TRANSFORMING THE PAIN EXPERIENCE OF SURGICAL PATIENTS
THROUGH SHARED DECISION-MAKING

By

KATHRYN E. BADER, RN, BSN

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The members of the Committee appointed to examine the thesis of KATHRYN ELIZABETH BADER find it satisfactory and recommend that it be accepted.

_______________________________
Janet Ruth Katz, Chair

_______________________________
Lorna L. Schumann

_______________________________
Christina Riebe
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My thanks to Dr. Angela Starkweather and Dr. Janet Katz for their ongoing support and mentoring through this long process. Thank you to Kim Resleff, ARNP and Rhonna Lee, ARNP for being shining examples of true mentors. I also want to thank my committee members for their time and commitment to assisting me in this endeavor, reviewing my manuscript, offering guidance, and for participating on my committee.

Finally, my thanks and gratitude to my fellow graduate students and network of friends. Their friendship and support undeniably saw me through this long journey. Finally, many thanks to Stephanie Kilroy, ARNP for her many hours of assistance with patient chart audits. Thank you to all of you.
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ABSTRACT

by Kathryn E. Bader, RN, BSN

Washington State University

May 2009

Chair: Janet Katz, PhD, RN

When nurses become aware that a patient is in pain, their response is influenced by a variety of factors, including their knowledge and skills related to pain assessment and management, and attitudes and misconceptions about patients with pain. Previous research indicates insufficient knowledge of the pain process, pharmacology, and the pain experience as key factors in unrelieved pain. A relatively new concept in pain management involves shared decision making between the patient and their health care provider to improve pain outcomes while enhancing patient autonomy. Although there is a large amount of research on patients’ perspectives regarding pain management, their
perceived satisfaction with pain management and care, and their attitudes
concerning the pain experience, little has been done to study how patients can
participate in the management of their pain. This study furthered nursing
research on pain management by identifying if an educational intervention will
improve patients’ perception of pain management. This study asked: Will an
educational intervention aimed at post-surgical patients improve their
understanding about their role in pain management, resulting in an increase in
patient satisfaction and an overall improved patient pain experience?
# TABLE OF CONTENTS

ACKNOWLEDGMENTS ........................................................................................................ iii  
ABSTRACT ........................................................................................................................ iv  
TABLE OF CONTENTS .......................................................................................................... vi  
LIST OF FIGURES ................................................................................................................ x  
LIST OF TABLES ................................................................................................................... x  
DEDICATION ....................................................................................................................... xi

CHAPTER ONE – INTRODUCTION AND BACKGROUND .................................................... 1  
  Introduction .................................................................................................................... 1  
  Statement of the Problem ............................................................................................. 1  
  Statement of the Purpose ............................................................................................... 2  
  Conceptual Framework ................................................................................................. 3  
  Literature Review .......................................................................................................... 5  
    Concept of the Pain Experience .................................................................................. 5  
    Concept of Patient Satisfaction .................................................................................. 6  
    Concept of Patient Autonomy ..................................................................................... 8  
    Concept of Shared Decision-Making .......................................................................... 9  
  Nurse’s Role in Pain Management ................................................................................. 10  
  Patients’ Role in Pain Management ............................................................................. 13  
  Transition from Literature Review to Hypothesis ....................................................... 15  
  Significance to Nursing ............................................................................................... 16

CHAPTER 2 – METHODS OF STUDY ............................................................................. 17  
  Design ............................................................................................................................ 17  
  Setting ............................................................................................................................ 17  
  Population and Sample ............................................................................................... 17  
  Variables ....................................................................................................................... 19  
    Independent Variable: Educational Intervention ..................................................... 20
LIST OF FIGURES

Figure 1: Symptom Management Model................................................................. 4

Figure 2: Types of Surgery..................................................................................... 31

Figure 3: Patient Control of Pain Management..................................................... 34

Figure 4: Patient Satisfaction with Pain Management ............................................. 34
LIST OF TABLES

Table 1: Literature Review of Concepts ................................................................. 14
Table 2: Reason for Withdrawal ........................................................................... 18
Table 3: Quick Reference of Variables ................................................................. 19
Table 4: Demographic Comparison ................................................................. 29
Table 5: Pearson's Correlation of Demographics ............................................. 30
Table 6: Other Demographics ........................................................................ 31
Table 7: Patient Beliefs about Pain ................................................................. 32
Table 8: Pain Questionnaire Comparison – Control & Satisfaction ............... 33
Table 9: Level of Pain ...................................................................................... 35
Table 10: Pearson's Correlations ..................................................................... 36
Table 11: Pain Questionnaire Comparison - Pain ........................................... 37
Table 12: Timeliness and Caring ..................................................................... 38
DEDICATION

This thesis is dedicated to my husband and daughter
who provided unequivocal emotional support. Thank you to my loving husband
for his support and encouragement as I reach for the sky.
It is easier to find men who will volunteer to die, than to find those who
are willing to endure pain with patience - Julius Caesar

Introduction

For patients entering the hospital setting, pain management is both a right and an expectation. For nurses, it is a fundamental aspect of patient care. Yet, pain, the fifth vital sign, remains one of the greatest concerns for surgical patients. When nurses become aware that a patient is in pain, their response is influenced by a variety of factors, including their knowledge and skills related to pain assessment and management, and attitudes and misconceptions about patients with pain. These factors affect the care the patient receives and may result in dissatisfaction with nursing care and inability to cope with post-surgical pain. Previous research indicates insufficient knowledge of the pain process, pharmacology, and the pain experience as key factors in unrelieved pain (MacLellan, 2004; Cowen, While, & Griffiths, 2004). These issues, as they pertain to surgical patients, have been studied extensively in the last few years.

Statement of the Problem

More than 73 million surgeries are performed annually in the United States and up to 75% of patients experience pain after surgery (Apfelbaum, Chen, Mehta, & Gan, 2003). It is
estimated that as many as 50% of surgical patients experience inadequate pain management (Horbury, Henderson, & Bromley, 2006). Although some pain is an expected part of surgery and the postoperative experience, inadequate pain management is common and can have negative outcomes on patient care (Apfelbaum et al, 2003). Unrelieved postoperative pain may have physical as well as psychological implications (Apfelbaum et al, 2003; Ead, 2005). Some of the negative impacts of pain include elevated blood pressure which can lead to heart attacks or stroke, feelings of weakness or fatigue, drowsiness or difficulty sleeping, and increased release of hormones that cause stress on the lungs and heart (Apfelbaum et al, 2003; Ead, 2005).

Other negative outcomes include delayed recovery time with an increased risk for complications, such as thrombosis, atelectasis, and pneumonia (Apfelbaum et al, 2003; Ead, 2005). Psychologically, prolonged pain can cause a decrease in appetite leading to poor nutritional status, and can have a negative impact on the patient’s view of health care as a whole (Ead, 2005).

Statement of the Purpose

Since the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) issued standards for pain assessment and treatment beginning in the year 2001, pain management has become a major nursing research focus. Education of current nursing students and registered nurses in the workforce has increased, but more research is needed to determine the best way to include patients in the assessment and management of their pain. A relatively new concept in pain management involves shared decision making between the patient and their health care
provider to improve pain outcomes while enhancing patient autonomy (Entwistle & Watt, 2006). Many researchers believe that “patient involvement in decision-making is valued both in its own right and because it is thought to be instrumental in the achievement of good health care outcomes” (Entwistle & Watt, 2006, p. 272). Although there is a large amount of research on patients’ perspectives regarding pain management, their perceived satisfaction with pain management and care, and their attitudes concerning the pain experience, little has been done to study how patients can participate in the management of their pain (Manias, Botti, & Bucknell, 2006). This study will further nursing research on pain management by identifying if an educational intervention will improve patients’ perception of pain management. This study asks: Will an educational intervention aimed at post-surgical patients improve their understanding about their role in pain management, resulting in an increase in patient satisfaction and an overall improved patient pain experience?

Conceptual Framework

The conceptual framework used in this study was the Symptom Management Model (SMM). The University of California, San Francisco (UCSF) School of Nursing developed a generic, conceptual model for symptom management that contained three components relevant to pain management and the pain experience: the symptom experience, symptom management strategies, and outcomes or symptom status (Caldwell & Miaskowski, 2000; Dodd et al, 2001). Symptoms motivate patients to seek care, they cause distress, and they disrupt quality of life. The study of symptoms is based on the perception of the person experiencing
the symptom and their self-report. This is especially true in a patient’s report of pain, making perceived acute surgical pain a prime example of a symptom that can be studied and managed (Caldwell & Miaskowski, 2000; Dodd et al, 2001).

The symptom experience component involves the perception, evaluation, and response to a symptom. The symptom management strategies construct examines interventions used to manage the symptom experience. The outcomes component evaluates symptom status including quality of life, emotional status, morbidity, and mortality. Other variables within the SMM include the domains of person, environment, and health state (Jablonski & Wyatt, 2005). These domains surround, influence, and modify the three components of symptom experience, management strategies, and outcomes (Figure 1).

![Figure 1: Symptom Management Model](image)
A patient does not need to actually experience a symptom to apply the SMM, only be at risk for a symptom. In this way, interventions can be initiated before the symptom occurs. According to Larson et al (1994), “the symptom experience is dynamic, involving the patient’s perception of a symptom, evaluation of the meaning of a symptom, and response to a symptom (Larson et al, 1994, p. 273). Understanding the various components of the symptom experience is essential for effective symptom management. The goal in symptom management is to avert or delay a negative outcome through medical, professional, and self-care strategies. This conceptual model is particularly useful in studying pain management in the acute care setting in that it allows pain to be interpreted as a symptom that is preventable and treatable.

**Literature Review**

The review of the literature covered current research about the nurse’s and patient’s roles in pain management. It also included a review of the concepts of the pain experience, patient satisfaction, patient autonomy, and shared decision-making. The literature review aided in defining the various concepts that are addressed in this study and opened the door for future research. The literature review revealed a major gap in understanding the patient’s role in managing their post-operative pain and including them in the decision-making process regarding their care.

*Concept of the Pain Experience.* Pain has been described as a multifaceted and highly subjective experience that is unique to each person. McCafferey defined pain as “whatever the experiencing person says it is, existing whenever the experiencing person says it does”
Huether describes pain as “an unpleasant phenomenon that is uniquely experienced by each individual; it cannot be adequately defined, identified, or measured by an observer” (Huether, 2004, p. 329). These two definitions summarily describe pain as uniquely experienced by each individual, whatever the experiencing person says it is, and cannot be adequately defined, identified, or measured by an observer. This concept of pain is a crucial component in describing the pain experience.

As explained, pain is a complex and subjective phenomenon involving sensory, emotional, cognitive, and behavioral components that influence the ways in which patients perceive and express pain (Huether, 2004; Renn & Dorsey, 2005). Patients who experience similar conditions may experience quite different levels of pain and distress. The patient must feel that their pain experience is unique to them, and to be believed as they report it in order to lay a foundation for patient autonomy to begin to grow (Entwistle & Watt, 2006). Many patients have misconceptions regarding pain, pain management, and addiction (MacLellan, 2004; Cowen, While, & Griffiths, 2004). To improve pain outcomes and increase patient autonomy, patients need education involving their role in the decision-making process regarding pain management.

*Concept of Patient Satisfaction.* Patient satisfaction is an important aspect of health care that influences patient behavior and treatment outcomes (Gordon, 2007). Relief from postoperative pain and patient satisfaction are often used as indicators of the effectiveness of pain management. Gordon defines patient satisfaction with pain management as a “measure
of how patient expectations correlate with overall perceptions of pain management,” (Gordon, 2007, p. 1). The American Pain Society (APS) Commission on Quality Assurance Standards has stated that patient satisfaction with clinical services received is part of the quality assurance of care delivery. Patient satisfaction is included as an outcome variable in the revised APS Patient Outcomes Questionnaire (APS, 1995). Research using this questionnaire showed that satisfied patients were more likely to comply with treatment and establish better relationships with their providers. Dissatisfied patients tended to comply poorly with their prescribed therapeutic regimens (Aharony & Strasser, 1993; Carr-Hill, 1992).

Patient satisfaction measures differ widely in their context and their method due to the lack of clarity concerning the meaning of satisfaction and its relationship to other measures. Carlson, Youngblood, Dalton, Blau, and Lindley (2003) found that there was a weak correlation between pain intensity and patient satisfaction. The study results showed that satisfaction was influenced by effectiveness of medication, independent of pain intensity, and by communication. Another factor is whether respondents could separate satisfaction with pain management from satisfaction with other aspects of care, such as the caring dispositions of health care providers (Hester, Miller, Foster, & Vojir, 1997; Hudak & Wright, 2000). Gordon (2007) found that satisfaction with pain management was dependent on patient expectations, education, level of pain intensity, and quality of interactions with nurses and the environment (Gordon, 2007; Carlson et al, 2003).
A survey carried out by Larson et al (2005), revealed that there was an upward trend in patient satisfaction with pain management since the initiation of JCAHO standards for pain management in 2001. Larson et al found that even if patients continue to experience uncomfortable levels of pain, they may still express satisfaction with their nurses’ pain control efforts. “Actions on the part of staff to control pain, including speed of response to request for pain medications, the use of infusion pumps, and permission for self-administered pain relievers,” (Larson et al, 2005, p. 508) lead to increased patient satisfaction ratings. On the other hand, other researchers have not found any differences in patient satisfaction with pain management before and after interventions. In addition, Comley and DeMeyer (2001) conducted a study that examined pain relief and patient satisfaction with pain management before and after implementation of new policy guidelines. Half of the patients reported moderate to severe pain before and after the implementation. However, greater than 90% of patients reported being satisfied with their pain management (Comley & DeMeyer, 2001).

