The Role of the Nurse and the Preoperative Assessment in Patient Transitions

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Abstract

Transitions in care in the perioperative environment are numerous and should be considered high-risk endeavors. The preoperative area is the first transition in care for a surgical patient and should be considered a critical dimension of care transition. The purposes of this study were to identify nursing’s contributions to transitions in care in the perioperative environment and to identify the role of the preoperative assessment in this transition. Qualitative descriptive design was used. Focus groups were conducted with 24 nurses in a 975-bed medical center. The themes that arose in the focus groups were: (1) understanding patient vulnerabilities, (2) multidimensional communication, (3) managing patients’ expectations, and (4) nursing’s role in compensating for gaps. We conclude that the nurse’s role in the preoperative assessment during the transition of preoperative care is that of advocate who identifies the patient’s needs and risk factors that may be affected by the surgical experience. This study suggests that the nursing preoperative assessment can be useful in identifying and defining patients’ risk factors not just for surgery, but for the entire perioperative care trajectory.

Keywords

transitions; multidimensional communication; transfer of care; preoperative assessment

Historically, the goal of preoperative assessment has been to determine patient factors that significantly increase the risk for perioperative complications. Overall, the perioperative complication rate has declined during the past 30 years because of improved anesthetic and surgical techniques. However, surgical complications are common and often preventable. Analyzing surgical complication data is challenging because of inconsistencies in classifying and reporting events. A recent study by Haynes et al demonstrated that the risk of perioperative death from noncardiac surgery was 1.5%, but declined to 0.8% after the use of a surgical safety checklist.

The complexity of the perioperative environment is growing because of an increased use of technology in the setting of institutional production pressures. The perioperative environment is “information intensive and relying heavily on how well information flows between phases, locations and providers.” Wide variation exists in the type of information that is lost in the perioperative environment. “Notably, handoffs or transitions in care [are] particularly prone to information loss.” Communication breakdown, information loss, and increased workload and competing tasks pose the greatest threats to
perioperative patient safety.\textsuperscript{5} We believe the preoperative assessment is a critical point of the care trajectory as the patient transitions through the perioperative environment.

**RESEARCH PURPOSE AND QUESTIONS**

This qualitative descriptive study proposed to identify nursing’s contributions to transitions in care as patients move between care settings in the perioperative environment. We asked

1. What are nurses’ contributions to transitions in care in the perioperative environment?

2. What is the role of the nursing preoperative assessment in the perioperative environment and does it assist with patients’ transitions in care that occur throughout the perioperative environment?

The nursing preoperative assessment assists with defining patients’ vulnerabilities or risk factors for poor surgical outcomes. If patients’ vulnerabilities cannot be lessened, they need to at least be identified so they can be managed in the complexity of the perioperative environment. The preoperative assessment, created and used by perioperative RNs, is a critical dimension of care transition and coordination in the perioperative environment. The consequences of ineffective transitions in care from acute care environments is well documented in the literature\textsuperscript{6-14}; however, there is a paucity of data related to the consequences of ineffective transitions on admission to the acute care environment, specifically the perioperative environment. The salient dimensions of transition on discharge may be similar to those present on admission. Research can guide evidence-based perioperative nursing interventions to ensure effective transitions in the perioperative environment.

**LITERATURE REVIEW**

More than 234 million surgical procedures are performed globally each year.\textsuperscript{15} The complexities introduced by a growing elderly population and advances in surgical technology create challenges in providing safe perioperative care. Nearly 50\% of adults older than 65 years have three or more chronic illnesses, and more than 20\% of adults live with more than five chronic conditions.\textsuperscript{16} Historically, the focus of a preoperative assessment has been to evaluate a patient and identify problems that may put the patient at high risk for poor surgical and anesthesia outcomes.\textsuperscript{2} Additional goals of the preoperative assessment are to improve quality of care and restore the patient to the desired level of function.\textsuperscript{17} When patients transition into the perioperative environment of care, their needs change drastically. The surgical patient is more vulnerable to transition-in-care errors or communication lapses because of the number of times the patient travels across sites of care through the preadmission, intraoperative, and postoperative phases.\textsuperscript{18} For elective procedures, the first transition in care in the perioperative environment commonly occurs as patients transfer from the care of the community-based primary care physician to the surgeon.

