ABSTRACT

IMPROVING TRANSITION OF CARE MANAGEMENT
THROUGH THE USE OF AN EVIDENCE-BASED
PATIENT/FAMILY EDUCATION PROGRAM

The purpose of this study is to determine if a care-transition focused
education program can improve a patient’s perception of preparation to participate
in self-care activities following elective total joint surgery. Comprehensive care-
transition education programs for post-operative patients can contribute to the
patient’s experience by improving quality outcomes, reducing readmissions and
complications, enhancing self-efficacy, creating economic savings, and ultimately
improving patient satisfaction with the healthcare system (Andrews & McBride,
2013; Costa, 2001; Kruzik, 2009; Suhonen, Valimaki, & Leino-Kilpi, 2005). In
order to influence the patient’s perception of self-efficacy, an education program
was developed by a multidisciplinary team, with the goal of increasing awareness
of the patient and caregiver’s roles in managing care upon transition to home. The
three Care Transition Management (CTM-3) questions within the Hospital
Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey
were used to measure a patient’s perception of preparation before and after
implementation of the education program. Results of HCAHPS responses were
compared pre- and post-implementation, finding a 10% increase in satisfaction
after participating in the education program.

Keywords: patient satisfaction, patient education, self-efficacy, care management,
transition of care

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May 2015
IMPROVING TRANSITION OF CARE MANAGEMENT THROUGH THE USE OF AN EVIDENCE-BASED PATIENT/FAMILY EDUCATION PROGRAM

by

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Nursing in the College of Health and Human Services California State University, Fresno

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CHAPTER 1: INTRODUCTION

Elective surgical procedures are increasing in popularity as a method of restoring patients to optimal functioning. Patients undergoing elective surgery will need to be effectively prepared for perioperative self-care requisites. This early preparation will ensure that the transition from hospital to home is seamless and will decrease the likelihood of adverse outcomes.

When successfully implemented, patient/caregiver-centered perioperative education programs can improve quality outcomes, reduce readmissions and complications, lead to improved quality of life, create economic savings, and ultimately improve patient satisfaction with the healthcare system (Andrews & McBride, 2013; Costa, 2001; Kruzik, 2009; Suhonen, Valimaki, & Leino-Kilpi 2005). Failure to provide such education can lead to adverse outcomes, therefore, patient and caregiver-centered education programs should be implemented prior to admission and continue throughout the hospital stay. These educational models can help provide patients and caregivers with the necessary information to safely manage care during transitions from hospital to home, while also improving patient satisfaction with the healthcare system.

The purpose of this study was to determine if a care-transition-focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. The effectiveness of preparation for discharge was measured using the responses on the Hospital Consumers Assessment of Healthcare Providers and Systems Survey (HCAHPS), namely the three Care Transition Measurement (CTM-3) items.
Problem Statement

Poorly managed care transitions can lead to adverse outcomes for surgical patients. Failure to provide patients and caregivers with thorough education can lead to medication mismanagement, surgical complications, increased hospital readmissions, and healthcare costs. With shorter lengths of stay approved by commercial and government insurance agencies, there is less time in the hospital to prepare patients and caregivers for what to expect when transitioning from hospital to home. With such urgent transitions, patients and caregivers are often left uncertain about new responsibilities. Despite the critical need to improve patients’ preparation for transitions of care, few interventions have been developed and sustained to address the problem. It is estimated that hospital readmissions within 30 days of discharge cost Medicare beneficiaries an estimated $15 billion annually (Press Ganey Associates, 2012). Additionally, it is estimated that one in five patients experience complications after discharge. Discharging patients from the hospital when not adequately prepared to manage new conditions may result in preventable misuse of health care services, such as primary care, emergency room visits, and re-hospitalizations (Andrews & McBride, 2013).

With regulatory agencies, such as Centers for Medicare and Medicaid Services (CMS), placing a heavy emphasis on quality outcomes, it is crucial that healthcare organizations develop and implement perioperative education programs. This approach to patient-centered care would help meet the extensive needs of elective surgical patients. Unfortunately, the development of effective patient education programs tends to be time consuming. Additionally, effective sustainability can be complex due to a variety of challenges in today’s patient population, such as limited health literacy, poor self-efficacy, and other patient-specific barriers. In an effort to mitigate these issues, a perioperative patient
education program was developed to improve patients’ perceptions of preparation to participate in self-care activities following elective total joint surgery.

**Background and Significance**

From Quarter 4 of 2012 to Quarter 1 of 2014, patients of a surgical hospital in central California reported on HCAHPS surveys that 56.3%-65.1% of the time they were prepared for their transition of care. Research has shown that patient satisfaction with preparation for discharge is directly linked to clinical outcomes (Coleman, n.d.). With patients feeling unprepared for discharge they are at risk for adverse outcomes related to self-care and medication mismanagement, thus increasing their risk for readmission and/or mortality.

**Purpose**

The purpose of this study was to develop an effective perioperative patient education program for patients undergoing elective total joint replacement using a multidisciplinary approach. The perioperative education program aims to provide patients and caregivers with the necessary information to effectively manage care after discharge from the hospital. The goal of the education program is to increase awareness of each of the patient’s and caregiver’s responsibilities upon transition to home, thus improving self-efficacy in this process. Subsequent to improved self-efficacy, it is predicted that improved satisfaction with the healthcare system will likely result.

In order to complete this, the following tasks were accomplished:

1. Collaboration amongst the perioperative team to identify common patient care needs specific to the total joint replacement population.
2. A comprehensive literature review of content and effect of education surrounding the surgical care process.
3. The development of an education program based on team collaboration and literature review findings, which took into account health literacy, readability, actionability of written materials, plus commonly accepted learning styles. Elements of the program include an education class provided at the surgical hospital, supplemental written materials, and an opportunity to practice skills prior to discharge.

   a. At the first point of contact, all patients scheduled for joint replacement are invited to attend a class provided by hospital-trained staff. These patients are also provided an educational booklet that reviews important aspects of care management from pre-admission through to discharge.

   b. Staff Registered Nurses (RNs) are educated on the most common causes of anxiety and fear surrounding surgery and are encouraged to reinforce information provided in the patient education booklets as needed. The hope is to assist in reducing negative feelings experienced by patients and caregivers.

   c. Post-operative care providers are educated on the role of promoting self-care activities so that patients and caregivers both exhibit increased self-confidence upon discharge. All discharge education is reinforced utilizing the teach-back method, which also serves as a means of evaluating knowledge deficits.

4. Evaluation of the program’s effectiveness through review of HCAHPS CTM scores, otherwise known as CTM-3.
Theoretical Framework

Properly educating patients and caregivers, in a manner that they can understand and act upon, can improve self-confidence and self-care management following elective surgery. Self-care management is the individual’s ability to manage symptoms and treatments inherent to the individual’s health condition(s). Self-care management is moving from once passive patient and caregiver roles to ones that are active and collaborative. This allows for nurses and the recipients of care to work together to achieve optimal outcomes (Du & Yuan, 2010). There is a direct relationship between self-care management and self-efficacy. Self-efficacy relates to a person’s perceived ability to reach a goal or perform a specific behavior (Du & Yuan, 2010). Bandura’s (1977) self-efficacy theory serves as the basis for self-care management. Furthermore, the Health Promotion Model developed by Nola Pender incorporates the ideas of the self-efficacy theory. The Health Promotion Model (HPM) can be applied to everyday nursing practice. Use of this theory may help positively influence the health of patients by promoting improved self-care management.

Self-Efficacy Theory

Self-efficacy is the belief that an individual possesses the power to act in a way that produces a desired effect or outcome (Stonecypher, 2009). According to Bandura (1977), perceived self-efficacy affects one’s choice of activities, expended efforts, and perseverance despite obstacles. Furthermore, Bandura’s theory supports the thought that the greater the perceived self-efficacy, the more effective one’s coping and self-confidence (S伊拉克, 2008). Those who persevere when faced with challenges or are subjected to threatening activities eliminate the obstacles through corrective experience, whereas those who lack self-confidence and avoid challenges may retain their self-debilitating status (Bandura, 1977).
Surgery can provoke feelings of anxiety and self-doubt, which can accompany a sense of decreased ability to provide self-care (Johanasson, Salantera, & Katajisto, 2007). Perioperative patient education can assist in avoiding such feelings by promoting improved self-confidence and self-efficacy. Ensuring patients have the necessary information to effectively manage self-care requisites may boost self-confidence and promote adherence to care plans following discharge.

Health Promotion Model

The HPM is based on the premise that the goal of nursing is to help people care for themselves and/or to restore individuals to optimal health. This model aims to illustrate how persons interact with the environment as they seek health (as cited in Sakraida, 2010). Additionally, Pender’s model identifies that health-promotion is motivated by a desire to improve well-being and facilitate the development of human potential (as cited in Sakraida, 2010). Some major assertions of the model are that prior behavior and individual characteristics influence beliefs and enactment of health-promoting behaviors, commitment to engaged behaviors is derived from personally valued benefits, perceived self-efficacy and positive emotions increase the likelihood of adherence, healthcare providers are an important influence, the greater the commitment the more likely persons will maintain health-promoting behaviors over time, and there is a decrease in perceived barriers when self-efficacy is increased (as cited in Sakraida, 2010).

Pender’s model of health promotion can be applied to the perioperative setting, where there is a considerable need for education that promotes improved self-efficacy. This patient population is particularly vulnerable to a deviation from
adherence to care plans when faced with anxiety over the impending surgery, post-operative pain, decreased mobility, wound care, and new medication management. To address this, the use of an evidence-based education program can promote enhanced self-efficacy as patients move toward a more active role in self-care management. The patient education program should encompass all information needed to prepare a patient for surgery, including the post-operative expectations. This approach may help patients feel supported and encouraged to accept health-promoting behaviors, moving the patient away from self-doubt to comfort and confidence.

**Definition of Terms**

*Health literacy.* The extent to which individuals have the ability to access, process, and understand the most basic healthcare related educational or informational material. This relates to the ability to make informed decisions about health and basic care (Stonecypher, 2009).

*Patient education.* A planned, organized learning experience designed to influence emotions and attitudes, with the intent of facilitating adoption or beliefs conducive to health (Bernier, Sanares, Owen, & Newhouse, 2003; McGregor, Henley, Morris, & Doré, 2012).

*Patient satisfaction.* A multifactorial outcome influenced by the ability of an experience to meet expectations of the patient; in regard to the care received, human interactions and attitudes encountered, and the technical outcome of the experience (Morris, Jahangir, & Sethi, 2013).

*Self-efficacy.* A belief in one’s own power to act in a way that produces a desired effect or outcome (Stonecypher, 2009), or according to London (2009), a
patient’s level of confidence in performing specific tasks (as cited in Andrews & McBride, 2013).

Teach-back method. Proven method to confirm when the health care professional has explained the necessary information in a manner patients can understand. Patient understanding is verified when patients can restate the information in their own words (Tamura-Lis, 2013).

Transition of care. The movement of a patient from one setting of care (hospital, ambulatory primary care practice, ambulatory specialty care practice, long-term care, home health, rehabilitation facility) to another (CMS, 2014). For the purpose of this study, it is the transition from hospital to home following surgery.