**Concept of Patient Autonomy.** Atkins (2006) defined the concept of autonomy as the “right to determine for oneself one’s interests, goals and values, and one’s own conception of a good life free from unwarranted interference” (Atkins, 2006, p. 206). Humphreys (2005) summarized that the freedom to choose treatment is not absolute. Thus, autonomy involved a substantial degree of freedom based on the capacity of the individual to make decisions (Humphreys, 2005). In summary, autonomy depends fundamentally on the capacity of the patient to take action. It is the capacity to think and decide independently, to act on the basis
of that decision, and the ability to communicate in some way with other people (Suohon et al., 2003). Therefore, an autonomous person is one who acts in accordance with a freely self-chosen and informed plan (Suohon et al., 2003). However, for patients in acute pain, the main goal was relief of pain, rather than autonomy, and the patient expected the nurse to take the pain away (Humphreys, 2005). As the patient has less pain, they were more willing to participate in choices to remove the pain (Humphreys, 2005).

Once the patient showed readiness to make decisions, steps leading to patient autonomy included acknowledgment of their expressions of pain, setting goals for pain management, understanding why pain needed to be controlled, and their role in pain management (Suohon et al., 2003). In addition, the strategies a patient uses to cope with pain are very important in the nurse-patient relationship. If the patient does not understand how they cope with pain, then it may be more difficult for the patient to utilize their coping strategies or learn better methods to relieve the pain (Bucknall, Manias, & Botti, 2001).

**Concept of Shared Decision-Making.** Shared decision-making (SDM) is the “process of fostering shared responsibility for medical care” and represents a potential area for continued collaboration between patients and their health care providers (Frantsve & Kerns, 2007). SDM is an interactive and dynamic process of treatment planning. It is a collaboration that integrates patient preferences and joint decision-making. Through extensive literature review on this concept, Eguadagnoli and Ward (1998) concluded that patients wanted to be informed
of treatment options, be included in treatment decisions, and that the benefits of involving the patient in the decision making process had not been clearly demonstrated at that time.

Additionally, while examining the current pain management practices, Bucknall, Manias, and Botti (2001) found that patients who had been educated about specific details of their medical treatment and informed about possible outcomes were usually more satisfied about their care than those who were less informed. They found that “patients need to be involved in and in control of their pain management. They need to be able to choose treatments that are effective for them as individuals, and to feel that these choices are encouraged by those caring for them” (Bucknall, Manias, & Botti, 2001, pg. 268). Nurses played a key role in assisting patients to make informed decisions about their care by providing them with the knowledge they required (Bucknall, Manias, & Botti, 2001).

Nurse’s Role in Pain Management. Since nurses play a key role in the management of pain, it is important for them to be knowledgeable about pain. Unfortunately, many studies found that pain management was not sufficiently covered in nursing curricula, and misconceptions and attitudes continued to interfere with the patient’s pain relief. A survey of nurses in 23 countries revealed that more than half of the respondents did not receive pain management education in their nursing programs (Holley, McMillan, Hagan, Palacios, & Rosenberg, 2005).

Another study assessed the content in 177 associate degree and 174 baccalaureate nursing programs in the United States and concluded that educational preparation in pain
management was limited. The majority (86%) of nurses did not believe that their basic nursing education adequately prepared them to care for patients in pain (Holley et al.). Additional research studies confirmed that lack of preparation contributed to inadequate knowledge about pain in practicing nurses (Holley et al., 2005; Rushton, Eggett, & Sutherland, 2003).

Additionally, Chiu, Trinca, Lim, and Tuazon (2003) found that although pain management was important to delivering quality patient care, nursing students did not receive adequate education on basic pain mechanisms, terms, and treatment options. On a pain knowledge questionnaire used to test the knowledge of three final year nursing schools, students scored an average of 41% correct. Chiu et al. concluded that a lack of basic knowledge of pain at the undergraduate level negatively influenced continued learning about pain when nurses began practice. Chiu et al. contended that their results should encourage educators to make pain management more prominent in curricula. Furthermore, McMillan, Tittle, Hagan, and Small (2005) utilized a pre-test/post-test design to determine if a 32-hour intensive pain management course increased the knowledge of pain resource nurses. Significant improvements were found in pain knowledge and attitudes towards patients in pain, supporting the implementation of an educational course for nurses (McMillan, Tittle, Hagan, & Small, 2005).

Plaisance and Logan (2006) also explored nursing student’s knowledge and attitudes about pain management. This descriptive study used the Nurses’ Knowledge and Attitude Survey Regarding Pain to collect data from Louisiana clinical nursing students. Results revealed
misconceptions about analgesic administration and duration, along with an exaggerated fear about the incidence of addiction among patients. Knowledge of pharmacology items was lower than that of non-pharmacology items. Even though students responded appropriately to a clinical scenario, when the situation required reassessment based on the patient’s response to the student’s chosen intervention, a majority responded incorrectly.

Lasch, Greenhill, Wilkes, Carr, Lee, and Blanchard (2002) found that individual bias and opinions about pain and addiction influenced pain management interventions unless education was initiated as a balance. They noted that both medical and nursing students were susceptible to the opinions of their instructors related to opioid use and the labeling of patients as drug seeking.

MacLellan (2004) demonstrated the importance of the role of nurses in pain management and how nurse-led interventions impacted patients’ pain experiences. The nurse-led interventions were based on the application of basic pain management principles. Nurses interpreted pain, administered and evaluated pain management, provided information to patients and worked as members of multidisciplinary teams (MacLellan, 2004; Cowen, While, & Griffiths, 2004). The study described certain skills and knowledge needed so that nurses can effectively embrace this role in pain management, and strategies were needed to ensure that nurses have these skills and knowledge and implement them in practice settings.

Further problems developed when the patient's need for analgesia did not conform to the written prescription, and nurses made comparisons with other patients with similar
circumstances. It was at this stage that the exceptional patient was often under-treated from an analgesic viewpoint. Other factors that contributed to under treatment of pain were poor knowledge of analgesics and fear of potential side effects (Rushton et al., 2003). It was also possible that this under-treatment of pain occurred because nurses considered patients to be exaggerating or imagining the extent of their pain and in so doing, the credibility of the reported pain was questioned.

*Patients’ Role in Pain Management.* Studies that had evaluated interventions to improve postoperative pain management have shown inconsistent results. The interventions mainly targeted nurses, and very few included patients. Dalton, Blau, Lindley, Carlson, Youngblood, and Greer (1999) studied the impact of introducing a pain management guideline with clinicians. Although Dalton et al reported use of the guideline by nurses, they did not provide results regarding changes in practice or patients’ pain (Bedard, Purden, Sauve-Larose, Certosini, & Schein, 2006).

Closs, Briggs, and Everett (1999) used a pre-post control group design to test several interventions to improve nurses’ pain assessment skills and reduce post-operative nighttime pain in orthopedic patients. Nurses were taught to use an assessment tool, and a patient booklet on pain management was developed and distributed. The experimental group experienced a higher number of pain assessments, and significantly lower “average” and “worst” pain scores than the control group.
<table>
<thead>
<tr>
<th>Concept</th>
<th>Literature Review</th>
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<tbody>
<tr>
<td><strong>Concept of the Pain Experience</strong></td>
<td>Cowen, While, &amp; Griffiths, 2004; Entwistle &amp; Watt, 2006; Huether, 2004;</td>
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<td></td>
<td>MacLellan, 2004; Renn &amp; Dorsey, 2005</td>
</tr>
<tr>
<td><strong>Concept of Patient Satisfaction</strong></td>
<td>Aharony &amp; Strasser, 1993; APS, 1995; Carlson, Youngblood, Dalton, Blau, &amp; Lindley,</td>
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<td></td>
<td>2003; Carr-Hill, 1992; Comley &amp; DeMeyer, 2001; Gordon, 2007; Hester, Miller, Foster,</td>
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<td>&amp; Vojir, 1997; Hudak &amp; Wright, 2000; Larson et al, 2005</td>
</tr>
<tr>
<td><strong>Concept of Patient Autonomy</strong></td>
<td>Atkins, 2006; Bucknall, Manias, &amp; Botti, 2001; Humphreys, 2005; Suhonen et al., 2003</td>
</tr>
<tr>
<td><strong>Concept of Shared Decision-Making</strong></td>
<td>Bucknall, Manias, &amp; Botti, 2001; Eguadagnoli and Ward, 1998; Frantsve &amp; Kerns, 2007</td>
</tr>
<tr>
<td><strong>Nurse’s Role in Pain Management</strong></td>
<td>Chiu, Trinca, Lim, and Tuazon, 2003; Cowen, While, &amp; Griffiths, 2004;</td>
</tr>
<tr>
<td></td>
<td>Holley, McMillan, Hagan, Palacios, &amp; Rosenberg, 2005; Lasch, Greenhill, Wilkes,</td>
</tr>
<tr>
<td></td>
<td>Carr, Lee, and Blanchard, 2002; MacLellan, 2004; McMillan, Tittle, Hagan, and Small,</td>
</tr>
<tr>
<td></td>
<td>2005; Plaisance &amp; Logan, 2006; Rushton, Eggett, &amp; Sutherland, 2003</td>
</tr>
<tr>
<td><strong>Patients’ Role in Pain Management</strong></td>
<td>Bedard, Purden, Sauve-Larose, Certosini, &amp; Schein, 2006; Closs, Briggs, and</td>
</tr>
<tr>
<td></td>
<td>Everett, 1999; Dalton, Blau, Lindley, Carlson, Youngblood, &amp; Greer, 1999; Salomaki,</td>
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<tr>
<td></td>
<td>Hokajarvi, Ranta, &amp; Alahuhta, 2000</td>
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</tbody>
</table>

Salomaki, Hokajarvi, Ranta, and Alahuhta (2000) studied 200 gynecology patients using a pre-post design with a control group. The study evaluated the effectiveness of an education and mentoring program for nurses and written material for patients to improve pain after surgery. They reported that the intervention group was more likely to receive analgesics on a
regular basis. In addition, the intervention group experienced greater pain relief and lower worst pain scores than the pre-intervention group.

Bedard et al (2006) used a quasi-experimental design to evaluate a post-operative pain management program that included educating nurses and patients. Patients received educational materials before hospital admission and surgery that discussed and addressed their beliefs related to pain management. Patients were also educated on their role in pain management, and how to participate in their care. Results showed that patients had lower pain scores and experienced fewer disturbances in sleep, walking, and general activities. The patients that received the educational materials were less likely to believe that good patients avoided talking about pain.

Transition from Literature Review to Hypothesis

The literature review revealed that the concept of pain management has been studied extensively in the last twenty years, especially the health care providers’ role. However, only a limited number of studies included the patient’s role in effective pain management. This study hopes to bridge that gap and assist in identifying areas for future research. This study asks whether an educational intervention aimed at post-surgical patients to include them in shared decision making will improve their understanding about their role in pain management, thus resulting in an increase in patient satisfaction and an overall improved patient pain experience.
Significance to Nursing

This study is significant to nursing because it furthers the research on pain management and adds to the already developing knowledge in this area. Nurses play a key role in managing pain in the post-surgical setting and are the ultimate patient advocates. For nurses, patient education remains a key element in the nurse-patient relationship. This study hopes to educate nurses on the need to include the patient in the decision-making process when managing their pain by adding to the growing body of research on this subject.
CHAPTER 2 – METHODS OF STUDY

Design

This study used a quasi-experimental design to compare the pain experiences of a control group (Group A) and an experimental group (Group B) of patients who received an educational intervention. The two groups were randomly selected to either receive an educational intervention or not from a convenience group of general and orthopedic surgical patients who met the study criteria and were one day post-surgery.

Setting

The setting was the surgical and orthopedic units of a 150-bed hospital in the Northwest United States. The orthopedic unit was included even though there were specific interventions in place for pain management on that unit. However, neither unit included pre- or post-operative teaching about pain management. The nurse educator at this hospital recently handed out an educational booklet to nurses regarding their role in pain management. Following JCAHO standards, the hospital had a general policy in place regarding pain management and reassessment of pain after interventions.

Population and Sample

The targeted population included all orthopedic and surgical patients during the months of August through December 2008. Inclusion criteria included patients who were between the ages of 21 and 70 years old, had the ability to read and understand English, were post-surgical patients on the orthopedic or surgical units, and who stayed in the hospital for a minimum of
two days after surgery. Patients who were cognitively impaired or unable to respond to the interview were excluded. The sample came from patients already scheduled for surgery. Exclusion criteria included bowel resections that required lengthy hospital stays and day surgery.

A convenience sample was utilized. The strength of this type of sample was that it would be easy to select a sample from the targeted population based on the number of surgical procedures performed in this hospital (Bucknall, Mania, & Botti, 2001). The weakness of convenience sampling was that the sample might not be a true representation of the targeted population. Recent analysis of nursing research revealed that the average sample size is under 100 subjects (Polit & Beck, 2004). This study utilized a sample size of twenty-five subjects per group for a total of fifty subjects. However, five subjects withdrew from the study for various reasons, leaving the sample size at forty-five (n=45) (Table 2). This sample size was chosen based ultimately on the small degree of variability between the groups, practical constraints such as time, subject availability, and resources.