Initial preoperative patient meetings with the perioperative care team that include the surgeon, anesthesia professional, and nurse among other care team members are ideal for
preparing surgical patients and coordinating care.19 Patients view the preoperative visit as beneficial in that it provides necessary information and clarifies expectations related to their perioperative course of care early in the care trajectory.19 The need for surgical intervention is determined during the initial surgical evaluation. The anesthesia evaluation establishes an anesthesia assessment and risk stratification for care across the perioperative environment.20

After the surgical procedure, the intraoperative care team commonly provides the postanesthesia care team with a report of the processes that occurred during the surgical procedure. The postanesthesia nursing care team initiates the transition of care to the postsurgical nursing team who typically cares for patients on surgical care units and ultimately prepares patients for the transition to home (with or without home care services) or to another care facility.

The preoperative assessment is one of the critical points of care for patients transitioning into the perioperative environment. Much of the perioperative safety literature generally speaks to communication failures in the OR and in the postoperative hand over.18 In contrast, one study by Nagpal et al18 points to susceptibilities in the preoperative phase and determined that OR team members had varying amounts of knowledge of the patient and only 27% of the total patient medical information was known to all the primary team members in the OR (ie, surgeon, anesthesiologist, surgical assistants, scrub person, RN circulator).21

Transitions in care in the perioperative area are numerous and should be viewed as high-risk endeavors. It is well documented that defective transitions play a role in a majority of serious medical errors; however, few studies address why this happens.22 In contrast to much of the literature regarding hand overs that define and acknowledge the safety risks inherent in transitions in care, Smith et al considered the issue of transfer of professional responsibility for the patient in the context of a hand over or transition, revealing how and at what point responsibility is accepted “depended on individual informal negotiation between nurse and anesthetist and appeared to involve mutual trust, differing expectations and the balance of power in the relationship.”23(p336)

Certain aspects of the culture and environment in the peri-operative environment could undermine the process of transition itself.23 The intraoperative environment has been described as being fast paced and frequently changing, composed of multidisciplinary teams that change membership often.24 Though it may not have the “pace” of the intraoperative environment, the professional culture of the preoperative environment is similar in that it is composed of multidisciplinary teams comprised of specialty physicians, nurses, anesthetists, and surgeons who change membership frequently as they prepare patients for the transition to the perioperative environment.

THEORETICAL FRAMEWORK

We used Dr Afaf Meleis’ transitions theory as a guiding framework for this study.25 Meleis contends that “Nursing does not deal with the transition of an individual, a family or a community in isolation from an environment. How human beings cope with transition and how the environment affects that coping are fundamental questions for nursing.”25(p101)
Meleis’ theory was applied to the complexities of the transitions inherent to the perioperative environment. This study focused on the initial preoperative phase of transition in care.

Transitions are a process in the perioperative environment, and the goal is to anticipate points at which the patient is most likely to be at risk.26 The comprehensive preoperative assessment is one tool that nurses can use to identify, document, and communicate patient risk factors or vulnerabilities. Risk assessment anticipates the potential positive and negative consequences the patient may experience related to anesthesia and the surgical procedure. The ability to conceptualize and anticipate potential perioperative consequences and provide intervention is the goal of the preoperative assessment.

RESEARCH DESIGN AND METHOD

In this study, we used a qualitative descriptive design to discern nurses’ perceptions of the preoperative assessment and how the assessment is used to transition care in the perioperative environment. Additionally, we sought nurses’ perceptions of the gaps in communication that occur as patients move between care settings and of the role of nurses in compensating for these gaps.