Summary

Poorly managed care transitions may lead to adverse outcomes for surgical patients. Failure to provide patients and caregivers with the needed education about their surgical procedure and self-care requisites can lead to medication mismanagement, surgical complications, increased hospital readmissions, and healthcare costs. In an effort to combat this, a comprehensive perioperative patient education program was developed to better prepare patients and caregivers for self-care requisites following total joint replacement. The goal of the program was to improve self-efficacy and overall patient satisfaction with preparation for transitions in care. The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. Prior to the development and implementation of the education program, a comprehensive literature review was completed to determine which items should be included
based on best evidence. Chapter 2 identifies important elements identified in the literature review conducted by this nurse researcher.
CHAPTER 2: LITERATURE REVIEW

Discharge from an acute care setting following elective surgery may leave patients feeling overwhelmed and uncertain about their well-being. These feelings of uncertainty can lead to care mismanagement, such as medication errors and/or surgical complications. With minimal knowledge and confidence regarding the new responsibilities of monitoring and managing one’s care, patients are often discharged from the hospital inadequately prepared. One way to combat this issue is through the development and implementation of a perioperative patient/caregiver education program. The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery.

Evidence suggests that an effective patient-centered education program is individualized and flexible (Pritchard, 2011), addresses various levels of health literacy (Saver, 2012), uses the teach-back method (Tamura-Lis, 2013), and includes information about potential complications and self-care management (Saver, 2012). Inclusion of these elements is believed to promote self-efficacy, enhanced outcomes, and improved patient satisfaction (Gahimer et al., 1996; Heinrich, 2012; Pritchard, 2011; Tamura-Lis, 2013).

Patient education is an essential role of the RN in the perioperative setting. Positive correlations have been found between patient education and proactive self-care management in the home environment. Engaging patients in self-care activities promotes self-confidence and positive adherence to treatment regimens (Phillips, 2010). In the elective surgical setting, patient education can be started
upon the first contact with the patient, prior to admission, which is not always the case in other acute care situations.

Preoperative patient education has proven to be particularly useful in reducing anxiety, decreasing length of stay, and increasing self-efficacy and patient satisfaction (Bilgin, Altun, Saylam, & Erdem, 2012; Gahimer et al., 1996; Pritchard, 2011), all of which lead to improved patient outcomes. Further research suggests information given to patients should be individualized and address the needs of both pre- and post-operative periods (Suhonen & Leino-Kilpi, 2006). It has also been identified that information provided in various formats is favorable when provided in the pre-operative, post-operative, and discharge phases (Pritchard, 2011). Regardless of when education is provided, it is through effective communication that nurses can positively influence patient outcomes.

Strong correlations have been identified between good communication, higher patient satisfaction, increased adherence, and improved patient outcomes (Boulding, Glickman, Manary, Schulman, & Staelin, 2011; Hamric, Hanson, O’Grady, & Tracy, 2014). With nurses spending a great deal of time with patients in the hospital, every effort shall be made to provide education at various intervals throughout the hospital stay. This may help enhance patient self-care management prior to discharge. Communication with nurses from the patient perspective assigns value to the patient’s perception of the care delivered. The interaction between nurses and patients shapes the overall patient experience that is measured by the HCAHPS survey (Dempsey, Reilly, & Buhlman, 2014).

The HCAHPS survey is a standardized, nationally recognized, instrument designed to assess the patient’s perspective of hospital care (Robinson & Watters, 2010). The 32-item instrument was developed by CMS and the Agency for Healthcare Research and Quality (AHRQ). The standardized tool produces data
that allows for objective and meaningful comparisons between healthcare organizations, namely hospitals, on topics important to consumers. The data are publically reported, which provides incentives and accountability for hospitals to improve the quality of care they provide (CMS, 2013). More specifically, the survey asks former patients to rate “how often” critical aspects of the patient experience occurred. The core of the survey focuses on care received from nurses and doctors with an emphasis placed on communication between healthcare providers and patients (HCAHPS, 2013). The survey also includes three questions that highlight problems associated with avoidable readmissions and/or problems with transitions of care. These questions, known as Care Transition Management-3 (CTM-3), were developed to assess the extent to which hospital staff prepared patients for discharge and the extent to which patients are prepared to participate in post-hospital self-care activities (Coleman, n.d.). The CTM-3 questions are (a) During my hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I left, (b) When I left the hospital, I had a good understanding of the things I was responsible for in managing my health, and (c) When I left the hospital, I clearly understood the purpose for taking my medications. Respondents can answer with Strongly Disagree, Disagree, Agree, or Strongly Agree (Coleman, n.d.).

In an attempt to increase patient satisfaction with discharge education, and improve self-care management of post-operative patients at a surgical hospital, an education program was developed based on best evidence. The foundation of the education program takes into account health literacy issues in the U.S., adapts to various adult learning styles, and utilizes the teach-back method.
Health Literacy

In a 2013 presentation by Lyn Ketelsen, RN, MBA, the following statistics were discussed: it is estimated that 20% of patients discharged from the hospital experience an adverse event within 3 weeks, medication errors harm 1.5 million people each year, within 30 days of discharge approximately 2.6 million Medicare beneficiaries are re-hospitalized, and 2.3 million (2%) emergency department visits are from patients who were discharged from the hospital within the previous 7 days. Drilling down further, a study by Maniaci, Heckman, and Dawson (2008) on discharged patients identified only 41% as able to state individual diagnoses, only 37% were able to state the purpose of their medications, and only 14% knew the common side effects of all medications. These statistics illuminate the issues healthcare workers will face and the support needed for improved education programs to effectively prepare patients and caregivers through transitions of care.

The National Patient Safety Foundation (2011) defined health literacy as the ability to read, understand, and act on health information. Saver (2012) highlighted statistics from the Department of Health and Human Services, wherein it was identified that only 12% of United States adults had “proficient” health literacy.

A literature search conducted by Berkman, Crotty, Donahue, Halpern, and Sheridan (2011), found the following to be more prevalent amongst low health literacy groups: an increased use of emergency care and hospitalizations, poor medication management, and higher mortality rates. These identified health literacy issues indicate that a staggering number of surgical patients and caregivers may not understand crucial information, such as consent forms, surgical findings, and discharge instructions. This raises the bar in which healthcare providers must adapt and begin to utilize alternative teaching methodologies to meet the
individual needs of each patient. An effective approach to combating health literacy issues is through the use of the teach-back method.

Teach-Back Method

Teach back is a proven method to confirm when a health care professional has explained the necessary information in a manner patients can understand. Patient understanding is verified when the patient can restate the information in his or her own words (DeWalt et al., 2010). The goal of teach-back is to provide effective teaching at the literacy level of the primary learner. The primary learner may be the patient, a family member, or another support person (Tamura-Lis, 2013). An example of teach-back is when the nurse asks the patient to state in his or her own words how to care for a surgical incision, administer new medications, or identify post-operative complications. This method allows for the nurse to immediately evaluate the effectiveness of the education provided. Tamura-Lis recommended that teach-back be used at all transitions of care: upon admission, between transfer of care providers, or transitions to the home environment.

Providing patients and caregivers with the necessary tools to manage care with understanding and the ability to act can improve self-care management after discharge from the hospital. Another effective technique to augment smooth transitions in care is through the use of written education materials.

Written Education Materials

Written education materials are useful after discharge should patients or caregivers need to reference them. Evidence-based approaches to making printed materials an effective tool should include the following elements: materials should be written at or below the sixth-grade level (DeWalt et al., 2010), using mono or bi-syllabic words, short paragraphs, and an active voice. Illustrations or images
should be recognizable to the reader and show actions. Clear headings should also be evident to the reader. Further recommendations include ensuring that communication of actions that should be taken are outlined in simple, manageable steps (Brach et al., 2012; Koh, Brach, Harris, & Parchman, 2013).

Printed education materials should be used in conjunction with other teaching methodologies to address various adult learning styles. Taking into consideration the provision of information through a booklet lends itself to passive learning, which does not promote engagement or patient satisfaction. Phillips (2010) suggested that patients should be more than just recipients of care but rather take on active roles. This collaboration can promote engagement, which, in turn, influences patient satisfaction.

**Patient Satisfaction**

The ability to meet patient expectations has been directly linked to satisfaction with the healthcare experience (Costa, 2001; Kruzik, 2009). Providing patients and caregivers with perioperative education prior to a surgical procedure, establishes realistic expectations for providers and patients alike. Research has shown that patients with fulfilled expectations report higher post-operative satisfaction when compared to those with inconsistent expectations (Soroceanu, Ching, Abdu, & McGuire, 2012). Interpretation of patient satisfaction links “care expected” to “care received” (Suhonen, Valimaki, & Leino-Kilpi, 2004). Consistently reducing the risk of incongruence with unrealistic expectations increases the likelihood of improved patient satisfaction (Costa, 2001). Therefore, every attempt shall be made at setting realistic expectations through the use of thorough perioperative, patient-centered education programs.
Summary

They key to improved patient outcomes following discharge, after elective total joint replacement surgery, starts with an effective perioperative patient education program. In order to enhance the effectiveness of the education program the following fundamental elements shall be incorporated: healthcare provider awareness of health literacy issues amongst the adult population, use of the teach-back method to evaluate the learner’s knowledge gained, and the use of written education materials to supplement information provided by staff. For the purpose of this study, the use of the teach-back method may influence responses to two of the three CTM-3 questions regarding self-care management upon discharge.

The goals of effective transitions of care include increased patient and caregiver awareness of new responsibilities and promoting self-efficacy with care management. This requires nurses to shift from providing passive education to a more active form that includes patients and caregivers. Additionally, it is imperative that principles of adult learning, individualized nursing care, and self-care management theories be utilized to maximize effectiveness of such education programs. Creating an active learning environment and including caregivers in the process may influence responses to one of the three CTM-3 questions regarding caregiver preferences.

Acknowledging that all learners are individuals allows for the abandonment of standardized education and allows for the opportunity to tailor information specific to each patient’s unique needs (Andrews & McBride, 2013). When patients feel they have been given information pertinent to their conditions, their satisfaction with care provided increases. Improved patient satisfaction leads to enhanced self-efficacy and, ultimately, more favorable outcomes.
The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. Chapter 3 outlines the methodology, study elements, and limitations of the study used to assess the effectiveness of a perioperative patient education program established in a surgical hospital in central California.
CHAPTER 3: METHODS AND MATERIALS

Methodology

The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. The patients’ perceptions of preparation for discharge will be measured by CTM-3 responses following elective total joint surgery. The surgical hospital’s Board of Managers approved the research to be conducted on site on July 10, 2014 (see Appendix A). Institutional Review Board (IRB) approval was granted by California State University, Fresno on August 9, 2014 (see Appendix B). Following these approvals, plans were made to implement the research. The educational booklet was finalized, the nurses received education on the teach-back method, and a teach-back education handout was developed for staff and patients. In addition, scheduled patients were invited to attend a Total Joint class, where education would be provided on the expectations regarding perioperative self-care management.

Introduction

The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. In an effort to improve patient satisfaction with preparation for discharge, and ultimately self-efficacy of patients and caregivers, the following study was designed: Comparison of a surgical hospital’s CTM Survey Outcomes: After Targeting Patient Preparation to Participate in Self-Care Activities in the Inpatient Setting.
Purpose of the Study

The aim of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities, upon transition from hospital to home, following elective total joint surgery.