<table>
<thead>
<tr>
<th>ID #</th>
<th>Reason for Withdrawal</th>
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<tbody>
<tr>
<td>9</td>
<td>Complications</td>
</tr>
<tr>
<td>17</td>
<td>Changed mind</td>
</tr>
<tr>
<td>22</td>
<td>Complications</td>
</tr>
<tr>
<td>39</td>
<td>Too drowsy</td>
</tr>
<tr>
<td>47</td>
<td>Complications</td>
</tr>
</tbody>
</table>
Variables

The independent variable for this study was the educational intervention given to the quasi-experimental group of patients and was referred to as Group B (experimental group). The four dependent variables measured were: 1) patient beliefs about pain, 2) patient coping skills, 3) patient control over pain management, and 4) patient satisfaction with pain management. Extraneous variables included: 1) demographic information, 2) patient level of pain, 3) patient perception of nurse’s caring and timeliness, and 4) patient expectations of pain. The variables were measured utilizing specific parts of each survey tool and will be further explained below (Table 3).

Table 3: Quick Reference of Variables

<table>
<thead>
<tr>
<th>Variable Type</th>
<th>Variable</th>
<th>Measurement Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent</td>
<td>Educational Intervention</td>
<td>One Minute Pain Questionnaire</td>
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<tr>
<td>Dependent</td>
<td>Patient Beliefs about Pain</td>
<td>Pain Outcome Questionnaire</td>
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<td></td>
<td>Patient Coping Skills</td>
<td>Pain Coping Tool</td>
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<td></td>
<td>Patient Control</td>
<td>One Minute Pain Questionnaire</td>
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<td></td>
<td>Patient Satisfaction</td>
<td>Pain Outcome Questionnaire</td>
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<td>One Minute Pain Questionnaire</td>
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<td>Pain Outcome Questionnaire</td>
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<tr>
<td>Extraneous</td>
<td>Demographics</td>
<td>Personal Characteristics</td>
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<td></td>
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<td>Chart Audit Form</td>
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<td>Patient Level of Pain</td>
<td>One Minute Pain Questionnaire</td>
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<td></td>
<td>Patient Perception of Timeliness and Caring</td>
<td>Pain Outcome Questionnaire</td>
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<td></td>
<td>Patient Expectation of Pain</td>
<td>Pain Outcome Questionnaire</td>
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</tbody>
</table>
**Independent Variable: Educational Intervention.** The One Minute Pain Questionnaire was used to assess the impact of the educational intervention on patients’ pain experiences. The change in patients’ responses for Post-op Day 1 and Post-op Day 2 were compared for significance.

**Variable #1: Patient Beliefs about Pain.** A portion of the Patient Outcome Questionnaire was used to compare and measure ten common beliefs about pain (Arathuzik, 1994). Both groups were asked if they agreed with the belief. If so, it was marked “yes.” This questionnaire was completed on the day of discharge from the hospital.

**Variable #2: Patient Coping Skills.** The Pain Coping Tool was used to measure patients’ coping skills regardless of whether or not they were in the experimental or control group. This tool measured whether or not differences between patients’ ability to cope with acute pain was a possible variable and aided to control for this possibility (Arathuzik, 1994).

**Variable #3: Patient Control.** Patient sense of control over their pain management was measured in two separate places. One question on the One Minute Pain Questionnaire asked the patient to rate how much they felt they were in control of their pain over the previous twenty-four hours. This question was asked daily until the day of discharge from the hospital. Another measurement was taken from the Pain Outcome Questionnaire that asked the patient to rate how much control they had with their pain management over the extent of their hospital stay. This questionnaire was completed on the day of discharge.
**Variable #4: Patient Satisfaction.** Patient satisfaction was measured using one question on the One Minute Pain Questionnaire for a daily sense of satisfaction. This variable was also measured using one question on the Pain Outcome Questionnaire that addressed the patient’s satisfaction over the course of their hospital stay.

**Extraneous Variable #1: Demographics.** After signing the consent forms, patients in both groups answered the Personal Characteristics form. This form obtained information regarding the patient’s age, gender, race, highest education completed, income level, and overall health status as perceived by the patient. This questionnaire was answered on the first post-operative day. The Chart Audit Form was completed by the researcher at the end of participation by the patient. Additional data was collected from this form, such as length of stay, documentation of pain by the nurse and physician, medication use, prior substance abuse, and complications associated with the surgery.

**Extraneous Variable #2: Patient Level of Pain.** The patient’s level of pain was measured at multiple points. Using the One Minute Pain Questionnaire, the patient answered questions regarding their level of pain at its worst over the previous twenty-four hours. On the day of discharge, the patient was asked about their overall level of pain on one question of the Pain Outcome Questionnaire.

**Extraneous Variable #3: Patient Perception of Nurse’s Timeliness and Caring.** The patient’s perception of the nurse’s timeliness with responding to requests for pain medication and the sense of caring were addressed with one question for each on the Pain Outcome
Questionnaire. Again, this questionnaire was filled out on the day the patient was discharged from the hospital.

*Extraneous Variable #4: Patient Expectation of Pain.* The patient was asked whether or not they expected to have pain during this hospital stay. This question was asked on the day of discharge on the Pain Outcome Questionnaire.

*Instrumentation*

*Educational Intervention.* Group B (experimental group) received an educational intervention. The intervention consisted of a five-minute video clip on their role in pain management titled, “Managing Your Surgical Pain.” This video clip was adapted from “Pain management: The 3 R’s” (Video Counseling Library). The experimental group also received an educational pamphlet titled “Pain Management: Understand Your Pain and Take Control” that further described their role and choices for pain management (Cleveland Clinic, 1995). The educational material was designed to educate the patient on the different types of pain relief available to them and on how they could participate in their pain management.

*Personal Characteristics.* The Personal Characteristics form collected demographic data. This form was adapted from existing forms from the American Medical Association found on their website and used in multiple studies by them. Adaptations were made to reduce the number of questions to those that are more pertinent to this study.

*Pain Coping Tool.* The Pain Coping Tool collected information on how the patient coped with pain, and was collected on Post-op Day 1 for all patients. This tool was developed by
Arathuzik in 1994 to be a measure of the strategies and behaviors used by patients to cope with pain (Arathuzik, 1994). It was a 30-item instrument for patient self-report of their perceptions of the strategies and behaviors they used to cope with pain. Each item was rated on a four-point Likert scale ranging from not at all to very much. A content validity index of 0.94 was obtained from content analysis. Reliability was determined to be 0.73 from testing on metastatic breast cancer patients (Arathuzik, 1994). Cronbach’s coefficient alpha for internal consistency was 0.71 (Arathuzik, 1994).

**One-Minute Pain Questionnaire.** The One-Minute Pain Questionnaire allowed for quick collection of the pain experience in the previous 24-hour period. Stevenson, Dahl, Berry, Beck, and Griffie developed this tool in 2002 to be useful in quality improvement measures and was tested for validity and reliability in 2006 on the initiation of pain management policies in small health care organizations (Stevenson, Dahl, Berry, Beck, & Griffie, 2006). The survey was adapted from other commonly used measures, and content validity was established through an expert panel of pain specialists (Stevenson, Dahl, Berry, Beck, & Griffie, 2006). If patients indicated they had pain in the last 24 hours, they were asked to rate intensity, level of distress, relief from analgesics, and sense of control and satisfaction with pain management.

This tool measured the variables of individual pain experience, patient control over pain management, and patient satisfaction with pain management. Even though it was given to the patients each day they were in the hospital, only the first two questionnaires were used for accuracy, since all patients stayed a minimum of two days. On post-surgical day one, the
questionnaire was answered by all patients. The second time the questionnaire was answered occurred post-intervention for the experimental group.

*Pain Outcome Questionnaire.* The Patient Outcomes Questionnaire collected data related to the patient’s overall experience and satisfaction with care. It was used to assist in measuring patient’s beliefs and expectations about pain. It also measured their overall satisfaction with their pain management. Perceptions about timeliness and caring of staff regarding the patients’ pain were also measured and analyzed. This tool was adapted from Willamette Falls Hospital (1996) and was distributed by the City of Hope Pain Resource Center in 1998. All patients were asked to complete this questionnaire on the day they went home from the hospital.

*Chart Audit Form.* The Chart Audit Form collected data from the chart on type of surgery, complications, prior substance abuse, medication use, and pain measurements by nurses.

*Data Collection Procedure*

*General Procedures*

The researcher approached surgical patients on post-operative day 1 for participation in the study. They were told that the study was to examine the quality of the pain management they received and their satisfaction. Patient confidentiality was assured and patients were informed that the data would be held on the computer, but names and personal details would not be stored. Patients were invited to participate in the study and were assured that if they
declined, it would not affect their care. Each participant provided informed consent. The patients completed the Pain Coping Tool and Personal Characteristics form at the beginning of the study, and were self-administrated. Patients were questioned about their post-surgical pain experience and symptom management on the first day of the study and on each day until discharge from the hospital utilizing The One Minute Pain Questionnaire.

After filling out the initial questionnaires, patients in Group B then received an educational intervention. Before discharge from the hospital, both groups were asked questions from the Patient Outcome Questionnaire regarding their overall pain experience and their satisfaction with pain management. Chart audits were conducted by the research assistant once the patient was discharged from the hospital utilizing the Chart Audit Form. These results were analyzed, comparing the control and experimental groups. These results were analyzed and the control and experimental groups were compared with one other. The Data Collection Protocol is included in Appendix A for easy reference.

Data Collection

Before approaching patients, form packets were created for the sample size of fifty and numbered 001 to 050. To randomize which group patients would be in, an envelope was filled with twenty-five A’s and twenty-five B’s. A letter was randomly selected from the envelope and placed in each form packet, designating it as Group A (control) or Group B (experimental). Each numbered set of forms, randomly marked with the group, was utilized to collect data from patients.
Reliability, Validity, and Scientific Rigor

Validity

Internal Validity. The internal validity threats of history, maturation, testing, instrumentation, mortality, and regression are controlled by using a quasi-experimental design (Polit & Beck, 2004). Selection bias was controlled by acceptance of all available patients meeting the inclusion criteria and comparing the demographic information between the control group and the experimental group.

External Validity. External validity is defined as the generalizability of the research findings to other settings or samples (Polit & Beck, 2004). An important question is whether the intervention will work in other settings and with different subjects. However, the small sample size limited generalizability, but contributed preliminary data for future research studies.

Data Management

Raw data is stored on a password-protected computer disk that does not include any identifying data about the patients who participated in the study. The survey data from the patients is completely confidential at all times. Patients signed a consent form that has their name on it and a study identification number. The consent form is the only data collected that has any identifying information on it. The identification number was used on the remainder of the data collection tools. Identifying information is maintained in a separate locked file for one
year after study completion. In May 2010, the consent forms containing the identifying data will be shredded.

**Data Analysis**

SPSS Statistical Software, Version 16, was used to perform all statistical analyses. Nominal and descriptive analyses were used to compare independent, dependent, and extraneous variables between two equivalent groups. Pearson’s Chi-Square and correlational analysis were used to analyze whether the educational intervention resulted in an improved patient pain experience and satisfaction with pain relief. The level of significance, or p-value, was 0.05 for all tests. All methods of analysis were chosen for their relevance in testing between variables and the two independent groups.

**Human Subjects Ethical Consideration**

This study did not pose any risks to the participants. Patients’ identifying data was only on the initial consent form and is kept confidential at all times. The health information obtained cannot be used to identify a particular patient. The consent form used for this study was included in the appendix. There is not any direct benefit to the individual participants, but will hopefully result in benefits to future surgical patients. The Institutional Review Board approval forms for research are included in Appendix J.
CHAPTER 3 - FINDINGS

Introduction

Group A (control) contained 22 patients, and Group B (intervention) contained 23 patients (n = 45) at the end of the study. Statistical analysis, using SPSS software, revealed that educating patients regarding their role in pain management did not change their overall pain experience or satisfaction with pain (p > 0.05 unless otherwise stated). Both groups had very similar results with minor differences between the two groups. The measures of the four dependent variables and the independent variable did not reveal any significant differences.