We conducted focus groups, guided by a semistructured interview guide consisting of the following five questions:

1. How is the preoperative nursing assessment helpful to you in caring for the patient?
2. In your experience, what are the gaps in communication that occur as patients move between care settings, for example moving from site to site: primary care physician to preadmission testing area to OR to postanesthesia care unit to surgical floor, intensive care unit (ICU) to surgical floor, emergency ward to surgical floor?
3. What is the significance of those gaps and what do you have to do to compensate or manage for that missing information?
4. How is it that we as nurses see these gaps when other providers do not?
5. Is there anything else that was not mentioned in our discussion that you think is important to know that might facilitate communication as patients move between care settings that I did not ask?

Questions were based on the use of the preoperative assessment, gaps in communication that occur, and the nurses’ role in compensating for these gaps. Speziale and Carpenter suggest that “focus groups are most useful when the topic of inquiry is considered sensitive.”27(p38) Given the potential ramifications of gaps in patient communication and the desire to achieve rich and insightful data, we decided focus groups would be the most appropriate method of data collection for this study.

PARTICIPANTS

The study setting was a 975-bed medical center in the Northeast United States. We used purposeful sampling to select nurse providers who could offer the most insight and broadest
range of experience related to research topic. Participants included nurses with perioperative nursing experience who work in the institution’s preanesthesia testing area and have a central role in the creation of preoperative nursing assessments for adult surgical patients. Participants also included nurses who worked on five different postoperative surgical care units and who at times created but more commonly were the end users of the preoperative nursing assessment.

We conducted four focus groups. The preanesthesia focus group had eight participants, one of the postoperative groups had four participants, and the other two postoperative groups each had six participants. We did not collect any additional demographic or identifying information from participants. Because we were studying the perceptions of the direct care nurse provider, we excluded unit nursing leadership from participation. We recruited staff nurses assigned to the designated patient care units at each site through e-mails and flyers and provided an informational letter notifying potential participants of the purpose, procedures, risks, and benefits and that participation was voluntary. Those who attended the focus group sessions were considered volunteers. Focus groups occurred in a secure conference room on the patient care units.

PROTECTION OF PARTICIPANTS’ RIGHTS

The proposal met the criteria for exemption by the hospital institutional review board. Appropriate provisions were made to protect the privacy and confidentiality of participants and the data. Participants were encouraged to not use any identifiers during the focus group. Identities of the participants were kept confidential. All data were deidentified and locked in a password-protected computer to protect participant information.

STUDY PROCEDURES

We conducted semistructured focus group interviews according to the interview guide. To ensure equivalence as described by Kidd and Parshall\(^\text{28}\) across the focus groups, one interviewer led all four focus groups. Five open-ended questions comprised the interview guide. We structured the questions to give participants an opportunity to provide detailed information about the use of the nursing preoperative assessment and the gaps in information that were incurred as patients move between care settings. To avoid loss of detail, we recorded field notes as soon as possible after the interview.

We shared all pertinent information with participants about the study and discussed the importance of confidentiality. We conducted the interviews in a private area and audiorecorded with the participants’ permission. A professional transcriptionist transcribed data from the interviews verbatim, and all data were stored in an encrypted secure electronic database.

DATA ANALYSIS

We performed the initial descriptive coding to organize and provide an understanding of the narrative data collected. Speziale and Carpenter\(^\text{27}\) suggested that basic content analysis should start when data collection begins. As recurring patterns emerged, we identified and
categorized important themes. Three members of the research team had multiple years of experience in qualitative analysis. Themes emerging from the data were multidimensional, yet were consistent throughout the narrative data. We then discussed the findings and reviewed the coding for accuracy and consistency. After the initial categorization of themes, we reviewed the narrative data in the focus group transcript to ensure good fit. In addition, we used journaling to help discern patterns during the analysis of the data and document an audit trail showing the evolution of our thoughts throughout data collection and analysis.

