or practitioner practices to encourage engagement or accommodate individual and family member needs and preferences.

The meaning of patient-centered care was explored by Marshall, Kitson, and Zeitz (2012) using data collected via interviews of 10 surgical patients in a large hospital. The participants described their expectations for care. The study revealed that patients wanted more involvement in their care, staff who were attentive to their needs demonstrated by spending more time with them, and connectedness that included being able to relate to each other and having a free flow of communication.

Successful implementation of PFCC has been inconsistent at best. The main reason identified for encountering difficulties in implementing PFCC is lack of a methodology to implement the concept. According to DiGioia, Embree, and Shapiro (2012), there are six steps to follow to evaluate, codesign, and transform care in partnership with patients and families: (1) select a care experience; (2) establish a PFCC experience guiding council; (3) evaluate the current state by viewing the experience through the eyes of the patient and family; (4) develop a PFCC care experience working group based on touch points; (5) create a shared vision by writing the story of the ideal patient and family care experience as if you were the patient and family member; and finally (6) identify your PFCC improvement projects and form project improvement teams. Successful use of the PFCC approach was demonstrated in the area of orthopaedic trauma by DiGioia, Lorenz, Greenhouse, Bertoty, and Rocks (2010), where care delivery was redesigned over a period of 4 years using the PFCC approach. One of the processes of care examined was cervical spine collar clearance. A PFCC trauma care experience working group was established, which included multidisciplinary team members from nursing, parking operations, admissions, pharmacy, corporate communications, physical therapy, and the operating room. They used shadowing and care flow mapping to understand the cervical spine collar experience through the eyes of patients and families. Within 2 weeks of the project team's appointment, time to cervical spine collar clearance for prioritized patients decreased by 50%, from 26.5 to 12 hours.

In an attempt to provide clinicians with a method for implementation of a patient-centered care for total joint replacement surgical care program, DiGioia, Greenhouse, and Levison (2007) collected prospective data on 618 consecutive patients who had received total hip or knee replacement surgical care within a dedicated PFCC program. The patient and family experience began with the surgeon's office and ended at discharge from the hospital setting. Physicians, nurses, therapists, and ancillary staff were recruited and retained with an emphasis on attitude that embraced a PFCC culture. Program goals included (1) patient and family education; (2) less invasive techniques; (3) multimodal anesthesia and pain management techniques; (4) rapid rehabilitation protocols; (5) rapid outcomes feedback (from the patients' and the providers' perspectives); (6) creation of a learning environment and culture; (7) development of a sense of community, competition, and teamwork among patients and between patients and caregivers and staff; and (8) promoting a wellness approach to recovery. A PFCC total joint replacement working group was formed to look at the patient's experience, along the care pathway, and continuously identify problems and areas for improvement. Implementation of the PFCC model resulted in an overall satisfaction score of 91.4 using the Press Ganey survey. Infection and mortality rates were 0.3% and 0.1%, respectively. Average length of stay was 2.8 days for total knee arthroplasty and 2.7 days for total hip arthroplasty with 91% of all patients being discharged directly home and 93% walking without hand-held assistance at the time of discharge.

Planetree Inc and the Institute for Patient and Family Centered Care (Warren, 2012) are two pioneers in promoting PFCC. They both promote the use of patient and families as advisors. Planetree supports the integration of patients and family members in focus groups and patient and family advisory councils, which allows healthcare providers to modify care based on patient needs rather than making the patient accept one model of care. In this way, patients become empowered in their decision making and this patient engagement is seen as an approach to patient safety and prevention of adverse events.

A systematic review of interventions implemented in controlled trials encouraging patient engagement was conducted examining published literature from 2000 to 2012 (Berger, Flickinger, Pfoh, Martinez, & Dy, 2014). Six articles met the inclusion criteria for effectiveness with a primary focus on patient engagement. Of the six studies, four focused on improving patient engagement centered on the healthcare worker and hand hygiene practices. The interventions included (1) encouraging patients to ask healthcare workers if they had washed/sanitized their hands; (2) putting up posters to encourage patients to ask providers; (3) watching a short animated film streamed in at the bedside to emphasize the importance of teamwork between hospital staff and patients to achieve patient safety outcomes; (4) a visit by a premedical student to discuss hand hygiene; and (5) application of other patient-directed visual aids. Following interventions, 60%–70% of patients asked workers to wash their hands. Factors associated with patient engagement included extroverted patient personality, patient belief on effectiveness of measure, younger age of patient, awareness of the severity of healthcare-associated infections, and an invitation by the healthcare worker to discuss hand hygiene. Two studies examining patient engagement in orthopaedic surgery focused on avoidance of wrong site surgery. Patients were given written instructions to mark the limb not to be operated on with the label "NO." Compliance was observed in 59% of the study sample. The second study, in a university-affiliated orthopaedic practice, gave patients both verbal and written instructions to mark the intended surgical site with the label "YES" and provided a marking pen to do so. In this study, patient compliance was 68.2%, with higher compliance in patients whose primary language was English and whose surgery occurred sooner after instructions were given. Authors concluded that patient participation in safety practices might be influenced by patient self-perception, the patient–physician relationship, societal norms, and the healthcare environment, including whether the organizational culture supports patient participation.