Sample Characteristics

The mean age of Group A was 54 years old, and Group B was 47 years old. The mean difference was statistically insignificant according to Levene’s test for equality of variances (p = 0.132). There were 13 females in the control group and 16 in the experimental group. The majority of patients in the study were Caucasian. There was a significant difference, based on Pearson’s Chi-square, between groups in marital status (degree of freedom = 12.257, p = 0.001). Of the patients in the control group, 81.8% stated they were married, whereas 65.2% stated married in the experimental group. In addition, Group B contained 34.8% who stated they were divorced. The majority of patients reported overall health status as excellent. There was not a statistical difference between the groups related to income level and highest grade completed. Pearson’s correlations did not show any significant correlation between the demographic variables (degree of significance, p > 0.01).
Table 4: Demographic Comparison

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age (years) Mean</strong></td>
<td>54 (22)</td>
<td>47 (23)</td>
<td>45</td>
<td>0.132</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>40.9% (9)</td>
<td>30.4% (7)</td>
<td>35.6% (16)</td>
<td>0.463</td>
</tr>
<tr>
<td>Female</td>
<td>59.1% (13)</td>
<td>69.6% (16)</td>
<td>64.4% (29)</td>
<td></td>
</tr>
<tr>
<td><strong>Race:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>90.9% (20)</td>
<td>100% (23)</td>
<td>95.6% (43)</td>
<td></td>
</tr>
<tr>
<td>Asian /Pacific Islander</td>
<td>4.5% (1)</td>
<td>0% (0)</td>
<td>2.2% (1)</td>
<td>0.228</td>
</tr>
<tr>
<td>American Indian</td>
<td>4.5% (1)</td>
<td>0% (0)</td>
<td>2.2% (1)</td>
<td></td>
</tr>
<tr>
<td><strong>Marital Status:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>81.8% (18)</td>
<td>65.2% (15)</td>
<td>73.3% (33)</td>
<td></td>
</tr>
<tr>
<td>Widowed</td>
<td>9.1% (2)</td>
<td>0% (0)</td>
<td>4.4% (2)</td>
<td>0.007</td>
</tr>
<tr>
<td>Divorced</td>
<td>0% (0)</td>
<td>34.8% (8)</td>
<td>17.8% (8)</td>
<td></td>
</tr>
<tr>
<td>Never Married</td>
<td>9.1% (2)</td>
<td>0% (0)</td>
<td>4.4% (2)</td>
<td></td>
</tr>
<tr>
<td><strong>Highest Grade Completed:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some HS</td>
<td>27.3% (6)</td>
<td>0% (0)</td>
<td>13.3% (6)</td>
<td></td>
</tr>
<tr>
<td>HS Graduate</td>
<td>14.3% (3)</td>
<td>21.7% (5)</td>
<td>17.8% (8)</td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>42.9% (9)</td>
<td>52.2% (12)</td>
<td>46.7% (21)</td>
<td>0.074</td>
</tr>
<tr>
<td>College Graduate</td>
<td>9.5% (2)</td>
<td>21.7% (5)</td>
<td>15.6% (7)</td>
<td></td>
</tr>
<tr>
<td>Post-Graduate</td>
<td>9.5% (2)</td>
<td>4.3% (1)</td>
<td>6.6% (3)</td>
<td></td>
</tr>
<tr>
<td><strong>Overall Health Status:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>59.1% (13)</td>
<td>56.5% (13)</td>
<td>57.8% (26)</td>
<td></td>
</tr>
<tr>
<td>Very Good</td>
<td>31.8% (7)</td>
<td>39.1% (9)</td>
<td>35.6% (16)</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>9.1% (2)</td>
<td>4.3% (1)</td>
<td>6.6% (3)</td>
<td>0.755</td>
</tr>
<tr>
<td>Fair</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td></td>
</tr>
<tr>
<td><strong>Income Level</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; $20,000</td>
<td>14.3% (3)</td>
<td>4.3% (1)</td>
<td>8.9% (4)</td>
<td></td>
</tr>
<tr>
<td>$20,000 - $39,000</td>
<td>23.8% (5)</td>
<td>26.1% (6)</td>
<td>24.4% (11)</td>
<td></td>
</tr>
<tr>
<td>$40,000 - $59,000</td>
<td>28.6% (6)</td>
<td>17.4% (4)</td>
<td>22.2% (10)</td>
<td>0.759</td>
</tr>
<tr>
<td>$60,000 - $79,000</td>
<td>9.5% (2)</td>
<td>8.7% (2)</td>
<td>8.9% (4)</td>
<td></td>
</tr>
<tr>
<td>&gt; $80,000</td>
<td>14.3% (3)</td>
<td>17.4% (4)</td>
<td>15.6% (7)</td>
<td></td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>13.6% (3)</td>
<td>26.1% (6)</td>
<td>20% (9)</td>
<td></td>
</tr>
</tbody>
</table>
Table 5: Pearson’s Correlation of Demographics

<table>
<thead>
<tr>
<th></th>
<th>Sex</th>
<th>Race</th>
<th>Marital Status</th>
<th>Highest Grade</th>
<th>Income Level</th>
<th>Overall Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>1</td>
<td>.152</td>
<td>.385</td>
<td>.155</td>
<td>-.021</td>
<td>.212</td>
</tr>
<tr>
<td>Race</td>
<td>.152</td>
<td>1</td>
<td>.292</td>
<td>-.164</td>
<td>-.316</td>
<td>.169</td>
</tr>
<tr>
<td>Marital Status</td>
<td>.385</td>
<td>.292</td>
<td>1</td>
<td>.163</td>
<td>-.176</td>
<td>-.017</td>
</tr>
<tr>
<td>Highest Grade</td>
<td>.155</td>
<td>-.164</td>
<td>.163</td>
<td>1</td>
<td>.026</td>
<td>-.122</td>
</tr>
<tr>
<td>Income Level</td>
<td>-.021</td>
<td>-.316</td>
<td>-.176</td>
<td>.026</td>
<td>1</td>
<td>.222</td>
</tr>
<tr>
<td>Overall Health</td>
<td>.212</td>
<td>.169</td>
<td>-.017</td>
<td>-.122</td>
<td>.222</td>
<td>1</td>
</tr>
</tbody>
</table>

In Group A, half the patients were in the surgical unit and half were in the orthopedic unit. In Group B, 56.5% of patients were in the surgical unit and 43.5% were in the orthopedic unit. There was not a significant difference between the groups with unit designation. The average length of stay for both groups was 3.7 days, and was statistically insignificant (p = 0.537). The majority of patients in both groups did not have any complications or prior substance abuse. In addition, there were not any significant differences between the groups with the amount of opioid medication used to relieve pain, the amount of adjunct medications used, and the amount of interference in activities of daily living caused by pain.
### Table 6: Other Demographics

<table>
<thead>
<tr>
<th>Unit</th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
<th>$p$</th>
<th>Pearson’s Value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surgical Unit</td>
<td>50% (11)</td>
<td>56.5% (13)</td>
<td>53.3% (24)</td>
<td>0.661</td>
<td>0.192</td>
<td>1</td>
</tr>
<tr>
<td>Orthopedic Unit</td>
<td>50% (11)</td>
<td>43.5% (10)</td>
<td>46.7% (21)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>13.6% (3)</td>
<td>4.3% (1)</td>
<td>8.9% (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>22.7% (5)</td>
<td>39.1% (9)</td>
<td>31.1% (14)</td>
<td>0.537</td>
<td>2.236</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>45.5% (10)</td>
<td>39.1% (9)</td>
<td>42.2% (19)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥ 5</td>
<td>18.2% (4)</td>
<td>17.4% (4)</td>
<td>17.8% (8)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complications</td>
<td>No</td>
<td>86.4% (19)</td>
<td>82.6% (19)</td>
<td>76% (38)</td>
<td>0.728</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>13.6% (3)</td>
<td>17.4% (4)</td>
<td>14% (7)</td>
<td>0.121</td>
<td></td>
</tr>
<tr>
<td>Substance Abuse</td>
<td>No</td>
<td>81.8% (18)</td>
<td>87% (20)</td>
<td>76% (38)</td>
<td>0.634</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>18.2% (4)</td>
<td>13% (3)</td>
<td>14% (7)</td>
<td>0.226</td>
<td></td>
</tr>
</tbody>
</table>

Types of surgeries included gynecologic, back/spinal, ankle, abdominal, total knee, and total hip surgeries. The two groups were equivalent based on Pearson’s Chi-Square (degree of freedom = 1.965, $p = 0.923$). Group A contained 59% of patients, and Group B contained 43.5%, who received orthopedic surgeries.

![Figure 2: Types of Surgery](image-url)
Research Question

Patient beliefs about pain. There were ten common beliefs about pain. Eleven patients in Group A (50%) and eight patients in Group B (34.8%) stated the belief that people get addicted to pain medicine easily. Nine patients in Group A (40.9%) and fifteen patients in Group B (65.2%) agreed with the belief that patients should expect pain, and that it is part of every hospitalization. Seventeen patients in Group A (77.3%) and 16 patients in Group B (69.9%) stated the belief that they shouldn’t have to endure pain, that there are medications available to control the pain. There was not a significant difference between groups on 9 out of 10 of the beliefs (p > 0.05). The seventh belief that pain medicine should be saved in case the pain gets worse showed a significant difference (p = 0.048) between the groups. Seven patients in Group A (31.8%) and two patients in Group B (8.7%) agreed with this belief.

Table 7: Patient Beliefs about Pain

<table>
<thead>
<tr>
<th>Beliefs</th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td># 1: Complaining about pain will distract my doctor.</td>
<td>4.5% (1)</td>
<td>0% (0)</td>
<td>2.2% (1)</td>
<td>0.228</td>
</tr>
<tr>
<td># 2: I don’t want to bother the nurse; she’s busy with other patients.</td>
<td>31.8% (7)</td>
<td>26.1% (6)</td>
<td>28.9% (13)</td>
<td>0.671</td>
</tr>
<tr>
<td># 3: Pain medicine can’t really control pain.</td>
<td>13.6% (3)</td>
<td>4.3% (1)</td>
<td>8.9% (4)</td>
<td>0.265</td>
</tr>
<tr>
<td># 4: People get addicted to pain medicine easily.</td>
<td>50% (11)</td>
<td>34.8% (8)</td>
<td>42.2% (19)</td>
<td>0.301</td>
</tr>
<tr>
<td># 5: It’s easier to put up with pain than with the side effects that come from pain medicines.</td>
<td>22.7% (5)</td>
<td>8.7% (2)</td>
<td>15.6% (7)</td>
<td>0.189</td>
</tr>
<tr>
<td># 6: Good patients avoid talking about pain.</td>
<td>22.7% (5)</td>
<td>13% (3)</td>
<td>37.5% (8)</td>
<td>0.394</td>
</tr>
<tr>
<td># 7: Pain medicine should be saved in case pain gets worse.</td>
<td>31.8% (7)</td>
<td>8.7% (2)</td>
<td>20% (9)</td>
<td>0.048</td>
</tr>
<tr>
<td># 8: Pain builds character; it’s good for you.</td>
<td>18.2% (4)</td>
<td>4.3% (1)</td>
<td>11.1% (5)</td>
<td>0.129</td>
</tr>
<tr>
<td># 9: Patients should expect to have pain; it’s part of almost every hospitalization.</td>
<td>40.9% (9)</td>
<td>65.2% (15)</td>
<td>53.3% (24)</td>
<td>0.101</td>
</tr>
<tr>
<td># 10: I shouldn’t have to endure pain; there are medications available to control the pain.</td>
<td>77.3% (17)</td>
<td>69.6% (16)</td>
<td>73.3% (33)</td>
<td>0.101</td>
</tr>
</tbody>
</table>
*Patient coping skills.* For the variable of patient coping skills, the Pain Coping Tool showed a significant difference between the two groups for 2 questions out of 30. One question asked if it was helpful to keep their suffering from others. Group A answered “somewhat” 46% of the time. Group B answered “not at all” 62% of the time, and there was a significant difference based on Pearson’s Chi-square (degree of freedom = 10.825, \( p = 0.013 \)). The second question asked if it was helpful to accept the pain. Group A answered “somewhat” 36% of the time. Group B answered “a little” 43% of the time, and there was a significant difference based on Pearson’s Chi-square (degree of freedom = 10.446, \( p = 0.015 \)). All other questions revealed no significant differences between the groups.

*Patient control and satisfaction with pain management.* There were not any significant differences between either group regarding overall patient control of pain management (degree of freedom 1.31, \( p = 0.519 \)) or overall patient satisfaction with pain management.

<table>
<thead>
<tr>
<th>Change in Control of Pain Management</th>
<th>Change</th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
<th>( p )</th>
<th>Pearson’s Value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-2</td>
<td>4.8% (1)</td>
<td>4.3% (1)</td>
<td>4.5% (2)</td>
<td>( 0.667 )</td>
<td>3.217</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>-1</td>
<td>9.5% (2)</td>
<td>8.7% (2)</td>
<td>9.1% (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>61.9% (13)</td>
<td>73.9% (17)</td>
<td>68.2% (30)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>14.3% (3)</td>
<td>4.3% (1)</td>
<td>9.1% (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4.8% (1)</td>
<td>8.7% (2)</td>
<td>6.8% (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>4.8% (1)</td>
<td>0% (0)</td>
<td>2.3% (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Change in Satisfaction with Pain Management</th>
<th>Change</th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
<th>( p )</th>
<th>Pearson’s Value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-2</td>
<td>0% (0)</td>
<td>4.3% (1)</td>
<td>2.3% (1)</td>
<td>( 0.223 )</td>
<td>4.38</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>-1</td>
<td>9.5% (2)</td>
<td>0% (0)</td>
<td>4.5% (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>81.0% (17)</td>
<td>82.6% (19)</td>
<td>81.8% (36)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>9.5% (2)</td>
<td>13.0% (3)</td>
<td>11.4% (5)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(degree of freedom 0.318, \( p = 0.957 \)). When asked about control over pain management throughout the hospitalization, 54.5% of patients in Group A and 39.1% in Group B answered “excellent”. When asked about overall satisfaction with pain management throughout the course of the hospital stay, 45.5% of patients in Group A and 43.5% of patients in Group B answered “very satisfied.”

**Figure 3: Patient Control of Pain Management**

**Figure 4: Patient Satisfaction with Pain Management**
**Patient level of pain.** Using descriptive statistics, there was not a significant difference between the groups in overall level of pain (degree of freedom = 2.254, \( p = 0.601 \)). In Group A, 40.9\% of patients answered “a lot” and 27.3\% answered “minimal.” In Group B, 47.8\% of patients answered “a lot” and 34.8\% answered “minimal.” Furthermore, according to correlational analysis, there was not any correlation between the patient’s level of pain, their control over their pain, or their satisfaction with their pain management.