Credibility, transferability, dependability, and confirmability as described by Lincoln and Guba were addressed in the following ways: experiences were compared across the groups, initial data analysis was performed by the lead researcher who was the moderator of the focus groups, and preliminary codes and emerging themes were reviewed with other members of the research team. The lead author is a nurse with 29 years of experience in the presurgical and postsurgical environment and has worked with some of the participants in the study as a staff nurse. Knowledge of the environment helped the author better understand the interviewees’ descriptions. We viewed this as a strength; however, we also worked to minimize threats to credibility by including all research team members in the data analysis process because the other members of the team are nurses with a variety of different backgrounds. To ensure internal consistency of coding, the focus groups were audiotaped and the verbatim transcription was reviewed by other members of the research team.

**FINDINGS**

We grouped the data into the following four themes:

- Understanding vulnerabilities,
- Multidimensional communication,
- Managing expectations, and
- Connecting the disconnected.

**Understanding Vulnerabilities: “Seeing the Red Flags”**

Preoperatively, nurses are interested in understanding the patient vulnerabilities that may affect the care trajectory. The preoperative assessment “gives us a quick overview if it’s a healthy patient,” whereas “negative findings allow us to intervene sooner rather than later.” “It allows nursing to see the red flags early and reach out to establish resources like nutrition and case management consults.” The preoperative assessment “tells us how the patient functions, can they hear, do they speak English, if they are in a wheelchair, are they incontinent … it is all there.” It “indicates any concerns the patient may have and allows the patient to verbalize their concerns.” The preoperative assessment is seen as a tool to “help with the hand off and communicate about the patient to other nurses.”

Postoperatively, the preoperative assessment “gives us the whole picture so you know what you are walking into.” It “allows us to identify changes in patient condition, because in the initial postoperative period the patient cannot tell us—if still anesthetized—they all look the same when they are asleep.” In the postoperative period, the preoperative assessment
establishes “a baseline” and assists with recognizing vulnerabilities like risk for falls—“once you have seen one fall you don’t want to live it again.” “If someone uses a cane or a walker and having surgery … most likely afterwards they are going need a PT [physical therapy] evaluation.” Postoperatively, the interest in vulnerabilities takes on additional dimensions. The desire to understand the home and caregiver situation becomes more immediate: “who do they live with, do they have family to help them and is the family going to be able to help them?” Thus, the preoperative assessment was seen as being helpful in assisting with understanding patient risk factors and as a tool to communicate nursing concerns to other providers in the perioperative environment.

**Multidimensional Communication: “What We Need to Know to Take Care of You”**

Perioperative nurses identified that inadequacy of communication is multidimensional, meaning it occurs between the physician and patient and also is interdisciplinary. Nurses often hear patients say, “the surgeon never told me that” and often “they [the patient] have no idea about an ICU stay; they think they will be back in their room that night.” Gaps in communication may occur as patients move between care settings and are often related to inadequate written, verbal, and/or electronic communication of patient health information, “staff in other units give meds and it’s not in the computer—may be documented in written medical record.” The timing and quality of the transfer of information or hand over that needs to occur preoperatively and throughout the peri-operative environment is less than adequate. “We don’t have good communication with primary care doctors … never a current history and physical, we don’t know if they can walk, don’t know their functional status or if they are mentally or developmentally delayed.” This lack of communication is often related to systems issues (ie, transfer of care responsibility) or often the sense of urgency to complete tasks in the transition of patients to the next level of care to accommodate those with greater morbidity, “the ED [emergency department] needs to get them out to get the next one in.” Moreover, communication inadequacies are entrenched in the importance that information has for each individual provider. Perioperative nurses feel their “perspective is different … it’s what we need to know to take care of you.” Thus, communication inadequacies occur at various points in care, most notably as patients transfer from different care areas.