Overall the literature supports the value of PFCC and supports integration of a PFCC approach into the total joint replacement service line. Education of multidisciplinary caregivers will be critical to successful knowledge translation of the PFCC model to practice.

SHADOWING

A view into the patient and family experience will be needed to ensure that development of the clinical service line is truly patient and family centered. Shadowing is one approach for gaining insight into the patient and family experience. Shadowing is a participant observation technique. The "shadower" is the person who conducts the shadowing. The shadower records every step of the care experience, using a shadowing observation guide (DiGioia, 2013). The shadowing guide details the touch-points, showing where patients and families go during the care process, with whom they come into contact, the steps in the care process, the length of time for each step, and the patient's and family's reactions to what happens at each step (DiGioia, Embree, & Shapiro, 2012). The outcomes of shadowing are recommendations for changes in approach to care that are truly co-created by patients and families, rather than by professionals who assume that they understand the process (DiGioia & Greenhouse, 2011).

Shadowing data provides significantly more data than quantitative satisfaction scores. It identifies key patient and family encounters throughout their care experience by repeated direct observation and care experience flow mapping. Instead of numerical ratings of satisfaction, shadowing provides rich data on thoughts, emotions, and direct experience of others. Shadowing the patient through touch points along the clinical service line will reveal inefficiencies in the standards, protocols, and processes in "real-time" that are unique to the organization. It will also highlight the individual and collective strengths of the healthcare team. Through a greater understanding of the hospital experience, new strategies for successful implementation of PFCC can be identified (MacDonald, Liben, Carnevale, & Cohen, 2012).

Project and Study Design

This capstone project was embedded within the overall goal of implementing the total Joint Replacement Service Line. The clinical program manager and the orthopaedic nurse manager at the hospital were doctoral students at Rutgers School of Nursing and were charged with successful program development and implementation as outlined by MSA. The goal of this capstone project was to assess the experience of patients and families throughout the entire spectrum of total joint replacement service line care with the intent of making recommendations to enhance the patient and family centeredness of the service line processes, protocols, and patient materials. Achieving this first required insight into how patients and families currently experience the perioperative experience of total joint replacement surgery. Armed with this information along with the best practices on patient-centered care identified in the literature, recommendations for change were made.

SAMPLE AND SETTING

The population of interest included patients (and their family members) who had been scheduled for a total joint replacement. A purposive sampling of eight patients and their accompanying family was the sampling goal from the four primary surgical groups practicing at the hospital.

Sample Recruitment

To identify these patients, a list of first-time total joint replacement patients scheduled for surgery within the next 30 days of query was obtained from the medical scheduler at the hospital. The list of patients was sorted according to the affiliated surgical group and patient gender. Patients scheduled for surgery were contacted by phone. The researchers began by introducing themselves and their role both as a student and as a hospital employee working on the joint service line team. The purpose of the shadowing was described following an explanation of the role of the researcher as a shadower. The benefits of shadowing in terms of improved care delivery for patients and families at the hospital were discussed. It was emphasized that the personal health information would be de-identified and aggregated with other observation data, to maintain confidentiality. Those individuals consenting to participate in the study completed informed consents.

Defining the Care Experience to Be Shadowed

The care experience that was observed and evaluated was the perioperative total joint care process beginning with preoperative admissions testing and/or preoperative education and ending with a follow-up telephone call or visit 2–3 days postdischarge from the hospital. As this is a broad experience, key segments of care were identified and included the following:

- Preadmission testing; generally within 21 days prior to surgery
- Preoperative education; generally within 21 days prior to surgery
- Surgical preparation area; 1 hour prior to surgery
- Family waiting room area; during operative and Post Anesthesia Care Unit time
- Postanesthesia recovery unit; immediately postoperatively
- Orthopaedic inpatient unit; at transfer and daily until discharge
- In-hospital discharge class; 48–72 hours postoperatively
- Home or alternate level of care, within 3 days of discharge

These segments were selected as they highlight key areas within the perioperative experience that have the potential for medical errors, due to uncoordinated care, miscommunication among caregivers, inadequate patient and family education, and failure to optimize on patient and family engagement. The operating room was not identified as a touch point as the patients are sedated and this touch point would not add to the patient's perspective.