**Table 9: Level of Pain**

<table>
<thead>
<tr>
<th>Level of Pain</th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
<th>( p )</th>
<th>Pearson’s Value</th>
<th>( df )</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>4.5% (1)</td>
<td>0% (0)</td>
<td>2.2% (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimal</td>
<td>27.3% (6)</td>
<td>34.8% (8)</td>
<td>31.2% (14)</td>
<td>0.601</td>
<td>2.254</td>
<td>3</td>
</tr>
<tr>
<td>A Lot</td>
<td>40.9% (9)</td>
<td>47.8% (11)</td>
<td>44.4% (20)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>27.3% (6)</td>
<td>17.4% (4)</td>
<td>22.2% (10)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Using the One-Minute Pain Questionnaire, the change in level of pain, amount of pain, distress caused by pain, and relief from pain between post-operative day 1 and post-operative day 2 was measured. None of these measurements was significant between the two groups. There was no change in 66.7\% of patients in Group A and 69.6\% in Group B. This change was insignificant (degree of freedom = 2.171, \( p = 0.538 \)). The change in the amount of pain from day 1 to day 2 was also insignificant for both groups (degree of freedom = 1.09, \( p = 0.779 \)). The level of distress caused by pain was also unchanged, with 66.7\% in Group A and 69.6\% in Group
B showing no degree of change (degree of freedom = 0.433, p = 0.503). Similar values were also seen regarding the relief received from medication (degree of freedom = 4.087, p = 0.394).

<table>
<thead>
<tr>
<th></th>
<th>Level of Pain</th>
<th>Pain Control</th>
<th>Pain Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Pain</td>
<td>1</td>
<td>.286</td>
<td>.184</td>
</tr>
<tr>
<td>Pain Control</td>
<td>.286</td>
<td>1</td>
<td>.344</td>
</tr>
<tr>
<td>Pain Satisfaction</td>
<td>.184</td>
<td>.344</td>
<td>1</td>
</tr>
</tbody>
</table>

*Table 10: Pearson's Correlations*

**Patient perception of nurse’s caring and timeliness.** For the extraneous variable of patient perception of nurses’ caring and timeliness, only the perception of caring showed a significant difference. The question from the Pain Outcome Questionnaire revealed a significant difference based on Pearson’s Chi-square (degree of freedom = 8.101, p = 0.044). In Group A, 91% of the participants answered that they perceived the nurses’ caring as “excellent,” while 57% in Group B had the same answer.

**Patient expectations of pain.** In both groups, the majority of patients expected to have pain during this hospitalization. In Group A 81.8 % and in Group B 91.3% of patients thought they would have pain. There was not a significant difference between the groups (degree of freedom = 0.888, p = 0.414).
<table>
<thead>
<tr>
<th>Change in Level of Pain</th>
<th>Change</th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
<th>p</th>
<th>Pearson’s Value</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-2</td>
<td>0% (0)</td>
<td>4.3% (1)</td>
<td>2.3% (1)</td>
<td></td>
<td>0.538</td>
<td>2.171</td>
</tr>
<tr>
<td></td>
<td>-1</td>
<td>28.6% (6)</td>
<td>17.4% (4)</td>
<td>22.7% (10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>66.7% (14)</td>
<td>69.6% (16)</td>
<td>68.2% (30)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>4.8% (1)</td>
<td>8.7% (2)</td>
<td>6.8% (3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Amount of Pain</td>
<td>-2</td>
<td>4.8% (1)</td>
<td>4.3% (1)</td>
<td>4.5% (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-1</td>
<td>19% (4)</td>
<td>8.7% (2)</td>
<td>13.7% (6)</td>
<td></td>
<td>0.779</td>
<td>1.09</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>66.7% (14)</td>
<td>78.3% (18)</td>
<td>72.7% (32)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>9.5% (2)</td>
<td>8.7% (2)</td>
<td>9.1% (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Level of Distress Caused by Pain</td>
<td>-3</td>
<td>4.8% (1)</td>
<td>4.3% (1)</td>
<td>4.5% (2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in Relief of Pain from Medication</td>
<td>-2</td>
<td>4.8% (1)</td>
<td>0% (0)</td>
<td>2.3% (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-1</td>
<td>14.3% (3)</td>
<td>4.5% (1)</td>
<td>9.3% (4)</td>
<td></td>
<td>0.503</td>
<td>0.433</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>66.7% (14)</td>
<td>77.3% (17)</td>
<td>72.1% (31)</td>
<td></td>
<td>0.394</td>
<td>4.087</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>14.3% (3)</td>
<td>13.6% (3)</td>
<td>14% (6)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>0% (0)</td>
<td>4.5% (1)</td>
<td>2.3% (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 12: Timeliness and Caring

<table>
<thead>
<tr>
<th></th>
<th>Group A</th>
<th>Group B</th>
<th>Total</th>
<th>$p$</th>
<th>Pearson’s Value</th>
<th>df</th>
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</thead>
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<tr>
<td><strong>Timeliness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>63.6% (14)</td>
<td>47.8% (11)</td>
<td>55.6% (25)</td>
<td>0.158</td>
<td>3.691</td>
<td>2</td>
</tr>
<tr>
<td>Good</td>
<td>22.7% (5)</td>
<td>47.8% (11)</td>
<td>35.6% (16)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair</td>
<td>13.6% (3)</td>
<td>4.3% (1)</td>
<td>8.8% (4)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Caring</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent</td>
<td>90.9% (20)</td>
<td>56.5% (13)</td>
<td>73% (33)</td>
<td>0.044</td>
<td>8.101</td>
<td>3</td>
</tr>
<tr>
<td>Good</td>
<td>9.1% (2)</td>
<td>34.8% (8)</td>
<td>22.2% (10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair</td>
<td>0% (0)</td>
<td>4.3% (1)</td>
<td>2.2% (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>0% (0)</td>
<td>4.3% (1)</td>
<td>2.2% (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 4 – DISCUSSION AND LIMITATIONS

Discussion

Shared decision-making continues to be a relatively new concept in pain management and requires more extensive research (Entwistle & Watt, 2006). Although there is a large amount of research on patients’ perspectives on pain management, their perceived satisfaction with pain management and care, and their attitudes concerning the pain experience, little has been done to study how patients can participate in the management of their pain (Manias, Botti, & Bucknell, 2006). Even though this study failed to prove that an educational intervention would improve patients’ perception of pain management, it did succeed in showing the need to approach surgical patients for pain management education before having surgery.

This study was not effective, in part, due to when the patients were approached. By the time the patients received the intervention, the majority of them had already experienced their worst pain. Further research is needed to see if an educational intervention given pre-operatively would be more effective in decreasing the level of pain, while increasing patient control and satisfaction with pain management. However, the importance of involving patients in their pain management continues to be very important.

Limitations

There are a few limitations with this study. First, a sample size of forty-five patients may have been too small a sample size and possibly led to sampling errors. The sample was also
taken from two separate units with very different pain management standards. On the orthopedic unit, standing orders existed that allowed the nurse to choose between multiple options for pain relief. This was especially useful if one pain medication was not effective. The nurse could easily turn to another pain medication without calling a physician. On the other hand, the surgical unit did not have any standing orders regarding pain management. If the patient continued to have pain with the original orders, then the nurse was required to call a physician for a change in pain management orders. This may have caused some nurses to under treat the pain due to the time involved with calling physicians.

Another limitation of this study was the day the patient received the educational intervention. It is possible that providing educational materials prior to surgery would result in more favorable or significant changes in the patient’s pain experience and satisfaction with pain management. Approaching the patient after surgery was not the best approach because patients most likely experienced their worst pain in that initial twenty-four hour period.

Implications

With many studies focusing on the role of nurses in managing post-surgical pain, this study took a different approach and looked at the role of the patient. The role of nurses continues to be one of patient advocate and educator. With more technological advances and the increasing knowledge of patients regarding their medical needs, it is more important today to include the patient in decision-making regarding their care, including pain management. This study adds to the existing knowledge about the importance of providing an educational
intervention to post-surgical patients to better able them to share in the decision-making process.

Recommendations for Further Research

This study could be improved in multiple ways. First, the sample size should be larger and cover a longer period. Second, the sample should be taken from one unit, rather than two separate units. In addition, a pre-/post-test design may be more effective than using two groups simultaneously. For example, the study should take part in two phases. Phase I would include data collected before any educational interventions were given to pre-surgical patients. Phase II would collect data after requiring all pre-surgical patients to attend a class on pain management and what to expect after surgery. This educational intervention could include more extensive teaching then this study allowed. Patients need education on their role in managing their pain. Finally, future research should also include creating patient education available in writing and as a video component that would become part of the pre-operative teaching for all patients before going to surgery.
REFERENCES


Database.


Philadelphia, PA: Lippincott, Williams & Wilkins.


Video Counseling Library. Adapted from *Pain management: The 3 R’s* [Motion picture]. (Available from Milner-Fenwick, Inc., 119 Lakefront Drive, Hunt Valley, MD 21093.)

APPENDIX
APPENDIX A: DATA COLLECTION PROTOCOL (DCP)

Questions of Interest Regarding Pain Assessment and Patient Autonomy

- Will patients have an improved overall pain experience if they are more knowledgeable and understanding about their role in pain management?
- Will patient satisfaction regarding their pain experience and post-surgical recovery improve after they receive an educational intervention?

The Sample
This project will include adults 21-70 years of age having any type of surgical procedure, except bowel resections or other surgeries requiring lengthy hospital stays. The patient must be able to read and speak English, and must be a surgical or orthopedic patient.

The Instruments
All data collection instruments must be labeled with identification numbers for patient and date. The identification box located in the top of each form must be completed, either manually or by affixing a label containing identifying information.

All project facilities will use the following data collection instruments:
- Consent Form (CF): This form is for internal use only, and will not be submitted to the aggregate data pool. This form will be kept in a separate locked file cabinet.
- Personal Characteristics Form (PCF): The demographic and comorbidity data on this form must be collected for basic data analysis. This form also includes functional status and well-being questions, as well as depression screening questions. This form will be completed by the patient at the time of enrollment.
- Pain Coping Tool (PCT): This form documents coping strategies utilized by the patient to cope with pain. This form will be completed by the patient at the time of enrollment.
- The One-Minute Pain Questionnaire (PQ): This form documents the patient’s overall daily pain experience. This form will be completed by the patient daily for each day in the hospital, including the day of discharge.
- Pain Outcome Questionnaire (POQ): This form documents the patient’s overall satisfaction and pain experience while hospitalized, and will be documented on the day of discharge.
- Chart Audit Form (CAF): This form documents pain assessment and interventions from the medical record, as well as surgical information. This form will be filled out by the investigator.

DATA COLLECTION PROCEDURES

Data Collection Window Periods
The time frames for data collection will be as follows:
- Post-op Day #1 after Surgery
- Each inpatient hospital day
- Day of Discharge
Forms to be Completed:
A. Post-op Day #1
   1. Patient: Consent Form
   2. Personal Characteristics Form
   3. Pain Coping Tool
B. Post-Op Days #2 - Discharge
   1. One-Minute Pain Questionnaire
C. Discharge
   1. Patient: One-Minute Pain Questionnaire
      Pain Outcome Questionnaire
   2. Researcher: Chart Audit Form

Important:
The description of the purpose of these questionnaires is very important. It should be described consistently by all persons distributing the questionnaires to patients. A cover letter will be included as part of each patient packet that provides the descriptions and purpose of the study and also provides instructions to the patient for correctly and accurately completing the patient questionnaire. If the patient requires assistance, the questions should be read rather than interpreted. If the patient refuses to complete the questionnaires, record the reason on the form. Refusals should be recorded as follows:
   Time: Patient does not have time
   Read: Patient could not read the form
   Conf: Patient perceived violation of confidentiality
   Unab: Patient unable to complete
   Other: Any other stated reason (e.g. altered mental status)

Source: Created April 10th, 2007 by Kathryn Bader, RN, BSN
APPENDIX B: CONSENT FORM

CONSENT FORM (CF)
Managing Your Post-Surgical Pain

Angela Starkweather, Ph.D., ANCP, CCRN, CNRN
Assistant Professor, Intercollegiate College of Nursing (509) 324-7279

Kathryn Bader, RN, BSN
Graduate Student, Intercollegiate College of Nursing (509) 979-2273

Introduction

You are being asked to take part in a research study that will evaluate the benefits of using an educational intervention called Managing Your Post-Surgical Pain. As a participant in the study, you will be asked to fill out questionnaires that ask about your current health status, your pain, and your satisfaction with care. The purpose of this consent form is to give you information to help you decide whether to be in the study or not. Please read the form carefully. You may ask questions about the research or anything in the form that is not clear to you. It is your decision to be in the study or not. This process is called ‘informed consent.’ You will get a copy of this form for your records.

Why is this study being done?

To see if an intervention improves the pain experience after surgery. It will increase understanding in ways to improve pain management.

How many people will take part in the study?

Fifty participants will be in the study.

What is involved in the study?