*Hypothesis:* Participants who have been exposed to a care-transition focused education program will report being more prepared to participate in post-hospital self-care activities when compared to participants who have not been exposed to a care-transition focused education program.

Research Design

The investigators used a historical comparison of HCAHPS CTM-3 data, pre-, and post-implementation of a care-transition focused education program to determine the program’s effectiveness on patient satisfaction with discharge preparation. The prospective quasi-experimental study was performed at a 27-bed surgical specialty hospital in the western United States. Rural Wisconsin Health Cooperative (RWHC), a contracted vendor, using a descriptive study design, collected primary source data for the study.

The education program is considered the independent variable, wherein patients were provided with information on self-care requisites prior to admission, received supplemental written education materials prior to discharge, and participated in the teach-back method prior to discharge. The dependent variable includes the individual patient’s perception of preparation for self-care upon transition to home after participating in the education program. Confounding variables include knowledge gained from previous surgeries, age, gender, caregiver or no caregiver available, learning disabilities, and patients transferred to
a higher level of care for changes in their conditions the surgical hospital is unable to accommodate.

**Procedures**

In order to complete this study, the following elements were designed and implemented based on best evidence:

1. Distribution of an education booklet to orthopedic patients scheduled for elective surgery at the hospital. Contents of the booklet focus on medication management, caregiver role, and skill acquisition, such as wound care, infection prevention techniques, prevention of common surgical complications, post-operative exercises, etc. The booklet aims to improve self-care requisites and self-efficacy (see Appendix C).

2. Education class at the surgical hospital offered to patients and his or her caregiver(s) prior to surgery. Each class is geared toward improving knowledge of perioperative self-care management. Each session emphasizes the importance of medication management, caregiver role, and skill acquisition aligned with the education booklet previously described.

3. Inclusion of a caregiver in all education activities. The goal of this element is to improve the caregiver’s knowledge of care activities necessary for a safe transition home so as to reduce the risk of post-surgical complications. Additionally, inclusion of caregivers in the surgical arena has the potential to positively influence responses on the CTM-3 question that pertains to staff taking the preferences of the patient’s family into consideration.

4. Standardized discharge teaching by RNs in the post-surgical unit. Utilizing the teach-back method is designed to evaluate the patient/caregiver’s understanding of knowledge transferred by staff throughout the hospital stay. Use
of the teach-back method will allow RNs to knowledge gained in the areas of medication management upon discharge, skills necessary to prevent complications post-discharge, and the caregiver’s role in post-hospitalization care. This intervention aims to improve self-efficacy.

5. Development of a teach-back handout for staff and patients to reference (see Appendix D).

6. Distribution of a HCAHPS survey to all patients who underwent an elective total joint replacement surgery between August 1, 2104 and January 31, 2015. Results were collected and aggregated by RWHC and then provided to the nurse researchers for review and analysis.

**Research Questions**

1. Does an organized education program allow for improved satisfaction, with staff taking the preferences of patients and their family or caregiver(s) into account in deciding what their health care needs would be upon discharge?

2. Does an organized education program allow for patients to have a good understanding of the things they are responsible for in managing their health upon discharge?

3. Does an organized education program allow for patients to clearly understand the purpose for taking each of their medications upon discharge?

**Setting**

For the purpose of convenience in this study, participants completed a HCAHPS surveys at their preferred times, dates, and locations. In this study, RWHC, a third party vendor, collected surveys and compiled the data after patients were discharged from the surgical hospital.
Population and Sample

The study sample consists of a convenience group of adult inpatients admitted to a post-surgical unit, following elective total joint surgery, in a hospital in the Western United States. All patients who were admitted for elective total joint replacement surgeries with a minimum stay of 24 hours were included in the intervention/study group and each was provided an opportunity to respond with anonymous feedback via the HCAHPS survey.

Instrumentation

Responses to the HCAHPS CTM-3 questions were used for evaluation of the perioperative education program’s effectiveness. Validity and reliability of the HCAHPS tool was previously determined by the developer and has been accepted as a nationally recognized standardized instrument for determining patient perceptions of preparation to participate in self-care activities. The survey instrument contains 32 questions, but for the purpose of this study, only questions 23, 24, and 25 were used. Item 23 addresses if preferences of caregivers were taken into account. Item 24 examines if the patient had a good understanding of self-care requisites upon discharge. Item 25 surveys whether patients understood the purpose for taking each of the prescribed medications upon discharge. Participants have the following options to choose from on each of the CTM-3 questions: Strongly Disagree, Disagree, Agree, and Strongly Agree. One exception applies to question 25, where participants can select the following answer (if applicable): “I was not given any medication when I left the hospital.”

Data Collection

HCAHPS surveys were distributed to all 696 patients who underwent elective total hip or knee replacement between August 1, 2014 and January 31,
2015 via standard mail by RWHC up to 30 days post-discharge. Participants were given six (6) weeks after distribution to complete and return the survey in a postage paid envelope. Demographic data collected through the hospital’s electronic medical record were not linked to the analysis of survey results, rather were strictly used to identify participants who met inclusion criteria.

Gathering CTM-3 results from the comparison and study groups completed the data collection for this study. The comparison group includes HCAHPS CTM-3 results for patients admitted between August 1, 2014 – October 31, 2014. The study group includes HCAHPS CTM-3 results for patients admitted for elective total hip or knee replacement between November 1, 2014 – January 31, 2015. During this timeframe, 696 patients were eligible to participate in this study, of which 512 completed the survey for analysis.

**Data Analysis**

Survey responses were collected and aggregated by RWHC according to descriptive data provided by participants. Following final collection of data, CTM-3 responses from participants were reviewed by the nurse researchers and categorized according to responses for each question pre- and post-intervention for further analysis. The comparison and study group responses were analyzed based on the variables of interest. Statistical analysis of the qualitative data was conducted using Microsoft Excel. Tables illustrating descriptive statistics were constructed to display results with respect to each of the three research questions.

**Limitations**

Use of a third-party vendor to collect data in this study has limited the ability to analyze results related to confounding variables that can affect preparation for discharge, such as age, sex, literacy level, previous surgeries, and
treatment at an acute rehabilitation facility, etc. If the nurse researcher collected data directly, more detailed demographics could be obtained, in addition to assessing variables that may affect responses. This may allow for further analysis. Although preoperative education has proven to promote more favorable outcomes (Gahimer et al., 1996), not all surgeons practicing at the surgical hospital in this study encouraged patients to attend the Total Joint class prior to undergoing surgery. Deviation from this practice may pose a threat to ensuring patients are adequately prepared for discharge, resulting in suboptimal CTM-3 responses, and potentially less favorable outcomes.

Summary

The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. In this chapter a description of the methods used to implement this research study were reviewed. Between August 1, 2014 and January 31, 2015, 696 patients who underwent elective total hip or knee replacement surgery were allowed to participate in this research study by completing an HCAHPS survey following discharge. The variables of interest included responses to the CTM-3 questions within the HCAHPS survey. CTM-3 responses evaluate the effectiveness of preparation for discharge from the hospital. Of the 696 surveys that were distributed, 512 were returned, yielding a 74% response rate. Statistical analysis was conducted and results of the study are discussed in chapter 4.
CHAPTER 4: RESULTS AND DISCUSSION

Review of Methodology

The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. The effectiveness of the program was measured using the responses to the CTM-3 questions within the HCAHPS survey. Following IRB approval, the project was implemented according to the research protocol. HCAHPS surveys were sent to both the comparison and study group participants who underwent total joint surgery between August 1, 2014 and January 31, 2015. Each participant was allowed 6 weeks to complete the survey following discharge from the hospital. The population size for this study included 696 participants. The sample size of the comparison group yielded 310 surveys returned out of 369 participants. The sample size of the study group yielded 232 surveys returned out of 327 participants. RWHC collected all completed surveys and reported anonymous aggregated data to the nurse researchers for further review and analysis. The data collected through HCAHPS surveys of discharged patients, namely CTM-3 responses, were used to compute descriptive statistics about the sample population. The purpose of this study is to determine if a care-transition focused education program could improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. The results for each of the research questions are outlined in the subsequent tables. Data received from RWHC included a summary of responses to each of the CTM-3 questions in the form of percentages. The detailed descriptive data from the study follows.
Results

Research Question 1

Does an organized education program allow for improved satisfaction with staff taking the preferences of patients and their families and/or caregivers into account in deciding what their health care needs would be upon discharge? Question 23 on the HCAHPS survey identifies patients’ perceptions of inclusion of family members/caregivers.

Question 23 Results

Table 1 displays the survey results for HCAHPS question 23 before and after the intervention. The question reads: “During the hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my health care needs would be when I left.” Before the intervention, 0.83% (n = 3) of the respondents selected Strongly Disagree, 4.3% (n = 13) respondents selected Disagree, 36.5% (n = 113) of respondents selected Agree, and 58.3% (n = 181) of respondents selected Strongly Agree. No respondents selected None. In contrast, after the intervention, 0% (n = 0) of the respondents selected Strongly Disagree, 0.9% (n = 2) respondents selected Disagree, 34.9% (n = 81) of respondents selected Agree, and 64.2% (n = 149) of respondents selected Strongly Agree. No respondents selected None.

Table 1

<table>
<thead>
<tr>
<th>Group</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>0.83%</td>
<td>4.30%</td>
<td>36.50%</td>
<td>58.30%</td>
<td>0%</td>
</tr>
<tr>
<td>After</td>
<td>0.00%</td>
<td>0.90%</td>
<td>34.90%</td>
<td>64.20%</td>
<td>0%</td>
</tr>
</tbody>
</table>
In order to better view an increase or decrease in satisfaction, the results for question 23 were pared down to combine Disagree, including Strongly Disagree and Disagree results, and combined Agree, including Agree and Strongly Agree results (see Table 2). After the intervention, there was a 4.2% increase in patients who reported agreeing with question 23.

Table 2

<table>
<thead>
<tr>
<th>Group</th>
<th>Combined disagree</th>
<th>Combined agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>5.10%</td>
<td>94.70%</td>
</tr>
<tr>
<td>After</td>
<td>1.10%</td>
<td>98.90%</td>
</tr>
</tbody>
</table>

Using the sample number provided on the HCAHPS report, the actual number of respondents was calculated, and these numbers were used to calculate a Fischer Exact Score. For this question, the difference in results was found to be statistically significant ($p < 0.05, 0.0062$).

Research Question 2

Does an organized education program allow for patients to have a good understanding of the things they are responsible for in managing their health upon discharge? Question 24 on the HCAHPS survey is directly linked with patient satisfaction of preparation for self-care management following discharge.

Question 24 Results

Table 3 displays the survey results for HCAHPS question 24 before and after the intervention. The question reads: “When I left the hospital, I had a good understanding for the things I was responsible for in managing my health.” Before the intervention, 1% ($n = 3$) of the respondents selected Strongly Disagree, 2.1%
(n = 7) respondents selected Disagree, 32% (n = 101) of respondents selected Agree, 64.3% (n = 203) of respondents selected Strongly Agree, and 0.56% (n = 2) of respondents selected None. In contrast, after the intervention 0% (n = 0) of the respondents selected Strongly Disagree, 1.7% (n = 4) respondents selected Disagree, 27.8% (n = 65) of respondents selected Agree, and 70.5% (n = 165) of respondents selected Strongly Agree. No respondents selected None.