**Managing Expectations: “Aren’t They Going to Know This?”**

Perioperative nurses identified that patients and their families have the reasonable expectation that they are known when they come into the hospital. They have “a reasonable expectation that when they arrive here on the day of surgery you know what they are here for and that you understand their situation.” They expect that their complete medical histories and their medications are “in the computer” and they “get irritated” when it is not because they “already told someone that six times.” Patients expect that their needs have been identified and their vulnerabilities are anticipated “when I tell them they need to let the anesthesiologist know about something—they look at me like … aren’t they going to know this?” They expect that if they were told preoperatively that they will recuperate in a private room that they will have a private room after surgery. “When they don’t get the private room everything can be downhill from there.” Patients and families become upset and distrustful, “they lose confidence in us” and of the care being provided. Nurses spend time
compensating for failed expectations by “apologizing” and “repeating” and ultimately redefining and redirecting care. Hence, when patient information is not known to providers and patients’ expectations have not been met, the burden of care is increased for nurses.

**Connecting the Disconnected: Taking the Extra Step**

Perioperative nurses are routinely confronted with integrating and reconciling data from diverse sources. “We have all these pieces and we put the glue between them, we put them in order and fill the space in between—otherwise you don’t have any continuity.” As the frontline staff members, nurses not only recognize, but are able to confront gaps in care and “take the extra step” and “use resources” in advocating for the patient. “Multiple consults and doctors are coming in and out, this floor sees it all, you are a trauma patient under the trauma service but we have to wait to hear from orthopedics, spinal and renal consults before we can give information.” By using a patient- and family-centered approach, nurses are able to perceive patients’ physical and emotional needs more accurately than other providers because “others don’t factor in everything else that goes on” and “the patients depend on us the most.” Thus, through integrating patient information, perioperative nurses are able to recognize and close the gaps that occur to ensure that adequate care is provided.

**DISCUSSION**

The perioperative environment is multidimensional, dynamic, and composed of multidisciplinary teams. Providers are confronted with caring for patients with multiple risk factors in a complex environment. The perioperative environment is dominated by competing tasks being carried out by multiple disciplines that rely on how well information is communicated among and between them.

In this study, understanding existing patient vulnerabilities was important to the nurses who were interviewed. The desire to identify and recognize those vulnerabilities, the “red flags” that emerge during transitions in care, was critical. The pre-operative assessment was viewed as helpful in identifying the red flags for both preoperative and postoperative nurse providers. Meleis’ transition theory infers that it is important to identify patients’ vulnerabilities or risk factors for surgery and concludes that we must recognize the different ways in which these vulnerabilities may manifest within the context of the perioperative environment. The nurses in this study used the preoperative assessment to communicate these vulnerabilities to other providers.

Nurses in the study said that communicating information related to the surgical procedure and the effect that the surgical procedure and anesthetic may have on the patient’s health status, functional status, and family dynamics was a priority. They emphasized the critical importance of establishing an accurate baseline for the patient. However, they noted that the nature of that baseline information varies according to the provider and the condition of the patient. The nurses in this study cite the lack of communication between the primary care team and the preoperative team as an important contributor to gaps in transitions into the preoperative environment.
When there is a lack of communication that results in failure in meeting a patient’s expectations, the burden of care is intensified and magnified and patient satisfaction is affected. The quality of care provided to patients depends on the ability of nurses to respond to the ambiguity inherent in transitions in care. The study’s purpose was to discern nursing’s contribution to transitions in care. The nurses in this study noted the dismay of patients whose expectations were not met. They identified the need for frequent nursing interventions used to redefine and clarify expectations. With transitions viewed as a process, anticipating points of vulnerability guide us in providing nursing care.

Nursing contributes to transitions in care by dealing with the ambiguity created when vulnerabilities have not been well defined or communicated. Nurses work with the uncertainty of shifting patient care needs as patients transfer between sites of care in the perioperative environment. The nurses in this study cite their contribution to transitions in care as “taking the extra step” and “connecting the disconnected” for patients. Furthermore, because nurses are navigating the environment far more frequently and, as noted by nurses in this study, “spend the most time with patients,” they understand and have a working knowledge of the complexity of the patient care environment that others do not.

LIMITATIONS
The study did not include intraoperative nurses because the intent of these focus groups was to explore nurses’ role in the creation of the preoperative assessment and its value for the end users who were ultimately transitioning the patients back to home. Future research should include intraoperative nurses, surgeons, anesthesia providers, and patients.