It may be chosen to receive an educational intervention called Managing Your Post-Surgical Pain. If you are chosen, you will watch a video and get brochures/handouts on goals for pain and ways you can help in your pain management. You will be asked to fill out forms that ask questions about you, your health, and your coping skills. A questionnaire asking about your pain and satisfaction with care will be filled out each day until you leave the hospital. A final
questionnaire asking about your pain experience and satisfaction with care will be filled out on the day you go home. The questionnaires should only take 20 minutes to complete at the beginning and end of the study. The daily questionnaire will only take one minute per day. You may refuse to answer any question or item in the questionnaires. Your medical record about your surgery and this admission will be reviewed to collect information on your pain scoring and medication use.

**How long will I be in the study?**
You will be in the study until you leave the hospital.

**What are the risks of the study?**
You may feel uncomfortable talking about your pain or other topics included in this study. If you are uncomfortable at any time, you may choose to not answer specific questions or withdraw from study participation.

**Are there benefits to taking part in the study?**
Your overall pain may be lower and you may increase your ability to make informed decisions about your health care. Other benefits may include less time in the hospital, more satisfaction with your care, and increased self-esteem. However, you may not benefit from participating in this study.

**What other options are there?**
This study will not change your care in the hospital. However, you can choose to not participate in the study.

**What would prevent me from being in the study?**
You must be able to read and understand English, not suffer from any cognitive defects, dementia, or delirium to be in this study.

**What are the costs?**
There are no costs to you.

**Who pays for study-related illness or injury?**
If you were to have symptoms of emotional distress or continuing pain, you should seek medical care through your usual healthcare provider for treatment. You will be responsible for all costs associated with the treatment. No funds have been set aside for compensation or reimbursement for immediate medical treatment or management of injury. If you have
questions about emotional distress associated with the study, contact the principal investigator, Angela Starkweather, at (509) 324-7279

What about confidentiality?
All study forms will have a unique identifying number on them so that your information will be kept confidential. Your name and any other identifying information will not be used in the research reports or any related publications. Only your immediate medical records related to this hospital stay and surgery will be accessed by the identified researchers.

What are my rights as a participant?
If you have questions about your rights as a participant in this research study, you may call Dr. Starkweather at (509) 324-7279. If you have further questions about your rights, you may contact the Institutional Review Board - Spokane at 509-358-7631.

Can I stop participating in the study?
Participation in this study is voluntary and refusal to participate will not affect the care you receive. You may withdraw from the study at any time without loss of benefits to which you are entitled as a patient.

Consent and Legal Rights
I have read or have had read to me the preceding information describing the study. All of my questions have been answered to my satisfaction and I, indicating my desire to participate in this study, am signing this form voluntarily. I am not waiving any of my rights by signing this form. I understand that I will receive a copy of this consent form.

______________________________    ___________________________
Signature of Participant                        Date

______________________________    ___________________________
Signature of Principal Investigator               Date

______________________________    ___________________________
Signature of Person Explaining Informed Consent   Date
APPENDIX C: ADDENDUM TO INFORMED CONSENT

ADDENDUM TO INFORMED CONSENT FORM (CF-A)
Authorization to Use, Create, and Share Health Information for Research

Managing Your Post-Surgical Pain

Angela Starkweather, Ph.D., ANCP, CCRN, CNRN
Assistant Professor, Intercollegiate College of Nursing

Kathryn Bader, RN BSN
Graduate Student, Intercollegiate College of Nursing

This attachment provides additional information about how your health information (your “records”) will be used and disclosed for this research study. Your records may include information from questionnaires you complete about your health and lifestyle, interviews and other health information about you created, collected, or reviewed during the course of the research study as described in the consent form.

This form allows the researcher identified in the consent to use your records to carry out the study described in the consent form. If you do not sign this form, you cannot participate in the study.

All of your records, the signed consent form, and this form also might be reviewed or copied by IRB - Spokane, by WSU-IRB or by other regulatory agencies. These agencies might review your records to check the information collected in this study, to check how the study was conducted or for other uses allowed by law.

Federal and state laws require the researcher to protect the privacy of your records. However, absolute confidentiality cannot be guaranteed because of the need to disclose information as described above. In addition, after the researcher discloses your records to others, then the law may no longer protect the privacy of the information. Your authorization will expire when the goals of the study have been met.

You can cancel this authorization at any time by giving a written notice to Dr. Angela Starkweather, Intercollegiate College of Nursing, 2917 W. Ft. George Wright Dr., Rm. 369, Spokane, WA 99224. If you cancel this authorization, then you no longer will be able to
participate in the study. If you cancel this authorization, the researcher will retain any health information collected prior to your cancellation.

**Authorization**

I authorize the release of my health information related to this research study, including my signed consent form and this addendum, to IRB – Spokane, WSU-IRB, and other regulatory agencies as described above.

By signing this form, I have not given up any of my legal rights as a research participant. I understand that I will receive a signed copy of this authorization for my records.

______________________________
Printed Name of Participant

______________________________  __________
Signature of Participant  Date

I certify that under state law, I am the legally authorized representative of the Participant named above and that I am authorized to sign this form to release the Participant’s medical records and health information as described above.

______________________________  __________________
Printed Name of Legal Representative  Relationship

______________________________  __________
Signature of Legal Representative  Date

56
APPENDIX D: PERSONAL CHARACTERISTICS

PERSONAL CHARACTERISTICS (PC)

1. What is your birth date? ........................................... ___ / ___ / ___

2. What is your sex?
   Male ........................................................................... 1
   Female ......................................................................... 2

3. Which of the following best describes your racial background?
   (circle one number)
   Black/African-American ............................................ 1
   White/Caucasian ........................................................... 2
   Asian/Oriental or Pacific Islander ................................. 3
   American Indian or Alaskan Native ......................... 4
   Other ........................................................................... 5

4. Are you of Spanish or Hispanic origin or ancestry?
   Yes .............................................................................. 1
   No ............................................................................... 2

5. Which of the following best describes your current marital status?
   (circle one number)
   Married ........................................................................ 1
   Widowed ...................................................................... 2
   Separated ..................................................................... 3
   Divorced ...................................................................... 4
   Never married ............................................................ 5

6. What is the highest grade you completed in school?
   8th grade or less .......................................................... 1
   Some high school ......................................................... 2
   High school graduate ................................................... 3
   Some college ................................................................ 4
   College graduate ........................................................ 5
   Any post-graduate work .............................................. 6

7. How many people other than yourself live in your household?
   Number of adults: ....................................................... ___
   Number of children: ..................................................... ___

Today's Date is: ____ / ____ / ______  Patient ID #: _______ _______
8. Which of the following categories best describes your household's total income before taxes last year? Please include income from all sources such as salaries and wages, Social Security, retirement income, investments, and other sources. (circle one number)
   - Less than $20,000 .......................................................... 1
   - $20,000-$39,999 .............................................................. 2
   - $40,000-$59,999 .............................................................. 3
   - $60,000-$79,999 .............................................................. 4
   - $80,000 or more ............................................................. 5
   - Prefer not to answer ....................................................... 6

9. What is your zip code? ..............................................

HEALTH CONDITIONS

1. Do you NOW have any of the following conditions? (circle one number for each condition)

a. Congestive heart failure? .............................................. 1 2
b. Chronic lung disease (including bronchitis or emphysema)? ........ 1 2
c. Blindness or trouble seeing, even when wearing glasses? ...... 1 2
d. Deafness or trouble hearing? .......................................... 1 2
e. Sugar diabetes (diabetes mellitus)? .................................. 1 2
f. Asthma? ............................................................................. 1 2
g. Ulcer or gastrointestinal bleeding (not counting hemorrhoids)? .... 1 2
h. Arthritis or rheumatism? ............................................... 1 2
i. Sciatica or chronic back problem? .................................... 1 2

2. Has a doctor EVER told you that you had any of the following conditions? (circle one number for each condition)

a. Hypertension or high blood pressure? ................................ 1 2
b. Angina? ............................................................................ 1 2
c. Heart attack or myocardial infarction? .............................. 1 2
d. Stroke? ............................................................................ 1 2
e. Kidney disease? ................................................................. 1 2
f. Cancer (not counting skin cancer)? .................................... 1 2

3. In general, would you say your health is:

   Excellent ................................................................. 1
   Very Good ................................................................. 2
   Good ............................................................................ 3
   Fair ................................................................................ 4
   Poor ............................................................................... 5
4. Compared to one year ago, how would you rate your health in general now?  
   Much better now than one year ago.............................. 1  
   Somewhat better now than one year ago .......................... 2  
   About the same ..................................................... 3  
   Somewhat worse now than one year ago........................... 4  
   Much worse now than one year ago .................................. 5  

HEALTH AND DAILY ACTIVITIES

The following questions are about activities you might do during a typical day. Does your health limit you in these activities? If so, how much?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes, limited a lot</th>
<th>Yes, limited a little</th>
<th>No, not limited at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Moderate activities, such as pushing a vacuum cleaner, bowling, or playing golf</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Lifting or carrying groceries</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Climbing several flights of stairs</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Climbing one flight of stairs</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Bending, kneeling, or stooping</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Walking more than a mile</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Walking several blocks</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. Walking one block</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. Bathing and dressing yourself</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of your physical health?

<table>
<thead>
<tr>
<th>Problem</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Cut down on the amount of time you spent on work or other activities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>12. Accomplished less than you would like</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>13. Were limited in the kind of work or other activities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>14. Had difficulty performing the work or other activities</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

During the past 4 weeks, have you had any of the following problems with your work or other regular daily activities as a result of any emotional problems (such as feeling depressed or anxious)?

<table>
<thead>
<tr>
<th>Problem</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Cut down on the amount of time you spent on work or other activities</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16. Accomplished less than you would like</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
17. Didn’t do work or other activities as carefully as usual...  1  2

18. During the **past 4 weeks**, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?
   - Not at all ................................................................. 1
   - Slightly ................................................................. 2
   - Moderately ......................................................... 3
   - Quite a bit ............................................................... 4
   - Extremely ............................................................. 5

**PAIN**

1. How much bodily pain have you had during the **past 4 months**?
   - None........................................................................ 1
   - Very mild .................................................................... 2
   - Mild ........................................................................... 3
   - Moderate .................................................................. 4
   - Severe ....................................................................... 5
   - Very severe ................................................................ 6

2. During the **past 4 months**, how much did pain interfere with your normal work (including work both outside the home and housework)?
   - Not at all ................................................................. 1
   - A little bit ................................................................. 2
   - Moderately ............................................................. 3
   - Quite a bit ............................................................... 4
   - Extremely ............................................................. 6

Source: Adapted from Health Outcomes Institute, 1993
**APPENDIX E: PAIN COPING TOOL**

**Pain Coping Tool (PCT)**

<table>
<thead>
<tr>
<th>Question</th>
<th>Not at all</th>
<th>A little</th>
<th>Some what</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Does it help to remain still and/or avoid movement?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. Does it help to protect the painful area of your body?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. Does it help to walk or pace?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. Does it help to just do something/anything?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. Does crying help?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. Does moaning help?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. Does it help to rub or massage the painful area?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>8. Does it help to apply heat or cold to the painful area?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. Does it help to discuss your pain with others?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. Does it help to seek help from others?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. Does it help to try and remain calm?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. Does it help to try to relax your muscles?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. Does it help to pray?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. Does it help to put your hope in God?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. Does it help to take pain medication?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. Does it help to daydream or fantasize?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17. Does visualization of natural and/or pleasant scenes help?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. Does it help to suppress the distress of your pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. Does it help to keep your suffering from others?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. Does it help to try to accept your pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21. Does it help to try to live with your pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22. Does it help to try to understand the reason for your pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23. Does it help to think of different ways to handle your pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24. Does it help to think of being well?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25. Does it help to think you can control your pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26. Does it help to try to come up with a plan to deal with your pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27. Does it help to try to do something creative about your pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28. Does it help to focus on other things or activities?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29. Does it help to try to distract yourself from the pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30. Does it help to try to draw on past experiences to handle your pain?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

APPENDIX F: ONE MINUTE PAIN QUESTIONNAIRE

The One-Minute Pain Questionnaire (PQ)

1. During the last 24 hours did you have pain or did you take any medication for pain?
   Yes ................................................................. 1
   No ................................................................. 2 (You are finished. Thank you for your time.)