Table 3

| Question 24 Survey Results Comparing Before and After Intervention |
|-----------------|--------|--------|--------|--------|--------|
| Group           | Strongly disagree | Disagree | Agree  | Strongly agree | None  |
| Before          | 1.00%   | 2.10%   | 32.00% | 64.30% | 0.56%  |
| After           | 0.00%   | 1.70%   | 27.80% | 70.50% | 0.00%  |

In order to ascertain whether there was an increase or decrease in satisfaction with question 24, the responses were pared down to combine Disagree, including Strongly Disagree and Disagree results, and combine Agree, including Agree and Strongly Agree results (see Table 4). After the intervention, there was a 1.9% increase in patients who reported agreeing with question 24.

Using the sample number provided on the HCAHPS report, the actual number of respondents was calculated, and these numbers were used to calculate a Fischer Exact Score. For this question, the difference in results was not found to be statistically significant (p > 0.05, 0.413).
Table 4

*Combined Question 24 Results Comparing Before and After Intervention*

<table>
<thead>
<tr>
<th>Group</th>
<th>Combined disagree</th>
<th>Combined agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>3.1%</td>
<td>96.3%</td>
</tr>
<tr>
<td>After</td>
<td>1.2%</td>
<td>98.2%</td>
</tr>
</tbody>
</table>

Research Question 3

Does an organized education program allow for patients to clearly understand the purpose for taking each of their medications upon discharge? Question 25 on the HCAHPS survey identifies patients’ perceptions of knowledge regarding medication management.

Question 25 Results

Table 5 displays the survey results for HCAHPS question 25 before and after the intervention. The question reads: “When I left the hospital, I clearly understood the purpose for taking each of my medications.” Before the intervention, 2.4% (n = 7) of the respondents selected Strongly Disagree, 0.26% (n = 1) respondents selected Disagree, 21% (n = 65) of respondents selected Agree, 58.3% (n = 180) of respondents selected Strongly Agree, and 15.6% (n = 48) of respondents selected “I was not given any medication when I left the hospital.” In contrast, after the intervention, 0.4% (n = 1) of the respondents selected Strongly Disagree, 1.3% (n = 3) respondents selected Disagree, 20.4% (n = 47) of respondents selected Agree, and 63% (n = 145) of respondents selected Strongly Agree, and 14.8% (n = 34) respondents selected “I was not given any medication when I left the hospital.”
Table 5

**Question 25 Survey Results Comparing Before and After Intervention**

<table>
<thead>
<tr>
<th>Group</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>2.40%</td>
<td>0.26%</td>
<td>21.00%</td>
<td>58.30%</td>
<td>15.60%</td>
</tr>
<tr>
<td>After</td>
<td>0.40%</td>
<td>1.30%</td>
<td>20.40%</td>
<td>63.00%</td>
<td>14.80%</td>
</tr>
</tbody>
</table>

To better understand whether there was an increase or decrease in satisfaction, the responses for question 25 were pared down to combine Disagree, including Strongly Disagree and Disagree results, and combine Agree, including Agree and Strongly Agree results (see Table 6). After the intervention, there was a 15.1% increase in patients who reported agreeing with question 25.

Table 6

**Combined Question 25 Results Comparing Before and After Intervention**

<table>
<thead>
<tr>
<th>Group</th>
<th>Combined disagree</th>
<th>Combined agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>2.7%</td>
<td>79.1%</td>
</tr>
<tr>
<td>After</td>
<td>1.6%</td>
<td>94.2%</td>
</tr>
</tbody>
</table>

Using the sample number provided on the HCAHPS report, the actual number of respondents was calculated, and these numbers were used to calculate a Fischer Exact Score. For this question, the difference in results was not found to be statistically significant (p > 0.05, 0.572).

**Composite Results**

Table 7 displays the survey results for the CTM-3 composite, which combines responses for all three questions before and after the intervention. Before the intervention, 1.41% (n = 13) of the respondents selected Strongly
Disagree, 2.3% (n = 22) respondents selected Disagree, 23.3% (n = 218) of respondents selected Agree, 60.3% (n = 564) of respondents selected Strongly Agree, and 5.38% (n = 50) of respondents selected None or “I was not given any medication when I left the hospital.” In contrast, after the intervention, 0% (n = 0) of the respondents selected Strongly Disagree, 1.3% (n = 9) respondents selected Disagree, 27.7% (n = 193) of respondents selected Agree, and 65.9% (n = 459) of respondents selected Strongly Agree and 4.9% (n = 34) respondents selected None or “I was not given any medication when I left the hospital.”

Table 7

<table>
<thead>
<tr>
<th>Group</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>1.41%</td>
<td>2.30%</td>
<td>23.30%</td>
<td>60.30%</td>
<td>5.38%</td>
</tr>
<tr>
<td>After</td>
<td>0.00%</td>
<td>1.30%</td>
<td>27.70%</td>
<td>65.90%</td>
<td>4.90%</td>
</tr>
</tbody>
</table>

To more clearly identify whether patients were satisfied and prepared for transitions in care overall, the composite responses were pared down to combine Disagree, including Strongly Disagree and Disagree results, and combine Agree, including Agree and Strongly Agree results (see Table 8). After the intervention, there was a 10% increase in patients who reported agreeing with being prepared for transitions in care.
Table 8

*Combined CTM-3 Composite Results Comparing Before and After Intervention*

<table>
<thead>
<tr>
<th>Group</th>
<th>Combined disagree</th>
<th>Combined agree</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>3.7%</td>
<td>83.6%</td>
<td>5.4%</td>
</tr>
<tr>
<td>After</td>
<td>1.3%</td>
<td>93.6%</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

Results of Research Questions

For the purpose of this study the following research questions were identified: 1) Does an organized education program allow for improved satisfaction, with staff taking the preferences of patients and families and/or caregivers into account in deciding what their health care needs would be upon discharge? 2) Does an organized education program allow for patients to have a good understanding of the things they are responsible for in managing their health upon discharge? 3) Does an organized education program allow for patients to clearly understand the purpose for taking each of their medications upon discharge? After thorough review of the CTM-3 responses from the study participants, there was statistical significance (p < 0.05, 0.0062) found in the results pre- and post-implementation of the education program. Although there was an increase in satisfaction with self-care management and medication knowledge reported on the surveys, the results are not statistically significant at this time. Further research would need to determine the effectiveness of the program in improving satisfaction with these elements of care.

Summary

The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate
in self-care activities following elective total joint surgery. This chapter identifies the results of the research study. Five hundred and twelve patients participated in this study following elective total hip or knee replacement surgery. The research study addressed patients’ preparation for self-care management upon discharge from the hospital. The results of this research showed that participants reported feeling improved satisfaction with preparation for discharge after receiving education pertinent to their surgical procedure. Patient satisfaction with discharge preparation according to HCAHPS CTM-3 responses increased 10% by the end of the study period following implementation of an evidence-based perioperative education program. The following chapter provides a conclusion to the study findings, implications for future practice, and research.
CHAPTER 5: CONCLUSION

The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. The goal of the program was to increase self-efficacy with self-care requisites and ultimately improve satisfaction with preparation for discharge. The program’s effectiveness was measured using the CTM-3 responses of the HCAHPS survey. This chapter will outline the results of the study. This chapter begins with a discussion of the results and reviews recommendations and implications for future practice and research.

Discussion

Providing patients with education regarding self-care management following surgery has the potential to improve patient satisfaction and surgical outcomes by setting realistic expectations. As suggested by Soroceanu et al. (2012), research has shown that patients with fulfilled expectations report higher post-operative satisfaction when compared to those with unmet expectations. Additionally, strong correlations have been identified between good communication, higher patient satisfaction, increased adherence to care plans, and improved patient outcomes (Boulding et al., 2011; Hamric et al., 2014). Therefore, with thorough communication of expectations in the form of education, patients and caregivers are likely to have improved satisfaction with preparation of new self-care requisites following surgery. Furthermore, evidence suggests that an effective patient-centered education program is individualized and flexible (Pritchard, 2011), addresses various levels of health literacy (Saver, 2012), uses the teach-back method (Tamura-Lis, 2013), and includes information about
potential complications and self-care management (Saver, 2012). Inclusion of these elements is believed to promote self-efficacy, enhanced outcomes, and improved patient satisfaction (Gahimer, et al., 1996; Heinrich, 2012; Pritchard, 2011; Tamura-Lis, 2013).

The results of this study support the conclusion that patient education improves satisfaction with preparation for self-care requisites, as evidenced by a 10% increase in patients who agreed that care transition needs were met on the HCAHPS survey. Despite the increase in overall reported satisfaction on the CTM-3 composite, there was no significant difference in ratings for individual responses regarding self-care management ($p = 0.413$) and medication knowledge ($p = 0.572$). The results of these responses may be related to surgeon practices.

One confounding variable regarding medication knowledge may be related to the fact that some surgeons prefer to prescribe post-operative medications prior to the patient undergoing surgery so they can fill the prescription ahead of time. While this allows for advanced preparation on the patient’s behalf, there is no control over how medication education was conducted. Failure to provide consistent education regarding post-operative medications may affect CTM-3 question 25 responses. Another physician-related practice that may have affected the results of responses to CTM-3 question 24 is that some surgeons do not advise patients to attend the Total Joint class. Without having adequate knowledge of self-care requisites following surgery, patients may lack confidence and have a sense of decreased self-efficacy. Furthermore, the shortened stay of 1 to 1.5 days, endorsed by some surgeons, decreases patient time with nurses and reduces their retention of education regarding discharge and aftercare. This shortcoming may be reflected in responses to CTM-3 question 24.
While there was a considerable increase in satisfaction with overall preparation for transitions in care pre- and post-intervention, it must be noted that there was a significant difference between the comparison and study groups. The comparison group included 42 more patients than the study group, with an 84% HCAHPS response rate, compared to that of the study group’s 71% response rate. These differences may be attributed to the time of year in which the nationally recognized holidays fall, lending to less surgeries and/or competing priorities. Additionally, during the post-intervention period there were fewer surgeries scheduled related to surgeons on vacation. This variable potentially affected the number of participants in the study group.

It must be noted that there was also a considerable difference in the number of attendees at the Total Joint class between the comparison and study groups. Table 9 illustrates the attendance rate between both groups that may have contributed to lower-than-expected satisfaction rates following the intervention. The average attendance rate was one-third of the total population, which was less than desirable considering patient education has been proven to influence patient outcomes in a positive fashion. However, 30% to 40% of the total joint population served at the surgical hospital in this study belonged to a surgeon who did not encourage patients to attend the Total Joint class because education was provided in the doctor’s office preoperatively. This may have impacted the overall results and it is recommended that further research be conducted to analyze the information more closely.
Table 9

Comparison of Total Joint Class Attendance

<table>
<thead>
<tr>
<th>Month</th>
<th>Total surgeries</th>
<th>Class attendance</th>
<th>Attendance percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>August</td>
<td>120</td>
<td>40</td>
<td>33</td>
</tr>
<tr>
<td>September</td>
<td>109</td>
<td>34</td>
<td>31</td>
</tr>
<tr>
<td>October</td>
<td>140</td>
<td>39</td>
<td>27</td>
</tr>
<tr>
<td>November</td>
<td>103</td>
<td>34</td>
<td>33</td>
</tr>
<tr>
<td>December</td>
<td>121</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td>January</td>
<td>103</td>
<td>24</td>
<td>23</td>
</tr>
</tbody>
</table>

Recommendations

The purpose of this study was to examine the effectiveness of a perioperative patient education program on the perceived satisfaction with preparation for self-care management following surgery. One recommendation to further improve patient satisfaction would be to have all elective surgical patients attend a perioperative education class pre-operatively. Additionally, it would be beneficial to replicate the study with an equal number of participants in both the comparison and study groups to eliminate discrepancies between different sample sizes. Based on the findings, additional recommendations are made for the future of nursing practice and research.