Shadowers

The shadowers, both DNP students and each performing roles within the joint service line, were off duty during the shadowing experience. Important to shadowing is the ability to put aside preconceived notions about care and how it is delivered. The experience needs to be viewed and the episode recorded as it unfolds (DiGioia et al., 2012). Following each shadowing episode, the shadowers met to discuss observations and impressions as an approach to monitoring their responses and possible biases. Observations and impressions were regularly reviewed and discussed with the researcher's committee chair in an effort to identify beliefs and biases and facilitate an approach that focuses on the emic perspective. During the observation, the shadowers paid special note to communication, education, environment, and patient and family engagement as identified later.

Observation and Care Experience Flow

Each segment included a series of touch points or encounters between the patient/family and the total joint caregiver. The IHI's recommended approach to observational shadowing and care experience mapping was used as the basic guide for the shadower's (IHI, 2013).

ETHICAL CONSIDERATIONS

No identifiable individual data were used in this project. Confidentiality and privacy of personal information were maintained by assigning codes to each study participant using the first letter of the surgeon's last name and numerical count. All data were aggregated. Access to study data was limited to researchers and teaching faculty at Rutgers School of Nursing, Newark, NJ. Study approval was received by the institutional review boards of Meridian Health and Rutgers University.

DATA COLLECTION

Data collection was accomplished using shadowing methodology as defined by the IHI and the Institute for

Patient and Family Centered Care (PFCC). This involved recording every step of the care process, including time, caregiver, activity, shadower's observations, and impressions. Touch point observations indicate the flow of care, including where patients and families go (setting) and with whom they come into contact as outlined in the IHI shadowing guide (2013).

- How long the experience at each touch-point takes (time)
- A description of the interaction in terms of—what do "caregivers" do and how do patients and family members view these interactions
- A description of the comments, questions, reactions, and concerns of the patient and family including any emotional cues from the patient or family, especially anything that seems to increase or decrease anxiety
- Any comments and suggestions made by caregivers at each touch point
- The shadowers' perspective of whether communication and action at each touch point is reflective of a respectful partnership that is responsive to the patient's and family's physical, comfort, emotional, informational, cultural, spiritual, and educational needs (Planetree Patient Notebook).

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DATA ANALYSIS

Data analysis began with a thorough reading of the field notes (observation guide and log). The impressions recorded in the log were transferred to the shadowing guide so one document had all data for analysis. The coding process began after a second read of the merged data. Using the observation guide, data process maps were developed mapping the full continuum of care experience for each individual patient and then combining it to present a standard process map. Trouble points, redundancies, and bottlenecks in the process were identified (see Figure 1).

The shadowing observation guides (inclusive of the shadowers' impressions) for each patient were coded line by line to identify common patterns and themes. Data were first analyzed across segments of care or touch point for each individual case. The data across segments of care were then pooled to allow for between-case comparisons. Each shadowing guide was coded independently by each researcher. The coding were compared and discussed with revisions being made and