2. During the last 24 hours, how intense was the pain at its worst? Was it...
   Mild ................................................................. 1
   Moderate ......................................................... 2
   Severe ............................................................. 3

3. During the last 24 hours, how often did you have pain? Was it...
   Occasionally, or less than half the time ................. 1
   About half of the time ........................................ 2
   Most of the time ............................................... 3
   All of the time .................................................. 4

4. During the last 24 hours, how much did the pain distress or bother you? Was it...
   Not at all .......................................................... 1
   Some ............................................................... 2
   Quite a lot ........................................................ 3
   Totally ............................................................ 4

5. During the last 24 hours did you take any medications for pain?
   Yes ................................................................. 1
   No ................................................................. 2 (Skip to question 7)

6. How much relief from pain did the medications provide?
   No relief ........................................................... 1
   Some relief ....................................................... 2
   Quite a lot of relief ............................................ 3
   Complete relief ............................................... 4

7. How much do you feel you are in control of your pain management?
   Not at all .......................................................... 1
   Some ............................................................... 2
   Quite a lot ........................................................ 3
   Totally ............................................................ 4

8. Overall, how much are you satisfied or dissatisfied with your pain management?
   Very dissatisfied ................................................. 1
   Somewhat dissatisfied ...................................... 2
   Somewhat satisfied .......................................... 3
   Very satisfied .................................................. 4
APPENDIX G: PAIN OUTCOME QUESTIONNAIRE

Pain Outcome Questionnaire (POQ)

Reason for hospitalization: _________________ # of Days in Hospital: _________

1. Did you expect to have considerable pain as part of your hospital experience?  
   1 Yes  
   2 No

2. Did the doctor or nurse explain the 0-10 pain scale to you?  
   1 Yes  
   2 No

3. How much pain did you experience will in the hospital?  
   1 None  
   2 Minimal  
   3 A Lot  
   4 Severe

4. Did nursing staff ask you to evaluate your pain on a scale of 0-10?  
   1 No  
   2 Seldom  
   3 Most of the time  
   4 All of the time

5. How would you characterize staff response to your request for pain medicine?  
   Timeliness:  
   1 Excellent  
   2 Good  
   3 Fair  
   4 Poor  
   Caring:  
   1 Excellent  
   2 Good  
   3 Fair  
   4 Poor

6. Overall, how well do you feel your pain was controlled?  
   1 Very satisfied  
   2 Satisfied  
   3 Slightly satisfied  
   4 Dissatisfied  
   5 Very Dissatisfied

7. Select the phrase that indicates how satisfied you are with your pain management:
8. Please check the method(s) that were used to control your pain:

_____ None  _____ Self-administered pain pump (PCA)
_____ Pills  _____ Pain medicine in the IV
_____ Injections (shots)  _____ Other (pain patch, epidural, etc)

9. Did pain interfere with your ability to (check all that apply):

_____ Move in bed  _____ Breathe  _____ Relate with others
_____ Walk  _____ Eat  _____ Other (explain):
_____ Mood (emotions)  _____ Sleep

10. Please check all those that represent your viewpoint:

_____ Complaining about pain will distract my doctor from his primary responsibility.
_____ I don’t want to bother the nurse; she’s busy with other patients.
_____ Pain medicine can’t really control pain.
_____ People get addicted to pain medicine easily.
_____ It’s easier to put up with pain than with the side effects that come from pain medicine.
_____ Good patients avoid talking about pain.
_____ Pain medicine should be saved in case the pain gets worse.
_____ Pain builds character; it’s good for you.
_____ Patients should expect to have pain; it’s part of almost every hospitalization.
_____ I shouldn’t have to endure pain; there are medications available to control the pain.

11. Was there a time that the medication you were given for pain didn’t help and you asked for something more or different to relieve the pain?

_____ Yes  _____ No

If your answer is yes, how long did it take before your doctor or nurse changed your treatment to a stronger or different medication and gave it to you?

____ 0-1 hr  ____ 1-2 hrs  ____ 2-4 hrs  ____ 4-8 hrs  ____ 8-24 hrs  ____ 24+ hrs

12. Early in your care, did your doctor or nurse ask you to be sure to tell them when you have pain?

_____ Yes  _____ No

13. Do you have any comments or suggestions for how your pain management could be improved?

APPENDIX H: CHART AUDIT FORM

CHART AUDIT FORM (CAF)

Surgical Unit

Patient Diagnosis

Prior substance abuse history: □ Alcohol □ Narcotics □ Other:

Cause of Pain

Date of surgery: _______________ Date of first ambulation: _______________

Complications: □ Pneumonia 
 □ Wound infection 
 □ Other 
 Describe Other: ____________________

Length of Stay: ____________________

Surgical Procedures:
□ Primary Surgery ________________________
□ Secondary Surgery ________________________
□ Scheduled □ Non-scheduled □ Elective

Disease Status:
□ Active treatment □ Other 
□ Palliative □ Chronic Pain

Was there any documentation of pain by a physician?
If yes, did the physician’s documentation include the use of either a numeric or descriptive pain scale?
□ Yes □ No

Was there documentation of pain by nurses?
If yes, did the nurses’ documentation include the use of either a numeric or descriptive pain intensity scale?
□ Yes □ No

Was there documented descriptions of pain other than objective ratings over the course of the hospitalization?
□ Yes □ No

How many pain intensity ratings were recorded on average for each day of the hospital stay? _________

Was the patient’s goal for pain recorded?
□ Yes □ No

How many were ≥ 5/10 or moderate or severe pain? _____

Highest pain rating? _____ Lowest pain rating? _____

□ Yes □ No

Has a follow-up evaluation been charted for:
Medications: □ Yes □ No
Other Modalities: □ Yes □ No

Is pain assessment reflected in:
RN Admission/History: □ Yes □ No
RN Summary Notes: □ Yes □ No
RN Care Plan: □ Yes □ No
MD Progress Notes: □ Yes □ No
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>PRN</th>
<th>Scheduled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the patient’s pain behavior documented? Choose all that apply.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Not documented</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Crying</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Restless</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Guarding</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Groaning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Yelling/Shouting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Moaning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Screaming</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Grimacing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are interventions to relieve pain documented?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ None documented</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Rx interventions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Non-Rx interventions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Nonspecific</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Pain not relieved</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicate all of the non-pharmacological interventions used to treat pain.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ None documented</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Distraction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Heat</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>□ Repositioning</td>
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<td>□ Cold</td>
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<td>□ Splinting</td>
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<tr>
<td>□ Relaxation</td>
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<tr>
<td>□ Music</td>
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<tr>
<td>□ Other</td>
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<td>Are factors that relieve pain documented?</td>
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<tr>
<td>□ None documented</td>
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<tr>
<td>□ Cough and deep breath</td>
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<tr>
<td>□ Position change</td>
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<tr>
<td>□ Dressing change</td>
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<tr>
<td>□ Movement of extremity</td>
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<tr>
<td>□ Distended bladder / voiding problems</td>
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<tr>
<td>□ Activity/Ambulation</td>
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<tr>
<td>□ Other</td>
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<td>Is the patient’s activity level documented?</td>
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<tr>
<td>□ Not documented</td>
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<tr>
<td>□ Ambulating w/o assist</td>
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<tr>
<td>□ Immobile/paralyzed</td>
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<tr>
<td>□ Moved extremity</td>
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<tr>
<td>□ Strict bedrest</td>
<td></td>
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<tr>
<td>□ Limited ROM</td>
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<tr>
<td>□ Bedrest w/BRP</td>
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<tr>
<td>□ Moved all extremities</td>
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<tr>
<td>□ Out of bed to chair</td>
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<tr>
<td>□ Up ad lib/independent</td>
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<tr>
<td>□ Ambulating w/assist</td>
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<tr>
<td>□ Other</td>
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<tr>
<td>Were any IM pain medications ordered?</td>
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<tr>
<td>□ Yes □ No</td>
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<tr>
<td>IM opioid administered:</td>
<td></td>
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<tr>
<td>_____ Morphine _____ Dilaudid</td>
<td></td>
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<tr>
<td>_____ Demerol _____ Other</td>
<td></td>
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<tr>
<td>Total dose/day #1</td>
<td></td>
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<tr>
<td>__________mg</td>
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<tr>
<td>Total dose/day #2</td>
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<tr>
<td>__________mg</td>
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<tr>
<td>Total dose/day #3</td>
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<tr>
<td>__________mg</td>
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<tr>
<td>Total dose/day #4</td>
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<tr>
<td>__________mg</td>
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<td># of injections/day #1 _____</td>
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<td># of injections/day #2 _____</td>
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<td># of injections/day #3 _____</td>
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<tr>
<td># of injections/day #4 _____</td>
<td></td>
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</tbody>
</table>
Did this patient receive pain medication via a PCA?

- □ PCA only     _____ Morphine
- □ PCA + Cont     _____ Dilaudid
- □ Cont Only     _____ Demerol

Total dose/day #1  ______________mg
Total dose/day #2  ______________mg
Total dose/day #3  ______________mg
Total dose/day #4  ______________mg

Settings:
- Dose _____ mg per push
- Lockout _____ mins
- 4 hr limit _____ mg
- Basal Rate _____ mg/hr
- PRN Bolus _____ mg

Were any IV Push pain medications ordered?

- □ Yes  □ No

Total dose/day #1  ______________mg
Total dose/day #2  ______________mg
Total dose/day #3  ______________mg
Total dose/day #4  ______________mg

Were any IV Push pain medications ordered?

- □ Yes  □ No

IV opioid administered:
- _____ Morphine  _____ Dilaudid
- _____ Demerol  _____ Other

Total dose/day #1  ______________mg
Total dose/day #2  ______________mg
Total dose/day #3  ______________mg
Total dose/day #4  ______________mg

Was an epidural ordered?

- □ Yes  □ No

□ PCA  □ PCA+cont

Were oral analgesics ordered?

- □ Yes  □ No

□ PRN  □ Scheduled

Oral opioid administered:
- ____ Morphine  ____ Darvocet
- ____ Oxycodone  ____ Codeine
- ____ MSContin  ____ Lortab
- ____ Demerol  ____ Methadone
- ____ Percocet  ____ Other

Total dose/day #1  ______________mg
Total dose/day #2  ______________mg
Total dose/day #3  ______________mg
Total dose/day #4  ______________mg

Were any NSAIDs ordered?

- □ Yes  □ No

□ PRN  □ Scheduled

ASA  ____ Ibuprofen  day #1 ___________mg
ASA  ____ Ultram  day #2 ___________mg
ASA  ____ Naproxen  day #3 ___________mg
ASA  ____ Lortab  day #4 ___________mg

ASA  ____ Toradol  day #4 ___________mg
<table>
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<th>PRN</th>
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<tr>
<td>Phenergan</td>
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<td>Vistaril</td>
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<tr>
<td>Benadryl</td>
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<td>APAP</td>
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<td>Prednisone</td>
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<td>Decadron</td>
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<td>Trazadone</td>
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<td>Other</td>
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<td>Total dose/day 1</td>
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<td>Total dose/day 3</td>
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<td>mg</td>
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<td># of doses/day 3</td>
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<tr>
<td>Total dose/day 4</td>
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<td>mg</td>
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<td># of doses/day 4</td>
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<td>mg</td>
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</table>

During the first 48 hrs, did the patient receive a change in analgesic orders?

Yes  No  Why? Check all that apply.

Regimen was:
- Increased  Decreased
- Changed to new drug  PO status changed
- Uncontrolled Pain  Unable to determine

Pain Management
Understand Your Pain and Take Control

What You Need to Know About Pain Control after Surgery

Pain control following surgery is a major priority for both you and your doctors. While you should expect to have some pain after your surgery, your doctors and nurses will make every effort to safely minimize your pain.

We provide the following information to help you understand your options for pain treatment, to describe how you can help your doctors and nurses control your pain, and to empower you to take an active role in making choices about pain treatment.

Be sure to inform your doctor if you are taking pain medication at home on a regular basis and if you are allergic to or cannot tolerate certain pain medications.

Why is pain control so important?

In addition to keeping you comfortable, pain control can help you recover faster and may reduce your risk of developing certain complications after surgery, such as pneumonia and blood clots. If your pain is well controlled, you will be better able to complete important tasks such as walking and deep breathing exercises.
What kinds of pain will I feel after surgery?

You may be surprised at where you experience pain after surgery. Often times, the incision itself is not the only area of discomfort. You may or may not feel the following:

- You may feel muscle pain in the neck, shoulders, back, or chest from lying on the operating table.
- Your throat may feel sore or scratchy.
- Sitting up, walking, and coughing are all important activities after surgery, but they may cause increased pain at or around the incision site.

What can I do to help keep my pain under control?

**Important!** Your doctors and nurses want and need to know about pain that is not adequately controlled. If you are having pain, **please tell someone!!** Don’t worry about being a “bother.”

You can help the doctors and nurses "measure" your pain. While you are recovering, your doctors and nurses will frequently ask you to rate your pain on a scale of 0 to 10, with "0" being "no pain" and "10" being "the worst pain you can imagine." Reporting your pain as a number helps the doctors and nurses know how well your treatment is working and whether to make any changes. Keep in mind that your comfort level (ie, ability to breathe deeply or cough) is more important than your pain score.

0  
No pain or hurt

2  
Hurts a little/pain is mild

4  
Hurts a little more/pain is causing discomfort

6  
Hurts even more/pain is distressing

8  
Hurts a whole lot/pain is horrible

10  
Hurts worse/pain is excruciating
Who is going to help manage my pain?

You and your surgeon will decide what type of pain control would be most acceptable for you after surgery. You are the one who ultimately decides which pain control option is most acceptable. Your surgeon will review your medical and surgical history, check the results from your laboratory tests and physical exam, then advise you about which pain management option may be best suited to safely minimize your discomfort.

After surgery, you will be assessed frequently to ensure that you are comfortable and safe. When necessary, adjustments or changes to your pain management regimen will be made.

Types of Pain-Control Treatments

You may receive more than one type of pain treatment, depending on your needs and the type of surgery you are having. All of these treatments are relatively safe, but like any therapy, they are not completely free of risk. In most cases, side effects are usually easily treated.

- **Intravenous Patient-Controlled Analgesia (PCA)**
  PCA is a computerized pump that safely permits you to push a button and deliver small amounts of pain medicine into your intravenous (IV) line, usually in your arm. PCA provides stable pain relief in most situations. Many patients like the sense of control they have over their pain management. The PCA pump is programmed to give a certain amount of medication when you press the button. It will only allow you to have so much medication, no matter how often you press the button, so there is little worry that you will give yourself too much.