Implications for Practice

Clinical interventions geared towards improving quality outcomes provide a nursing solution to long-standing health policy issues. Through continued efforts at effectively educating patients, it is expected that clinical outcomes, such as improved pain control, decreased surgical site infections and general complications, improved patient satisfaction, and decreased healthcare costs would
The likely result. The results of this study indicate that patients who participated in a perioperative education program were more satisfied with preparation for self-care compared to those who did not participate in an education program. Increased satisfaction with care lends itself to improved outcomes following surgery; therefore, every attempt should be made to develop evidence-based perioperative education programs.

**Implications for Future Research**

Further studies are recommended to increase the sample size and study the effects of perioperative education on the satisfaction of other surgical populations. Additionally, another study could identify which element(s) of this education program participants perceived as the most effective. Finally, it may prove to be beneficial to test the effectiveness of the program on various populations outside of a surgical specialty hospital.

**Summary of Findings**

The findings of this study serve as a basis for designing perioperative patient education programs that address the needs of surgical patients and caregivers. Attention to the needs of each individual aids in improving quality outcomes and satisfaction with preparation for transitions in care. With an evidence-based approach to providing patient education, improvements in health care literacy disparities can be made while actively engaging in health promotion activities. Further research is needed to identify the effectiveness of perioperative education in additional populations, as well as identifying which elements of the education program are perceived as most effective.
Conclusion

The purpose of this study was to determine if a care-transition focused education program can improve a patient’s perception of preparation to participate in self-care activities following elective total joint surgery. Providing patients with the clearly communicated and necessary education that they can act upon is an ethical imperative. Perioperative education can lead to improved patient satisfaction and outcomes following surgery. Through the use of an evidence-based perioperative patient education program, patient satisfaction with preparation for care transitions was increased by 10% following elective total joint replacement. Although further research is needed, this study identifies areas in need of clinical interventions to improve patient satisfaction and ultimately self-care management following surgery. Through continued efforts, additional interventions geared towards improving self-efficacy of surgical patients can further increase patient satisfaction and enhance post-operative outcomes.
REFERENCES


APPENDICES
APPENDIX A: FRESNO SURGICAL HOSPITAL RESEARCH APPROVAL
July 10, 2014

Crystal Teague, RN, BSN
Heidi Honeycutt, RN, BSN, MSN
Fresno Surgical Hospital
6125 North Fresno Street
Fresno, CA 93710

Re: Comparison of Fresno Surgical Hospital’s CTM Survey Outcomes: After Targeting Patient Preparation to Participate in Self Care Activities in Inpatient Setting

Dear Mrs. Teague and Mrs. Honeycutt:

The Fresno Surgical Hospital's Medical Executive Committee reviewed all documents for the above referenced study on July 10, 2014. The initiation of the study was approved to be conducted at Fresno Surgical Hospital subject to the receipt of approval by the Institutional Review Board of California State University Fresno. The study has been approved as minimal risk for a period of twelve (12) months. The study period will expire July 10, 2015.

Sincerely,

Jerome Dunklin, MD
Chief of Staff

Copy: Bernard Payongayong, Clinical Educator
APPENDIX B: IRB APPROVAL
Date: September 8, 2014

RE: MSN-1403 Improving Transition of Care Management Through the Use of an Evidenced-Based Patient/Family Education Program

Dear Crystal Teague,

As the Chair of the Department of Nursing Research Committee, serving as the Institutional Review Board for the Department of Nursing, I have reviewed and approved your review request for the above-referenced project for a period of 12 months. I have determined your study to meet the criteria for Minimal Risk IRB review.

Under the Policy and Procedures for Research with Human Subjects at California State University, Fresno, your proposal meets minimal risk criteria according to section 3.3.7: Research in which the risks of harm anticipated are not greater, probability and magnitude, than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

The Research Committee may periodically wish to assess the adequacy of research process. If, in the course of the study, you consider making any changes in the protocol or consent form, you must forward this information to the Research Committee prior to implementation unless the change is necessary to eliminate an apparent immediate hazard to the research participant(s).

This study expires: September 8, 2015

The Research Committee is authorized to periodically assess the adequacy of the consent and research process. All problems having to do with subject safety must be reported to the Research Committee. Please maintain proper data control and confidentiality.

If you have any questions, please contact me through the CSU, Fresno School of Nursing Research Committee at tereag@csufresno.edu.

Sincerely,

Terea Giannetta, DNP
School of Nursing, Research Committee, Chair
APPENDIX C: A PATIENT’S GUIDE TO HIP AND KNEE REPLACEMENT
A Patient’s Guide to Hip and Knee Replacement

Pre-operative Care, Hospital Care, and Recovery Care
Welcome

Welcome from Fresno Surgical Hospital, your surgeon, and your healthcare team! We are pleased you have chosen us for your surgery, and we want to make sure your experience lives up to your expectations.

At Fresno Surgical Hospital we recognize that YOU are our most important team member. Our goal is to assist you in achieving the best results, and understand that you play a vital role in that.

Recovery is a process that starts before you enter the hospital through education and preparation, and continues at home after you leave. We could not achieve our goal without all of your hard work and efforts.

This booklet has been designed to help you through this process. We have included as many helpful tips and ideas as we know to make your recovery just a bit easier. Every situation is different and not all of the information may apply to you, but we want to give you the opportunity to be as informed as possible. Please feel free to ask us any questions.
<table>
<thead>
<tr>
<th>TABLE OF CONTENTS</th>
</tr>
</thead>
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<td>Welcome! ................................................................. 1</td>
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<td>General Information ...................................................... 4</td>
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<td>Contact Information ........................................................ 4</td>
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<tr>
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<td>Preparing for Surgery ..................................................... 5</td>
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<td>The Joint Replacement Class ............................................ 5</td>
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GENERAL INFORMATION

CONTACT INFORMATION

Fresno Surgical Hospital
Address: 6125 North Fresno Street
         Fresno, CA 93710
Phone: (559) 431-8000
Toll Free: 1-(800)-431-8455
Fax: (559) 431-8242

DIRECTIONS

Coming from North Bound CA-41
Heading North on Highway 41, take Exit 133, Bullard Avenue and turn right. Get in the left hand lane and turn left at your first intersection (Bullard Ave and Fresno St). At the first light on Fresno Street make a U-turn. Fresno Surgical Hospital is on the right hand side. Feel free to pull in and park in the parking lot directly in front of the hospital.

Coming from South Bound CA-41
Heading South on Highway 41, take Exit 133, Bullard Avenue and turn left. Get in the left hand lane and turn left at your first intersection (Bullard Ave and Fresno St). At the first light on Fresno Street make a U-turn. Fresno Surgical Hospital is on the right hand side. Feel free to pull in and park in the parking lot directly in front of the hospital.

PARKING

The parking lot in front of the hospital is open 24 hours a day and there is no fee. Our security staff patrols the parking lot routinely, but please do not leave valuables in your car.
PREPARING FOR SURGERY

THE JOINT REPLACEMENT CLASS

We, along with your surgeon, strongly recommend you attend this class.

Fresno Surgical Hospital offers a free educational class that reviews information included in this book and also allows you to ask questions about your care! This class offers an opportunity to get more information about how to care for yourself and what to expect during your hospital stay. During the class we also provide you with the special soap needed to bathe with before surgery (page 7).

This class is held every Monday at 10:00, except for holidays. We usually send you an invitation for a class about 2 weeks before your surgery. If the date and time of the class you have been provided does not work with your schedule, or you have not received this invitation please contact us at: 447-7707.

SMOKING

Stop Smoking; it is imperative to your healing. Do not smoke the morning of your surgery.

Smoking increases the risk of breathing problems, heart problems, and infections. Smoking also causes poor or slow healing after surgery. In preparation for your surgery, think about taking the time to identify ways you can quit smoking now.

A number of resources are available to assist you in quitting. As always, if you have questions, please talk to your doctor.

MEDICAL EQUIPMENT

Please speak with your surgeon about medical equipment. Patients often need a walker or a 3-in-1 commode after knee or hip surgery. If you are given a script for a walker, please get the walker and bring it in to the hospital with you. If they do not, this will be coordinated through your discharge planner and your physical therapist in the hospital. You should check with your insurance company regarding coverage of medical equipment, just to be prepared.

If you are borrowing or already have a walker please bring it in to the hospital with you. The Physical Therapists would like to make sure it is adjusted to your height and safe for you to use.
PRE-SURGICAL EXERCISE

*Activity is a key to a faster recovery.*

Keep moving before your surgery: include daily walks, light biceps curls, and stretching in your routine. Having toned muscles will help you during recovery. Also continue any exercises your surgeon or healthcare provider has instructed you to do.

TRANSPORTATION AND CARE AT HOME

Arrange for someone to take you to and from the hospital and doctor appointments. Your surgeon will not want you to drive for a period of time after your surgery, and having this set up may reduce some anxiety.

Our goal is for you to go home when you are discharged. Arrange for a friend or family member to care for you at home. You will want someone who can assist you in safely moving around the house and help you wash, dress, clean, and cook.

PREPARING YOUR HOME

A few other tips for preparing your house:

- If your bedroom is upstairs, consider setting up a temporary bedroom downstairs. Stairs may be difficult for you during the initial recovery period.
- If there are things you use daily, store them at a level between your hips and shoulders to reduce the risk of hurting yourself when bending over or reaching up.
- Take a look at your floor and make sure there are no area rugs, cords, or objects on which you could trip. Generally look for ways to make your house safer for your recovery.
- If you have stairs leading into your house look for another entry such as a garage entry or back door. This may initially be easier for you when you get home.
- If you have pets that may get a little too excited to see you, or need a lot of attention, consider having a friend or family member watch them while you recover.
- Have extra pillows, pads, or cushions available to help position yourself and make yourself comfortable.
YOUR SURGICAL EXPERIENCE

PREADMISSIONS NURSE INTERVIEW

A nurse will call you before surgery for an interview.

A preadmissions nurse will call you to complete a preoperative interview. This interview will include:

1. A Medical History: The nurse will ask you if you have any medical conditions, previous surgeries, or take any medications.
2. Instructions: This will include reviewing your doctor’s recommendations on what medications to take on the day of surgery and what to stop taking.
3. Answer your questions: Feel free to use this time to ask the nurse any questions you have about your procedure or your hospital stay.

If you do not hear from a Preadmission nurse within a few days before your surgery, please feel free to give them a call! Phone: (559) 447-7360

The following are a few of the topics that the Preadmission nurse will review with you to help you prepare for surgery.