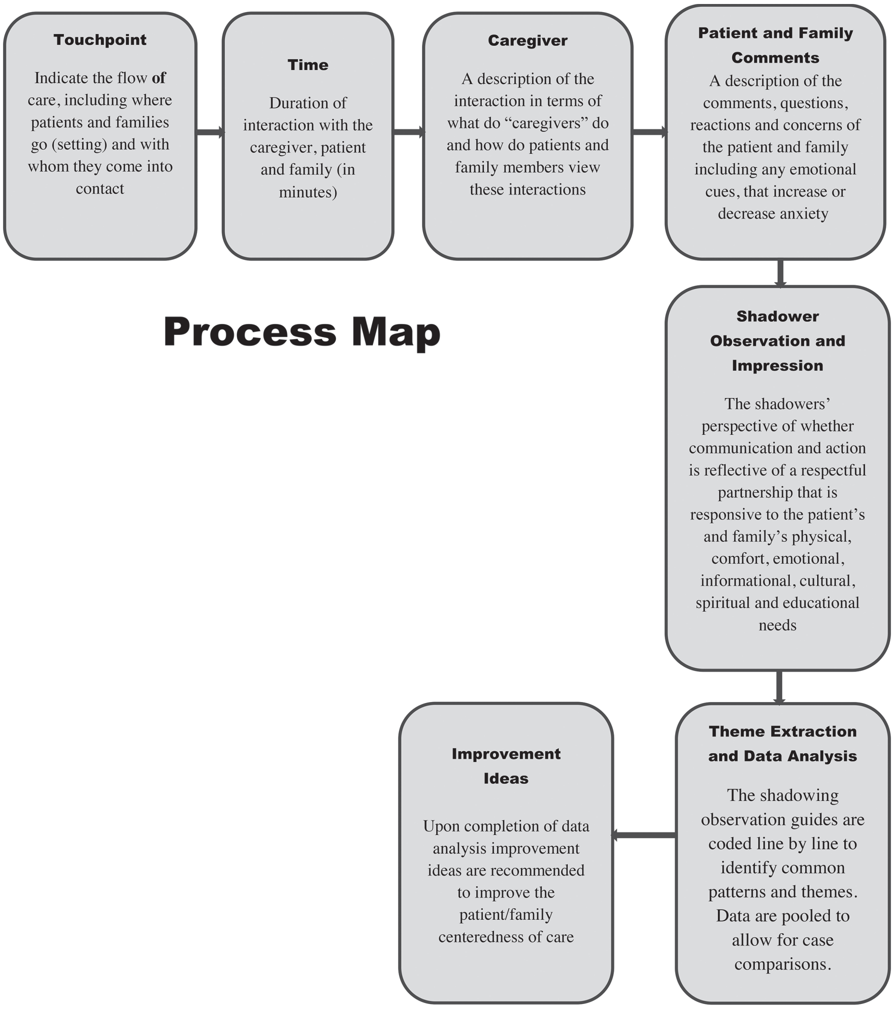

FIGURE 1. Process map.

then reviewed by the capstone advisor, an expert in qualitative research.

The anticipated categories identified in advance included anxiety, communication, teaching/learning, environment, and care patterns. As the shadowing guides were reviewed, the initial categories were adjusted. The final categories that reflected the data included communication, education, environment, PFCC/engagement, and process issues.

The data from both the data process map and the emerging categories/themes were combined to present a summary of the patients' care experience with an emphasis on highlighting both what is consistent with a patient/family centered approach and what in the process was not patient centered.

Findings

Although there were inconsistencies in the delivery of PFCC at all touch points, a majority of the observations were categorized around the categories of environment, education, communication, patient and family centeredness/engagement, and process issues.

ENVIRONMENT

Overall the environment projected a welcoming feel that patients and families responded positively to. The hospital was clean, with adequate lighting, complimentary cable television, phone, and Wi-Fi access throughout the campus. The friends and family lounge was open and airy with modern furnishings and refreshments for families. The orthopaedic unit was newly renovated, which included the designation of private patient rooms, and accommodations for families to stay overnight with 24-hour visiting provided. Art work display included pictures that depicted movement, promoting an active lifestyle. A multipurpose area was remodeled for physical therapy and education. Fifty percent of the study sample reported to the campus for scheduled surgery at 5:30 a.m. The four patient/family groups reported the need for improved signage within the campus while navigating through the corridors on the day of surgery.

EDUCATION

The provision of education during daily routine care was inconsistent. Teaching at all touch points was primarily the delivery of content with limited assessment of understanding or retention. Although family was present, few attempts to include them were observed.

Examining the data from the *preoperative education class*, the timing of the class, and the inconsistent referral of patients to the class by the attending surgeon was a concern. A wide screen projector for PowerPoint presentations during preoperative and discharge class was installed. The weekly class offering was not convenient for all. Predeveloped teaching scripts were available for presenters but were not consistently used, which sometimes left gaps in content delivered. The quality of the presentation varied with the experience of the presenter. Patients appeared surprised that discharge to home was an option and there was an assumption that a discharge to home would be "too difficult." The group education session was planned with the intent of including families and facilitating a dialogue among participants, although no material was presented on how the family could assist in recovery. A concern was retention of education. Much of the education was provided to the patient in a supplemental joint replacement guidebook. Despite its comprehensiveness, it was text dense. The exhaustiveness of the content may, in fact, be intimidating to the surgical patient.