The experience level in the postsurgical groups had a wider range of nursing experience (two to 30 years) than the preoperative group (10 to 35 years). Also, this study was conducted in a single academic center in the Northeast with only 24 participants. Findings may not be transferable to other health care settings. One assumption going into the study was that gaps in communication exist in the perioperative environment. This assumption was based on the lead researcher’s nursing experience working in the preoperative and postoperative environment.

RECOMMENDATIONS
With shorter lengths of stay, many patients’ vulnerabilities or risk factors are not apparent until patients are being transitioned out of the environment. Based on these preliminary findings, we recommend further research to determine whether the preoperative assessment should be more than a simple clearance for surgery, but a means to identify and communicate the different ways in which vulnerabilities may manifest as a product of the transitions in care in the perioperative environment. Others have demonstrated improved quality and cost outcomes with the implementation of a transitional care model for at-risk chronically ill older adults as they transition out of hospitals. Suggestions for further research include inquiries related to the application of a similar conceptual model to patients as they transition into and through health care environments and an expansion of the research to include a larger number of nurses in other centers. A rigorous analysis of the process of transitions with attention to the gaps that occur will inform nursing interventions.
Additional research is needed to discern whether a patient can be made less vulnerable and whether nurses can control for patients’ vulnerabilities that are either pre-existing or a product of the disorder that is part of the busy clinical environment. Inquiry is needed to discover whether the course of care can be altered by process changes during transitions in care. Additionally, future studies that include anesthesia providers who assess patients in their transitions should be considered.

CONCLUSION

This study suggests that the nursing preoperative assessment can be useful in identifying and defining patients’ risk factors and vulnerabilities not just for surgery, but for the entire perioperative care trajectory. The assumption that communication gaps exist was supported by the research findings. Communication of patient risk factors and vulnerabilities to the entire perioperative team is critical for a successful transition through the perioperative environment to occur. If patients’ vulnerabilities or risks cannot be lessened, they need to at least be identified so they can be managed as they shift within the complexity of the perioperative environment.

Early transitions in care in the preoperative environment set the stage for the entire perioperative care trajectory. Further empirical work is needed to determine the potential impact of inadequate early transitions on the care trajectory and ultimately on patient outcomes.

Biography

Ann Malley, PhD, APRN-NP, is a Jonas Scholar and Post Doctoral Fellow at NewCourtland Center for Transitions and Health at the University of Pennsylvania, Philadelphia. Dr Malley has no declared affiliation that could be perceived as posing a potential conflict of interest in the publication of this article.

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References


KEY TAKEAWAYS FOR CLINICAL PRACTICE

The Role of the Nurse and the Preoperative Assessment in Patient Transitions

WHY DID WE DO THIS STUDY?

• This focus group survey was undertaken to identify nursing’s contributions to transitions in care in the peri-operative environment and to identify the role of the preoperative assessment in this transition.

WHAT DID WE FIND?

• The nurse’s role in the preoperative assessment is that of advocate who identifies the patient’s needs and risk factors that may be affected by the surgical experience.

• The nursing preoperative assessment may be useful in identifying and defining patients’ risk factors not just for surgery, but for the entire perioperative care trajectory.

• Nurses’ comments reflected four themes that arise during the preoperative assessment: (1) understanding patient vulnerabilities, (2) multidimensional communication, (3) managing patients’ expectations, and (4) nursing’s role in compensating for gaps.

HOW CAN HEALTH CARE PROFESSIONALS USE THESE RESULTS?

• Clinician: Perioperative team members should focus on the preoperative assessment not just as a clearance for surgery, but also for managing the transitions of patient care throughout the perioperative experience.

• Manager: Managers should focus on supporting the nurses’ role in identifying risk factors and managing patient expectations during the preoperative assessment.

• Educator: Educators should emphasize the importance of the nurses’ role in the preoperative assessment for identifying gaps in care using the preoperative assessment as a tool.