6-DIGIT PIN

During this call you will be given a 6-digit PIN number that is individualized to you. This is a number you can give your friends and family who you would like to receive information on how you are doing while you are in the hospital. If anyone calls the hospital asking about you, we will not give them information unless they can provide us with this number.

My PIN number is: _______________________

SPECIAL BATHING INSTRUCTIONS

You will need to shower the night before and the morning of your surgery with a special antibacterial soap called chlorhexidine gluconate (CHG), commonly known as Hibiclens (if you are allergic to chlorhexidine, do not use this soap. Ask your surgeon for an alternative). This soap can be purchased at most drug stores. This soap reduces the amount of bacteria on your skin, which helps to prevent infections.

Follow these instructions:

1. Take your normal shower, but do not shave with a razor, as this increases your risk for an infection.
2. Turn off the water but stay in the shower.
3. Place half of the bottle of CHG in the palms of your hands and apply to your body from your neck to your toes. Avoid getting the soap near your eyes, ears, and genital area, and hair.
4. Gently massage the soap into your skin for 2-5 minutes; focusing on your surgical site (You may need assistance with this). The soap will not lather, but will still be doing its job.
5. Turn on the water and rinse your body.
6. Pat yourself dry with a clean soft towel. Do not put on any perfumes, powders, lotions, or creams.
WHEN TO STOP EATING AND DRINKING

Do not eat or drink anything after midnight, including gum, hard candy, or water (unless instructed differently by the Preadmissions nurse). If you are taking medications the morning of your surgery, take them with a very small sip of water. This is important, as it helps to keep you safe from certain complications during surgery.

TIME OF ARRIVAL

The hospital will call you the night before your surgery between 6pm and 8pm to tell you what time to come to the hospital for your surgery. If your surgery is on Monday or a holiday, we will call you the business day before your surgery.

MEDICATION USE BEFORE SURGERY

Your doctor will tell you what medications to stop taking before surgery. The preadmission nurse will also review these medications. Besides your prescription medications there are over-the-counter medications and herbal supplements that you need to avoid for at least one week before surgery and for 3 months after your surgery until your surgeon approves them. These medications can cause bleeding and prevent your body from healing completely after the surgery. If you take Aspirin or a blood thinner for a heart condition, talk to your cardiologist before you stop taking it.

Non-Steroidal Anti-Inflammatory Drugs (NSAIDS). Stop taking NSAIDS at least one week before surgery. Examples of NSAIDS are: Advil, Aleve, Aspirin, Celebrex, Ibuprofen, Motrin, Toradol, Naprosyn, and Voltaren.

Herbal Supplements. Stop taking all herbal supplements at least one week before surgery.

These are the medications I am going to take on the morning of my surgery:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

These are the medications I am not going to take on the morning of my surgery:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

I am going to stop these medications for ________ days before surgery:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
THE NIGHT BEFORE YOUR SURGERY

1. Take your shower with the special soap (page 7).
2. Eat a healthy meal. Remember that you cannot eat after midnight, so consider eating a little later than you might usually eat dinner.
3. Check your overnight bag and make sure you have everything you need for a comfortable stay in the hospital. Use the checklist in the back of this booklet as a guide for packing.
4. Get the following items ready to bring with you to the hospital:
   a. Photo Identification card
   b. Insurance card(s)
   c. Medication in original bottles
5. Relax and try and get a good night’s sleep.

THE MORNING OF YOUR SURGERY

ACTIVITIES TO COMPLETE

1. ONLY take the medications your doctor and preadmission nurse told you to take with a small sip of water.
2. Repeat the showering process with the special antibacterial soap (page 7).
3. Brush your teeth, but be careful not to swallow the water.
4. Do not put on any deodorant, perfumes, lotions, powders, creams, or make-up.
5. Dress in loose comfortable clothes with comfortable non-slip shoes.

ARRIVAL TO THE HOSPITAL

When you get to Fresno Surgical Hospital on the day of your surgery, park in front of the hospital in the parking lot adjacent to Fresno Street. Enter the front lobby and head straight to the reception desk, where they will be expecting you. The receptionist will ask you for your identification card and insurance card to check you in. They will also review a few forms with you.

Once this is completed, the receptionist will let the Pre-op nurse know that you are here and ready. We will ask that your family wait in the lobby initially while the nurse reviews information with you and completes an assessment. Your family or friends will be brought back to PreOp to see you shortly thereafter.
SAFETY IN THE HOSPITAL

Your safety is one of our top priorities while you are in the hospital. There are a few things that we want you to be aware of to help us keep you safe.

Name and Date of Birth

We will be asking you to tell us your name and date of birth frequently and comparing it to your armband or the doctor’s orders. While it might seem like we forgot who you are, this is not the case! Instead, this helps us ensure that we provide the right treatments, tests, and medications every single time.

Hand Washing

Another one of our top priorities is preventing the spread of bacteria and protecting our patients from infections. You can expect your healthcare team to clean their hands before and after every contact with each patient. This can be done with soap and water or hand sanitizer, both of which are very effective in reducing the spread of bacteria. If you encounter one of your healthcare team members not washing their hands, please speak up and remind them.

Antibiotics

Your doctor will order IV antibiotics to be given to you right before your surgery and for part of the time while you are in the hospital. This helps prevent infections at your surgical site.

Preventing Wrong Site Surgeries

There are always risks associated with surgery. At Fresno Surgical Hospital we work hard to perform the right procedure, on the right patient, on the right body part. In order to ensure this happens we have multiple processes in place and want you to be as involved as possible. There are three separate times the preadmission, preoperative, and surgical nurses will ask you what procedure we are doing for you. Your answer is compared to our documentation to make sure it matches. Your surgeon will also ask you to be involved by identifying your surgical site and confirming that the site he/she marks in the pre-op area is correct.
PRE-OPERATIVE PREPARATION DEPARTMENT - PRE-OP

The Nurse

A nurse will walk you to the pre-op area. You will be asked to change into a gown and hospital socks. We have plenty of warm blankets to keep you warm and comfortable at this point. Following this the nurse will:

- Review the planned surgery with you.
- Review your medical history and medications as well as complete a general assessment.
- Start your IV (We will do everything we can to make this a comfortable process)

The Anesthesiologist

The Anesthesiologist will visit you and discuss the different types of anesthesia and what the best options are for you. Together you will develop a plan for anesthesia.

The Surgeon

Your surgeon will visit you and review the surgery plan that you two have developed. This is a great time to ask any last minute questions. The surgeon will also ask you to point to the area that you are having surgery. They use a marker to mark the site. This is an important safety check to protect you and help guide the team.

Friends and Family

After you are prepared, your friends or family can stay with you while you wait to go into the operating room. Once you do they are more than welcome to wait in the lobby. Refreshments are available, but if they would like to leave for a meal or a little shopping, we ask that they notify the receptionist and leave contact information.

When you are taken into the operating room, you will be in the highly trained hands of your operating room nurse, anesthesiologist, and scrub technologist.
OPERATING ROOM

When you arrive to the operating room you will be cared for by the surgical team who will explain things as they work with you.

Once everything is set up the entire surgical team pauses and ensures everything is safely prepared for surgery.

The time it takes for the surgery to be completed is an estimate. Your surgery may take more or less time than originally planned. After the procedure your surgeon will meet with your family or friends to review the procedure and discuss your condition in a private consultation room. Please let your family know this so that they can be available. If they are not available we will try and contact them by phone. The receptionist and nurse can help coordinate this timing with your family.

RECOVERY IN THE POST ANESTHESIA CARE UNIT- PACU

After your surgery you will be taken to the recovery room to be closely monitored as you recover from anesthesia. The nurse will be monitoring things like your blood pressure, heart rate, and side effects from anesthesia such as nausea, shivering, or itching.

You will have an IV to give you fluids and medication until you can tolerate these without being nauseated. Not everyone experiences nausea after surgery, but some do. If this occurs, tell your nurses so they can give you medication to treat the nausea.
PAIN MANAGEMENT

Pain offers no benefit to your recovery and can affect your body. Sometimes patients try and bear through the pain, or do not feel that they will be understood. This is not the case. Untreated pain can cause fear, anxiety, lack of sleep, and also prolong your recovery.

After surgery it is not always possible to eliminate all of the pain. Our goal is to help you reduce it so that you are comfortable. We never want your pain to be uncontrolled.

In order to treat your pain effectively and make you comfortable, we have included what is expected of you while you are in the hospital, and what you can expect from us.

WHAT TO EXPECT

What you can expect from your healthcare team:

✓ To have your pain assessed routinely throughout your stay.
✓ To have a plan developed for your pain control, which can include medication, relaxation, deep breathing, cold therapy, positioning, and spiritual care.
✓ Information and answers to your questions about pain relief.
✓ A quick response from your doctor or nurse when you report pain.
✓ To be treated by a team that cares about your pain management and believes that you are in pain when you say you are.
✓ To be provided with every treatment option that can be safely administered to you to treat your pain.

What your healthcare team will expect from you:

✓ Assist the healthcare team in assessing your pain. You will be asked to help by “rating” your pain on the scale included in this booklet. It is also helpful if you can describe the pain (throb, ache, sharp, shooting, cramp), as this helps the team choose treatment that is best for you.
✓ Tells us what you take at home for pain control, or what has worked for you in the past. This is very important because it helps the healthcare team create a plan customized to you.
✓ Notify the healthcare team when the pain first begins. It is usually easier to control the pain before it gets too painful.
✓ Talk to the nurses and the doctors about concerns you have about pain control, or if you have any worries about taking pain medication.
✓ Understand that you will not be totally pain free after surgery and during the recovery period, but you can expect to be at a bearable level of pain.
PAIN SCALE

We use a pain scale to identify what your pain is and see if treatments are working. The scale is a number from 0 to 10. We will ask you to identify a bearable level of pain. Everyone is different and this number will vary from person to person.

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<tr>
<td>No Pain</td>
<td>Mild Pain</td>
<td>Moderate Pain</td>
<td>Severe Pain</td>
<td>Very Severe Pain</td>
<td>Worst Pain Possible</td>
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MEDICATIONS USED FOR PAIN MANAGEMENT

The following are examples of pain medication commonly used for this procedure. Your doctor will individualize your pain management plan to your specific needs, and prescribe you the best medication for your pain.

IV Medication

Fentanyl, Dilaudid, and Morphine are the most commonly used IV medications for pain control after joint surgery. These can be used for the first 12-24 hours to help control your pain. They can be given by the nurse, or through the special pain pump called a Patient Controlled Analgesic (PCA) pump (page 21).

Oral Medication

Once you are eating and drinking well, you will be given medications by mouth. The most commonly used pain medications are Norco (hydrocodone / acetaminophen) and Percocet (oxycodone / acetaminophen) and Nucynta.

Common Side Effects to Pain Medication

Side effects can include drowsiness, nausea, vomiting, dizziness, constipation, dry mouth, decreased appetite, and more serious side effects such as decreased breathing.

Time frame

IV pain medications can take 5-10 minutes to help relieve your pain, and are used for short term relief.

Oral pain medications can take 30-45 minutes to work, and can be used to manage pain for about 4-6 hours, unless it is a long acting medication which can last for up to 12 hours.
OTHER PAIN MANAGEMENT OPTIONS

Breathing Exercise

Pain can cause you to unconsciously take quick short breaths. This can increase the feeling of anxiety, and cause fluid build-up in your lungs, which could lead to pneumonia. Use the following technique to help you maintain control of the pain as well as reduce your risk of pneumonia.