Discharge Education

Families who act as caregivers are generally the key person responsible for implementing or assisting with implementation of the discharge plan. There was a significant lack of education informing the family member of the expected discharge transition, necessary transport arrangements, home care services, and delivery of medical equipment. Not providing this information resulted in anxiety not only for the family but the patient who does not wish to overburden the caregiver. In addition, it created dissatisfaction as the discharge process was fragmented and often delayed.

A formal discharge class was provided of which 6 of the 8 participants attended during their hospital stay. At the conclusion of the formal discharge class, patients are asked to provide suggestions for improvement. Three patients self-reported that discharge planning was not well coordinated specific to discharge time and transportation on the orthopaedic unit. Patients stated that neither their nurse nor the social worker could provide an exact time for discharge and transportation, which caused increased anxiety in not being able to relay this information to family members and caregivers. Two of the eight patients did not participate in the formal discharge class due to early discharge and clinical complication. Discharge education in these cases was individualized and provided by the primary staff nurse with little assessment of understanding. There was almost no engagement of the family in discussions regarding the plan of care. Team collaboration and coordination were generally not evident in discharge planning process and discharge rounds were not conducted consistently.

COMMUNICATION

Communication is an integral part in the provision of PFCC. Areas of concern included insufficient signage, lack of introductions, failure to communicate when care is not progressing as planned, and general lack of involvement of family in discussion and problem solving. It was more common for communication by healthcare professionals to be one way without allowing time for processing of information and asking questions. This one-way, hierarchical communication pattern was not tailored to the patient and often left the patient anxious. Across all touch-points, staff introductions or explanation about what they would be doing for the patient was inconsistent. Communication with the patient and family was generally one-sided, with a lack of listening and follow-through of patient concerns.

In the surgical prep area, the admission assessment was perceived as strictly fact finding by one case in which the nurse did not make eye contact with the patient while performing the assessment. When a Certified Registered Nurse Anesthetist met with one of the patients, she provided the patient with comprehensive education on different types of anesthesia but did not involve the patient as decision maker. The patient responded with a blank stare.

In the presurgical and operative period, there was a lack in keeping the patient and family informed about what was and would be occurring. This reinforced the provider-centric approach to communication and care. Key examples were the failure to explain delays in surgery start times. Two of the patients were significantly off schedule (90-minute delay and 135-minute delay). No clear explanation or apology was offered to either patient for the delay. Similarly on the orthopaedic floor, patients were ready for discharge but delayed because the discharge transportation was not coordinated. There was much uncertainty surrounding equipment availability, wheelchair transport, and ambulance services at the time of discharge. In one instance, the amount of luggage that could be transported by the ambulance personnel was not communicated to the surgical patient or members of the clinical service team prior to arrival. This discharge experience caused increased anxiety and irritation for this patient as he lived alone and had no family support in the local area.

PATIENT- AND FAMILY-CENTEREDNESS/ENGAGEMENT

Patient- and family-centered care is an approach to the planning, delivery, and evaluation of healthcare that is grounded in mutually beneficial partnership among healthcare providers, patients, and families (Institute for Patient and Family Centered Care, 2010). The areas that appeared most patient-friendly were the PAT Registration area and security from the northwest pavilion. The registrars were consistently polite and person-centered. For example, one patient was flustered as he could not recall his daughter's phone number and consequently was trying to retrieve it from his cell phone. The registrar was respectful and understanding as the patient secured the information. Similarly, the security team present upon entrance to the northwest pavilion of the surgical area lobby exhibited exemplary customer service by going out of their way to assist patients and families arriving for early scheduled 5:30 a.m. surgical cases. The program volunteers met with one family group in the surgical prep area to provide program materials, room placement, and explain the daily routine. The family group was pleased with the interaction after initial thought of a possible surgical complication when approached by the volunteer. In the surgical prep area, the operating room staff were in place to escort one surgical case to the operating room suite. The family requested a moment to pray. The entire team excused themselves and closed the cubicle curtain to respect the privacy of the patient and family of which the patient/family group expressed appreciation.

There was little evidence of patient or family involvement during interfacility transfers and shift report. For example, handoffs were not patient-centered. They focused predominantly on events or what was done for the patient rather than proactively discussing where the patient was in terms of functional ability and pain, how the patient was responding, the plan of care, and family involvement. There were two exemplars of patient-centeredness. In the first case, a patient was unable to attend the weekly scheduled class total joint education class so an individualized preoperative education class was held for the patient. The patient reported high sensitivity to opiates. The APRN for pain immediately addressed the patient concern by speaking to the clinical pharmacy manager and obtaining authorization for alternate pain management protocol.