1. Lay or sit still in bed.
2. Inhale through the nose while counting to 2.
3. Hold breath for one count.
4. Exhale gently through the mouth while counting to 4.
5. Continue this breathing in a smooth and even pattern until you feel the calming effects.
6. If the breaths feel too short or too long, adjust them to your preference.

Exercise

Walking and moving your arms and legs increases blood flow and prevents increased pain from swelling and stiffness. Walking is generally good for your recovery.

Music

Music has been shown to decrease the body’s response to pain. Music may reduce the intensity of pain you feel and decrease the amount of pain medication you need after surgery. Bring in your favorite calming music to listen to while you are in the hospital. As a courtesy to other patients, please use personal listening devices such as headphones.

Distraction

Focusing on your pain may make it seem more intense. Concentrate on something else, like reading a book, watching TV, or talking with someone.

Repositioning

Sitting or lying in the same place without moving can cause your muscles to be stiff, or your body to be sore in general. Move to a new position if you find that you have been sitting or lying in the same place for a while and are starting to have pain.

Repositioning is also good for the skin. It increases the blood flow and decreases the chances of developing bedsores.
CLINICAL PATHWAY FOR HOSPITAL RECOVERY

A clinical pathway is a guide to the daily goals and progress for a successful recovery after surgery. Your care will be customized to meet your needs, while trying to follow this guide.

After you have recovered from anesthesia you will be taken to your private room. Here you will begin your path to recovery! Depending on the type of surgery you have and your individual needs you may meet these goals sooner than identified. This is absolutely fine!

All of our inpatient rooms are private rooms with a full bathroom. There is a couch that turns into a bed for a guest to stay with you overnight. You are welcome to have a guest over the age of 18 stay with you during your visit. Meals are available to guests at a small fee, provided by our in-house chefs.

We recommend that the person caring for you at home stay with you in the hospital. This gives them an opportunity to learn how to care for you.

During flu season (usually October 1st through April 1st) children under the age of 12 are not allowed to visit in the hospital. This is to protect our patients from being exposed to the flu, which can make recovery very difficult.
DAY OF SURGERY

Activity

You want to start moving as soon as possible. If your doctor orders physical therapy to start after surgery your physical therapist will evaluate your ability to sit, stand, and walk.

Diet

You will start with a clear liquid diet. This includes chicken or vegetable broth, a popsicle, clear soda, and perhaps some jello. It is not uncommon to be a little nauseated after anesthesia or with pain medication. Let your nurse know; we have medication to treat this.

If you do not have any nausea then your diet may be advanced to your regular diet.

Pain Management

You will have pain medication available, either through your IV or by mouth. This depends on how much pain you have, your procedure, and if you are nauseated. Work with your nurse to identify what works best for your pain. Concentrate on taking deep slow breathes.

Based on your doctor’s orders, equipment may include:

- An IV to give you fluids and medication.
- A drain that removes extra fluid from around your surgical site.
- A catheter that drains urine from your bladder. This will be removed on either the first or second day after surgery.
- Oxygen that is delivered through your nose to help you recover from the anesthesia.
- Leg wraps around your calves that inflate and deflate automatically to help prevent blood clots. You should wear these at all times when you are in bed.
- Elastic Support Stockings that help prevent blood clots.
- An Incentive Spirometer to use hourly that exercises your lungs and prevents fluid from building up (see page 21).
- Ice packs or an ice machine to decrease swelling to the surgical site. This should be used according to your doctor’s orders.
- If you had knee surgery, Continuous Passive Motion (CPM) therapy may be started after surgery depending on your doctor’s orders. The goal of CPM therapy is to assist in controlling post-operative pain, reduce inflammation, and promote range of motion. The CPM settings will be adjusted to your doctor’s orders.
- A Patient Controlled Analgesia Pump for pain medication (see page 21).
POST-OP DAY 1, 2, AND 3

All patients are different and your recovery will depend on your general health and motivation. The amount of time you spend in the hospital will be based on your doctor’s orders and how you are progressing. Most patients go home on post-op day 1 or 2, but some do stay until the 3rd day.

Activity

You will continue to focus on walking as much as you can and making sure you understand all instructions about caring for yourself at home.

If your doctor orders physical therapy, they may come to see you twice a day.

If you have a drain or a catheter, these will be removed before you go home.

Discharge

You will meet with the Discharge Planner to talk about your home situation and help you plan for discharge. This day is a good day to have a friend or family member who will be helping you at home available to discuss these instructions with your healthcare team.

Diet

You will have a regular diet. If you have any nausea let the nurse know.

A side effect of pain medication is constipation so be sure to drink plenty of water. You will be given stool softeners to prevent the constipation.

Pain Management

Continue to work with your nurse to identify what works best for your pain, and develop a pain management plan you can continue at home.

Concentrate on taking deep slow breathes.

Equipment May Include:

- An IV to give you fluids and medication. If you are eating and drinking well your IV may be capped off. The IV will still stay in place in case you need any other medications through your IV.
- A drain that removes excess fluid around your surgical site.
- Leg wraps around your calves that help prevent blood clots. You should wear these at all times when you are in bed. The goal is to wear them for 18 hours a day.
- Elastic support stockings that help prevent blood clots.
- An Incentive Spirometer to use hourly.
- Ice packs or an ice machine to decrease swelling to the surgical site.
- CPM therapy may continue depending on your doctor’s orders. The CPM flexion settings are generally increased 15 degrees per day or otherwise based on your doctor’s orders.
DISCHARGE PLAN- BEFORE YOU LEAVE THE HOSPITAL!

Our goal is for each patient to safely transition from the hospital back home, however we recognize that this phase of the recovery period is dependent on your individual needs and progress. Occasionally, it is in the best interest of the patient to be transferred to an acute rehabilitation center or extended care facility if certain criteria are met. Your discharge plan will be individualized to your needs with the help of your discharge planning nurse and doctor. Be sure to discuss your discharge needs with your family and doctor before surgery.

The following are important parts of the discharge plan. Read through the information below and make sure all questions you have about your home care are answered.

✓ Managing your pain at home:
  o Remember the tips you learned in the hospital will also be useful at home.
  o Use pain medication as directed. If the pain is not relieved or if it gets worse please call your doctor.
  o Remember that oral pain medications typically take 30-45 minutes to take effect. Time your medications before activities, such as dressing or exercise.
  o Pain medications are best tolerated when taken with food. They can cause nausea when taken on an empty stomach.
  o Do not take Tylenol and your prescribed pain medications together at home.

✓ Preventing constipation:
  o Stool softeners are medications generally prescribed to help prevent and treat constipation that may be caused by anesthesia or pain medication.
  o Take a stool softener such as Colace 1-2 times daily as prescribed.
  o Drink at least 8 glasses (8oz each) of water daily.
  o Increase your fiber intake
  o Walking/Exercise increases bowel activity and helps prevent constipation. Stay active!

✓ Preventing Blood Clots:
  o Anticoagulants are medications that may be prescribed to thin your blood and reduce the risk of or treat blood clots.
  o Continue taking your anticoagulant medication (Aspirin, Lovenox, Coumadin, Xarelto) as prescribed.
  o Increase your walking distance daily.

✓ Nutrition after surgery:
  o Calorie and protein needs are greater after surgery. Aim for three healthy meals per day with snacks as tolerated.
  o Iron supplements may be prescribed to restore levels back to normal following blood loss during surgery. Iron is needed to help carry oxygen throughout your body.
✓ Medications to continue after surgery:
  o Your discharge nurse will review your routine and new medications with you prior to discharge.
    Please continue taking all your routine medications as outlined by your doctor in your discharge paperwork. Your doctor will indicate which medications to stop taking.

✓ Care of your incision:
  o Keep your incision clean and dry at all times
  o Do not apply creams, lotions, or powders to your incision
  o Change your bandage as instructed by your doctor

✓ Durable Medical Equipment (DME):
  o Depending on your needs your discharge planner will coordinate the delivery of any DME such as a walker, commode, toilet seat riser, or other items to your home or the hospital.
  o Insurance authorizations will determine whether the equipment will be covered and your discharge planner will discuss options with you.

✓ Questions you should consider asking the nurse or doctor:
  o Will I need help at home?
  o Will I need physical therapy when I go home?
  o Should I practice post-operative exercises before surgery?
  o After leaving the hospital, when do I see my surgeon again?
  o When can I drive?
  o When can I return to work?
  o Are there any activities that I should avoid initially?
  o What special instructions should I follow when taking anticoagulants?
  o What should I do if I miss a dose of my anticoagulant?
  o How long should I wear elastic stockings?

✓ Planning for care after your surgery:
  o Make arrangements for a family member or friend to stay with you for up to 2 weeks after surgery or until you are safe with your daily routines.
  o Arrange for a family member or friend to transport you to and from all doctor’s and physical therapy appointments.

✓ Call your doctor if you experience:
  o Fever over 101 degrees
  o Increased redness, heat, drainage or swelling to the incision site
  o Pain uncontrolled by pain medications
  o Increased swelling, pain or tenderness to your thigh, calf ankle, or foot
  o Abnormal bleeding of any kind, such as nosebleeds, bleeding around the gums, blood in urine, or at your incision site
PATIENT CONTROL ANALGESIA (PCA)

The doctor may order a PCA pump to help you control your pain immediately after the surgery. A PCA pump allows you to give yourself small doses of pain medication when you need it. The medication will be in a special pump with tubing connected to your IV.

You will be given a small handheld button to push when you have pain. The amount and frequency of medication is based on the doctor’s order. This is a built in safety aspect that prevents you from receiving too much medication.

If the green light on the handheld button is on, you have an available dose of medication. To receive the medication, press the button. If it is not green it is not time for another dose. It is very important for your safety that only you push the button. We ask that friends and family do not press the button for you.

INCENTIVE SPIROMETER

The Incentive Spirometer (IS) is used after surgery to help keep your lungs clear and free of fluid while you are recovering, as well as reduce the risk of respiratory infection. Try to use the IS 10 times an hour while you are awake.

1. Sit up in bed as much as you can.
2. Hold the IS upright in your hands by the flat base.
3. Place the mouthpiece in your mouth.
4. Breathe in slowly and deeply. Your first thoughts may be to blow through the mouthpiece but the goal is to fill your lungs with as much air as you can.
5. Hold the air in your lungs for at least 3 seconds.

The goal is to raise and keep all three balls elevated for 3-5 seconds. After using the IS, turn your head to one side if you can and cough to help clear your lungs.
RECOVERING AT HOME

WOUND CARE

Your doctor may want you to change your dressing daily. The nurse will show you how to do this at home. You may need someone to help you with this. Always make sure you and your helper wash your hands with antibacterial soap before you change your dressing. Avoid touching your incision as much as possible.

SHOWERING

For the first two weeks after surgery you need to keep your bandage dry. Some people have found that covering the bandage with clear plastic wrap (Saran wrap) and waterproof tape has made showering easier. Another option is a sponge bath.

Do not take a tub bath until approved by your physician.

Use a bath seat with adjustable leg height in the tub or shower stall, if needed.

A hand-held shower head and a long-handled bath sponge will enable you to wash your feet without bending.