The second exemplar occurred on the orthopaedic unit. Orders had been given for patient discharge. The social worker had received authorization for discharge to home with services, but the clinical team had reservations regarding patient safety at home. The patient's hemoglobin level was fluctuating and the patient presented with fatigue and a decreased level in therapy participation. Members of the clinical team met with the patient and gave her different options for discharge and allowed her to become the decision maker in her discharge plan. The patient opted to go home and there were no negative outcomes.

The area that seemed to embrace patient-centeredness was the orthopaedic physical therapy group sessions conducted in the gymnasium. The lead physical therapist was highly skilled in motivating patients. During the group therapy sessions, he would state "You may hate me now, but you'll love me later." He also asked each participant "what they wanted to get back to." He then reminded them of their personal goal during the therapeutic exercise sessions. However, family members who attended sat with the patient but were not engaged in the role of a coach. The volunteers present during therapy also provided encouragement and support for patients without a designated coach.

PROCESS ISSUES

Pain management is a critical aspect of care for the total joint replacement surgical patient. A structured schedule of routine, and breakthrough pain medication, was available. Pain management appeared to be reactive versus proactive based on patients' self-reports that pain medications were administered as requested. The APRN pain referrals made by nurses and surgeons were infrequent.

Another gap in process was realized when there was a deviation in transfer from PACU to the inpatient orthopaedic specialty unit. In one case, a patient was going from the PACU to the telemetry unit for monitoring of a cardiac problem. The clinical program manager and the orthopaedic nurse manager were not aware that the patient had been transferred to the telemetry unit. The telemetry nurses were not aware of the total joint program protocols (regarding the use of continuous passive motion, physical therapy evaluation, and out-of-bed protocols). This created a significant amount of stress for the patient and the nurse caring for the patient. The nurses on the telemetry unit could neither provide joint education nor were they aware of the routine joint protocols that were part of the care map. The shadowing observation was conducted on the telemetry unit at the time. The shadower was able to educate the nurses on the use of the CPM machine and the joint protocols. However, there was no process in place to address this type of situation.

POSTDISCHARGE

During discharge contacts there were reports from patients about negative experiences at various subacute rehabilitation facilities. The lack of therapy on the weekend disappointed several patients who felt that they could have gone home. Accommodation of personal needs was also verbalized as a concern. In one case, a patient's subacute rehabilitation stay was prolonged by the facility and the patient felt that it was unnecessary.

DISSEMINATION OF PROJECT FINDINGS

A performance improvement team (PIT) meeting was held following closure of the study to discuss project findings. The PIT embraces a multidisciplinary approach to quality improvement. The role of the PIT is to measure service line outcomes, evaluate the results, and develop a plan of action in accordance with best practice. A need for significant changes to provider–patient interactions was identified inclusive of necessary changes in patient education and communication. An approach for a culture change has been proposed and embraced by organizational managers. Touch-point specific teams have been developed for improvement projects that include ongoing data on the patient experience.

RESEARCH IMPLICATIONS

There is an ongoing need for repeating the shadowing process with a larger sample especially as changes in the culture are made. As the shift is made to a culture of PFCC, we recommend that this long-term process be implemented as an action research project. This inquiry would likely empower the practitioners and patients participating in the change but also contribute to the science of PFCC and how to make the culture shift successful. The CMS is placing a stronger focus on patient and family centeredness and tying patient satisfaction directly to clinical reimbursement. A review of the financial impact on patient satisfaction by partnering with rehabilitative therapy and case management would demonstrate the benefit of a PFCC culture. A greater understanding is needed as to how and to what extent patients and families want to be involved in care and what their priorities are. This is an area for further research.

Conclusion

Results indicated a provider-centric approach to care, with further education needed to drive the shift to a PFCC culture. By using study data findings, the total joint replacement clinical service line team implemented changes to enhance the patient and family centeredness of care. Six months after study completion, patient satisfaction for the total joint replacement population, as measured by HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) increased by 25% for overall satisfaction. Patient satisfaction remained stable at 92% for overall satisfaction, with likelihood to recommend at 100% for the following two quarters. Due to team efforts and organizational support in embracing a PFCC culture, the hip and knee program was awarded certification by the Joint Commission 9 months after study completion. A PFCC culture is a value that must be embraced and evidenced in the everyday interactions of the team. The shadowing methodology has proven to be an ideal way to assess the patient experience and the organization's progress in adopting a PFCC framework.

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