PHYSICAL ACTIVITY

Your activity will be limited in your initial recovery period. This does not mean that you should be inactive, but understand you will not be at the same level of activity that you were at before surgery. Your goal is to allow your body to rest and recover, but ultimately get back to an active lifestyle.

Home exercise equipment such as a treadmill is not recommended after your surgery because it increases your risk of falling. Walk outside wearing stable walking shoes that have some cushion in the sole and have arch support. Try and find a flat even surface for walking and take a friend with you. Another option is walking indoors at a shopping mall during less busy or crowded times.

ICE

Apply ice to your knee or hip 4 times a day to help reduce swelling and ease minor pain. Be sure to have a barrier between the ice and your skin to protect your skin. Also, be sure to keep your bandage dry while you have the ice on.
PROTECTING YOURSELF FROM SURGICAL SITE INFECTIONS

Your safety is our top priority and we want to give you information on what you can do to prevent an infection at your surgical wound. Infection is a risk with most surgeries, but there are things you can do to prevent them.

SYMPTOMS OF INFECTION

- Reddened swollen area around your incision
- Drainage of cloudy thick fluid from your incision
- Fever over 100.5°F
- Swelling

WHAT YOU CAN DO

- **Before the Hospital Stay**
  - Follow the instructions on showering with the special soap before surgery (page 7).
  - Wash your sheets or bed linens before your surgery.

- **During the Hospital Stay**
  - Wash your hands frequently.
  - Remind your care givers to wash or sanitize their hands before coming into direct contact with you. Sometimes we get busy and forget this important step! We appreciate a reminder if we do.
  - Avoid touching your surgical site or drains.
  - Your nurse will instruct you how to change your dressing and care for your incisions. Make sure you understand these instructions before you leave. Consider having someone with you to hear the instructions.
  - Make sure you know whom to contact if you have questions about your incisions when you are at home.

- **After the Hospital Stay**
  - Always wash your hands before changing your dressing or touching the area near your incision.
  - Use a clean wash cloth and clean towel. Do not share towels or wash cloths with others as germs can transfer from one person to another.
  - **DO NOT soak in hot tub, go swimming,** or wear clothing that can bind or irritate your incision until your doctor states it is safe to do so.
  - Keep pets or animals away from your incision and sleeping area.
  - Call your surgeon if you have signs or symptoms of infection.
PROTECTING YOUR SELF FROM A BLOOD CLOT

Recent surgery and less activity can put you at risk for having a blood clot. When blood clots occur they block the flow of blood in your body. Blood clots in the legs and arms are often called deep vein thrombosis. The clots can break free and travel to your lungs and cause a life-threatening condition called a pulmonary embolism. This risk does not end when you leave the hospital. Fortunately, there are things you can do to reduce your risk of having a blood clot.

✓ When you leave the hospital your doctor will prescribe a blood thinner. It is very important that you take this medication exactly as it is prescribed for as long as instructed. Each blood thinning medication is different and it is important for you to understand how to take it. Make sure you ask questions about the medication if you do not understand. If you find that you taking the medication is too difficult talk to your doctor before stopping. There may be other medications that can be prescribed.

✓ Stay active when you get home. Get up walk around or stretch during long periods of rest. Rotate your feet in circles or pump them up and down when you are sitting or laying down for a long time.

✓ Be aware of signs and symptoms of a clot. The symptoms will vary depending on where the clot is. A blood clot in the leg or arm could cause swelling, redness, or pain. A blood clot in your lungs could cause lightheadedness, difficulty breathing, and chest pain.

✓ Be sure to seek immediate care or call 911 if:
  - Your arm or leg feels warm, tender to touch, or painful.
  - Your arm or leg becomes red, or swollen.
  - You have sudden abdominal pain, vomiting and diarrhea.
  - You have a severe headache.
  - You feel lightheaded, short of breath, and chest pain.
  - You cough up blood.

EMOTIONS

It is not uncommon after surgery to be tired or feel run down. Take one day at a time. Some days are better than others, and it is not unusual to feel down or depressed at some point. Continue to care for yourself, find activities that you enjoy, and focus on recovering from your surgery. These feelings should get better. If you find that you continue to feel depressed, or that you are not improving from day to day, talk to your physician. You are not the only one to feel like this and they can help you develop a plan to continue your recovery.
# Pain Management at Home

You will be sent home with oral pain medication, but even with the medication there can still be some pain. Continue to use your pain medication as prescribed, but also continue the alternative management techniques you have been doing in the hospital.

## Common Medications and Their Side Effects

Remember that your doctor has prescribed your medication because he or she thinks the benefit to you is greater than the risk of side effects. Many people using these medications do not experience side effects. Please read about these medications before taking them at home.

<table>
<thead>
<tr>
<th>Medication</th>
<th>Purpose</th>
<th>Common Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fentanyl, Morphine, Dilaudid, Percoct, Norco, Nueynta</td>
<td>These medications are used to treat moderate to severe pain.</td>
<td>Nausea and vomiting, Itching, Headache, Dizziness, Sleepiness</td>
</tr>
<tr>
<td>Celebrex</td>
<td>This medication is used to treat inflammation caused by arthritis.</td>
<td>Cough, Fever, Skin rash, Sore throat, Facial swelling</td>
</tr>
<tr>
<td>Aspirin, Xarelto, Lovonox, Coumadin</td>
<td>These medications work to prevent blood clots. Your doctor will prescribe an anticoagulant based on your individual needs.</td>
<td>Bruising, Bleeding: Gums, Nosebleeds, incision site, stool, or urine</td>
</tr>
<tr>
<td>Benadryl</td>
<td>This medication is used to treat itching that can accompany anesthesia or narcotics.</td>
<td>Drowsiness, Dizziness, Headache, Irritability, Dry mouth</td>
</tr>
<tr>
<td>Iron Supplement</td>
<td>This medication is used to restore Iron levels back to normal following blood loss during surgery. Iron is needed to help carry oxygen through out your body. <strong>Do not take with milk, tea, or coffee</strong> <strong>Best absorbed when taken with foods high in vitamin C (Orange, grapefruit, tomato, or cranberry juice).</strong></td>
<td>Constipation, Dark colored stools</td>
</tr>
<tr>
<td>Colace, Milk of Magnesia</td>
<td>These medications are used to help prevent and treat constipation that may be caused by anesthesia or pain medication.</td>
<td>Stomach pain, Diarrhea, Cramping</td>
</tr>
<tr>
<td>Zofran, Vistaril, Compazine</td>
<td>These medications are used to treat nausea and vomiting that can be caused by anesthesia or pain medications.</td>
<td>Dry mouth, Dizziness, Headache, Constipation</td>
</tr>
</tbody>
</table>
PACKING CHECKLIST

What to Bring With You to the Hospital

- Your insurance card.
- Your identification card (driver's license, passport, stat issued ID card, etc.).
- A copy of your Advanced Directive or Living Will if applicable.
- Medications in original bottles. (We need these to verify the prescription on the label for your safety. We use our medications in the hospital, and will ask your friend or family to bring these home after we verify them.)
- Loose fitting athletic clothing to go home in. (Hospital gowns are provided during hospitalization.)
- Comfortable non-slip shoes to go home in.
- Walker or cane if you are currently using one.
- Your glasses and hearing aids. (If you wear contacts, please take them out and leave them at home. We prefer you wear your glasses, as this is safer during your hospital stay.)
- CPAP Machine (If you have a condition called sleep apnea, and use a special machine please bring it with you. Our Biomedical Engineers will have to do a quick safety check).
- This Education Booklet.
- Personal items such as
  - Phone Charger
  - Reading Material
  - Electronic Devices
  - Personal Music Player

What Not to Bring with You

- Large amounts of money.
- Jewelry.
- Other personal valuables.
APPENDIX D: TEACH BACK TOOL FOR TOTAL JOINT DISCHARGE EDUCATION
Teach Back Tool for Total Joint Discharge Education

Preventing Surgical Site Infection and Caring for Your Incision:

Signs and symptoms of infection:
- Reddened swollen area around your incision
- Drainage of cloudy thick fluid from your incision
- Fever over 100.5° F
- Swelling at the incision

What you can do to prevent infection:
- Avoid touching your surgical site.
- Always wash your hands before changing your dressing or touching the area near your incision.
- Bathing
  - For the first two weeks after surgery you need to keep your bandage dry. Some people have found that covering the bandage with clear plastic wrap (Saran wrap) and waterproof tape has made showering easier. Another option is a sponge bath.
  - Do not take a tub bath until approved by your physician.
  - Use a bath seat with adjustable leg height in the tub or shower stall, if needed.
  - A hand-held shower head and a long hand-held bath sponge will enable you to wash your feet without bending
  - Use a clean wash cloth and clean towel. Do not share towels or wash cloths with others as germs can transfer from one person to another.
- DO NOT soak in hot tub, go swimming, or wear clothing that can bind or irritate your incision until your doctor states it is safe to do so.
- Keep pets or animals away from your incision and sleeping area.
- Call your surgeon if you have signs or symptoms of infection.

Care of your incision:
- Keep your incision clean and dry at all times
- Do not apply creams, lotions, or powders to your incision
- Change your bandage as instructed by your doctor

Teach Back Opportunity:

The patient should be able to teach back how to prevent surgical site infection and how they are instructed to change their dressing.
Preventing Blood Clots

Risk for Blood Clot:
- Recent surgery and less activity can put you at risk for having a blood clot. When blood clots occur they block the flow of blood in your body. This risk does not end when you leave the hospital. Fortunately, there are things you can do to reduce your risk of having a blood clot.

Ways to prevent blood clot:
- When you leave the hospital your doctor will prescribe a blood thinner. *It is very important that you take this medication exactly as it is prescribed for as long as instructed.* Each blood thinning medication is different and it is important for you to understand how to take it. Make sure you ask questions about the medication if you do not understand.
- Stay active when you get home. Get up walk around or stretch during long periods of rest. Rotate your feet in circles or pump them up and down when you are sitting or laying down for a long time.

Signs and Symptoms of blood clot:
- Be aware of signs and symptoms of a clot. The symptoms will vary depending on where the clot is.
- A blood clot in the leg or arm could cause swelling, redness, or pain. A blood clot in your lungs could cause lightheadedness, difficulty breathing, and chest pain.

Teach Back Opportunity:
The patient should be able to teach back signs and symptoms of a blood clot, what medication they are taking to prevent a blood clot, and ways to prevent a blood clot.

Medication Management

Managing pain at home:
- Use pain medication as directed. If the pain is not relieved or if it gets worse please call your doctor.
- Remember that oral pain medications typically take 30-45 minutes to take effect. Time your medications before activities, such as dressing or exercise.
- Pain medications are best tolerated when taken with food. They can cause nausea when taken on an empty stomach.
- Do not take Tylenol and your prescribed pain medications together at home.
Preventing constipation:
- Drink at least 8 glasses (8oz each) of water daily and increase your fiber intake.
- Walking increases bowel activity and helps prevent constipation. Stay active!

Medications to continue after surgery:
- Your discharge nurse will review your routine and new medications with you prior to discharge. Please continue taking all your routine medications as outlined by your doctor in your discharge paperwork. Your doctor will indicate which medications to stop taking.

**Teach Back Opportunity:**
The patient should be able to teach back why they are taking new medication, how to administer new medication, and potential interactions with current medication.

*tabs*
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