- **Epidural Analgesia**
  Many people are familiar with epidural anesthesia because it is frequently used to control pain during childbirth. Epidural Analgesia uses a pump to deliver pain-control medicine into an epidural catheter (a very thin plastic tube) that is placed into your back. During and after your surgery, pain medications will be infused through this epidural catheter with the goal of providing you with excellent pain control when you
awaken.

- **Nerve Blocks**
  You may be offered a nerve block to control your pain after surgery. Whereas an epidural controls pain over a broad area of your body, a nerve block is used when pain from surgery affects a smaller region of your body, such as an arm or leg. Sometimes a catheter similar to an epidural catheter is placed for prolonged pain control.

- **Pain Medications Taken by Mouth**
  At some point during your recovery from surgery, your doctor will order pain medications to be taken by mouth (oral pain medications). These may be ordered to come at a specified time, or you may need to ask your nurse to bring them to you. *Make sure you know whether or not you need to ask for the medication!* Most oral pain medications can be taken every 3-4 hours.

  *Important!: Do not wait until your pain is severe before you ask for pain medications. Also, if the pain medication has not significantly helped within 30 minutes, notify your nurse. Extra pain medication is available for you to take. You do not have to wait 4 hours to receive more medication.*

What are some of the risks and benefits associated with pain medication?

- **Opioids (Narcotics) after surgery (medications such as morphine, fentanyl, hydromorphone):**
  **Benefits:** Strong pain relievers. Many options are available if one is causing significant side effects. **Risks:** May cause nausea, vomiting, itching, drowsiness, and constipation. The risk of becoming addicted is extremely rare.

- **Non-Opioid (Non-narcotic) Analgesics (Tylenol®, Feverall®):**
  **Benefits:** Effective for mild to moderate pain. They have very few side effects and are safe for most patients. They often decrease the requirement for stronger medications, which may reduce the incidence of side effects. **Risks:** Liver damage may result if more than the recommended daily dose is used. Patients with pre-existing liver disease or those who drink significant quantities of alcohol may be at increased risk.

- **Nonsteroidal Anti-inflammatory Drugs (NSAIDS) ibuprofen (Advil®), naproxen sodium (Aleve):**
  **Benefits:** These drugs reduce swelling and inflammation and relieve mild to moderate pain. Ibuprofen and naproxen sodium are available without a prescription, but you
should ask your doctor about taking them. They may reduce the amount of opioid analgesic you need, possibly reducing side effects such as nausea, vomiting, and drowsiness. If taken alone, there are no restrictions on driving or operating machinery. **Risks:** The most common side effects of NSAIDS are stomach upset and dizziness. You should not take these drugs without your doctor’s approval if you have kidney problems, a history of stomach ulcers, heart failure or are on “blood thinner” medications such as Coumadin® (warfarin), Lovenox® injections, or Plavix®.

**Are there ways I can relieve pain without medication?**

Yes, there are other ways to relieve pain and it is important to keep an open mind about these techniques. When used along with medication, these techniques can dramatically reduce pain. Some options are:

- Focused relaxation that coaches you in creating calm, peaceful images in your mind -- a "mental escape."
- Listening to soft music, changing your position in bed, or tuning in to the hospital music channels may relieve or lessen pain.
- Heat or cold therapy may be an option that your surgeon may choose to help reduce swelling and control your pain.
- Light massage of sore or tense muscles along with adequate rest may relieve or lessen pain as well.
- If you have an abdominal or chest incision, you will want to splint the area with a pillow when you are coughing or deep breathing to decrease motion near your incision.

Most importantly, make sure you are comfortable with your treatment plan. Talk to your doctors and nurses about your concerns and needs. This will help avoid miscommunication, stress, anxiety, and disappointment, which may make pain worse. Keep asking questions until you have satisfactory answers. You are the one who will benefit.

**Play an Active Role in Your Pain Control**

**Ask your doctors and nurses about:**

- Pain and pain control treatments and what you can expect from them. You have a right to the best level of pain relief that can be safely provided.
- Your schedule for pain medicines in the hospital.
- How you can participate in a pain-control plan.
Inform your doctors and nurses about:
- How you relieved your pain before you came to the hospital.
- Pain you have had recently or currently.
- Pain medications you have taken in the past and cannot tolerate.
- Pain medications you have been taking prior to surgery
- Any pain that is not controlled with your current pain medications.

You should:
- Help the doctors and nurses “measure” your pain and expect staff to ask about pain relief often and to respond quickly when you do report pain.
- Ask for pain medicines as soon as pain begins.
- Tell us how well your pain is relieved and your pain relief expectations.
- Use other comfort measures for pain control as described above.

Pain Facts
- Pain is different for everyone.
- Treating pain early usually brings quicker and better results.
- Healing occurs faster when pain is under control.
- Pain affects blood pressure, heart rate, appetite, and general mood.
- Pain may be sharp, dull, stabbing, cramping, throbbing, constant, on and off, etc.

APPENDIX J: IRB APPROVAL FORMS

April 7, 2008

Angela Sterkwether
Attn: Kathryn Bader
2917 West Fort George Wright Drive, Room 369
Spokane, WA 99204

RE: 1478 -- "WSU No. 10358-001 -- Transforming the Pain Experience of Post-operative Surgical Patients through Shared Decision Making". Approval Expiration Date: March 31, 2009.

Dear Ms. Sterkwether:

Your research study referenced above has been reviewed and granted expedited review and approval by the Institutional Review Board - Spokane on April 7, 2008 for conduct at Holy Family Hospital. Review and approval were expedited because this study represents minimal risk to subjects. Items reviewed and approved include:

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<thead>
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<th>Name of Document</th>
<th>Version Date</th>
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<td>Data Collection Protocol</td>
<td>3-30-08</td>
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<tr>
<td>Data collection tools: Personal Characteristics</td>
<td></td>
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<tr>
<td>Pain Coping Tool; The One Minute Pain Questionnaire;</td>
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<tr>
<td>Pain Outcome Questionnaire; Patient Log; Pain Assessment</td>
<td></td>
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<tr>
<td>Flow Sheet (CAP-2); Discharge from Study Patient Log</td>
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<tr>
<td>Informed Consent</td>
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</tbody>
</table>

Approval for conduct of this study expires March 31, 2009.

The following conditions apply to this project:

- All participants entered on this project must sign the appropriate approved consent form. You are responsible for maintaining all consent forms in medical charts as appropriate and in your personal records. Consent forms must be kept on file for a period of three years.

- The study will be subject to continuing review. Your first progress report is due in February 2009. If your study continues to be active beyond the approval period, submit a request for continuation in the progress report. Please note that continuation of research after expiration of IRB approval is a violation of the FDA regulations [21 CFR 50.103 (c)]. Studies will be suspended if the progress report is not received by the expiration date.

- Emergent problems, unexpected side effects, serious adverse reactions and deaths, whether or not study-related are to be reported within five days (form is available on the website).

- Procedural changes or amendments and consent form revisions must be approved by the IRB (form is accessible on the website). No changes may be made without IRB approval except to eliminate apparent immediate hazards.

- Periodic site visits may be made by the IRB. You will be requested to provide the pertinent information if your project should be reviewed.

If your project has been significantly altered as a result of the IRB review and recommendations, it is your responsibility to notify the study sponsor of the changes.

Sincerely,

Philip Cleveland, MD
Co-Chair

104 W. Fifth Ave. Suite 5010; Spokane, WA 99204
(509) 343-2121 • FAX: (509) 343-2123 • Email: Health@ewu.org
http://www.irbspokane.ewu.org
CONSENT FORM
Managing Your Post-Surgical Pain

Angela Starkweather, Ph.D., ANCP, CCRN, CNRN
Assistant Professor, Intercollegiate College of Nursing (509) 324-7279

Kathryn Bader, RN, BSN
Graduate Student, Intercollegiate College of Nursing (509) 979-2273

Introduction
You are being asked to take part in a research study that will evaluate the benefits of receiving patient education in the form of a video, written materials, and discussion. As a participant in the study, you will be asked to fill out questionnaires that ask about your current health status, your pain, and your satisfaction with care. The purpose of this consent form is to give you information to help you decide whether to be in the study or not. Please read the form carefully. You may ask questions about the research or anything in the form that you do not understand. It is your decision to be in the study or not. This process is called "informed consent." You will get a copy of this form for your records.

Why is this study being done?
To see if patient education on pain improves the pain experience after surgery. It will increase understanding in ways to improve pain management.

How many people will take part in the study?
Fifty participants will be in the study.

What is involved in the study?
You have a 50:50 chance of being chosen to receive an educational intervention called Managing Your Post-Surgical Pain. If you are chosen, you will watch a video and receive written materials on goals for pain and ways you can help in your pain management. You will be asked to fill out forms that ask questions about you, your health, and your ability to cope with pain and stress. A questionnaire asking about your pain and satisfaction with care will be filled out each day until you leave the hospital. A final questionnaire asking about your pain experience and satisfaction with care will be filled out on the day you go home. The questionnaires should take about 20 minutes to complete at the beginning and end of the study. The daily questionnaire will take about one minute each day. You may refuse to answer any question or item in the questionnaires. Hospital staff will not see the questionnaires. Your medical record about your surgery and this admission will be reviewed to collect information on your pain scoring and medication use. You will still receive pain medication as if you were not participating in the study.
How long will I be in the study?
You will be in the study until you leave the hospital.

What are the risks of the study?
You may feel uncomfortable talking about your pain or other topics included in this study. If you are uncomfortable at any time, you may choose to not answer specific questions or withdraw from study participation.

Are there benefits to taking part in the study?
Your overall pain may be lower and you may increase your ability to make informed decisions about your health care. Other benefits may include less time in the hospital and more satisfaction with your care. However, you may not benefit from participating in this study.

What other options are there?
This study will not change your care in the hospital. However, you can choose to not participate in the study.

What would prevent me from being in the study?
You must be able to read and understand English to be in this study.

What are the costs?
There are no costs to you.

Who pays for study-related illness or injury?
If you experience feelings of anxiety or discomfort, you should seek medical care through your usual healthcare provider for treatment. You will be responsible for all costs associated with the treatment. No funds have been set aside for compensation or reimbursement for immediate medical treatment or management of injury. If you have questions about feelings you may experience associated with the study, contact the researcher, Kathryn Bader, at (509) 979-2273.

What about confidentiality?
All study forms will have a unique identifying number on them so that your information will be kept confidential. Your name and any other identifying information will not be used in the research reports or any related publications. Only your immediate medical records related to this hospital stay and surgery will be accessed by the identified researchers, Angela Starkweather and Kathryn Bader. In addition to the researchers listed on page one, the IRB-Spokane may also review your records used for this study.
What are my rights as a participant?

If you have questions about your rights as a participant in this research study, you may call Dr. Starkweather at (509) 324-7279. If you have further questions about your rights, you may contact the Institutional Review Board - Spokane at 509-343-2121.

Can I stop participating in the study?

Participation in this study is voluntary and refusal to participate will not affect the care you receive. You may withdraw from the study at any time without loss of benefits to which you are entitled as a patient.

Consent and Legal Rights

I have read or have had read to me the preceding information describing the study. All of my questions have been answered to my satisfaction and I, indicating my desire to participate in this study, am signing this form voluntarily. I am not waiving any of my rights by signing this form. I understand that I will receive a copy of this consent form.

__________________________  ______________________
Signature of Participant     Date

__________________________  ______________________
Signature of Principal Investigator  Date

__________________________  ______________________
Signature of Person Explaining Informed Consent  Date

__________________________  ______________________
Signature of Witness  Date
Addendum to Informed Consent Form
Authorization to Use, Create, and Share Health Information for Research

Managing Your Post-Surgical Pain

Angela Starkweather, Ph.D., ANCP, CCRN, CNRN
Assistant Professor, Intercollegiate College of Nursing

Kathryn Bader, RN BSN
Graduate Student, Intercollegiate College of Nursing

This attachment provides additional information about how your health information (your "records") will be used and disclosed for this research study. Your records may include information from questionnaires you complete about your health and lifestyle, interviews and other health information about you created, collected, or reviewed during the course of the research study as described in the consent form.

This form allows the researcher identified in the consent to use your records to carry out the study described in the consent form. If you do not sign this form, you cannot participate in the study.

All of your records, the signed consent form, and this form also might be reviewed or copied by IRB - Spokane, by WSU-IRB or by other regulatory agencies. These agencies might review your records to check the information collected in this study, to check how the study was conducted or for other uses allowed by law.

Federal and state laws require the researcher to protect the privacy of your records. However, absolute confidentiality cannot be guaranteed because of the need to disclose information as described above. In addition, after the researcher discloses your records to others, then the law may no longer protect the privacy of the information.

Your authorization will expire when the goals of the study have been met.

You can cancel this authorization at any time by giving a written notice to Dr. Angela Starkweather, Intercollegiate College of Nursing, 2917 W. Ft. George Wright Dr., Rm. 369, Spokane, WA 99224. If you cancel this authorization, then you no longer will be able to participate in the study. If you cancel this authorization, the researcher will retain any health information collected prior to your cancellation.

Authorization

I authorize the release of my health information related to this research study, including my signed consent form and this addendum, to IRB – Spokane, WSU-IRB, and other regulatory agencies as described above.
By signing this form, I have not given up any of my legal rights as a research participant. I understand that I will receive a signed copy of this authorization for my records.

Printed Name of Participant

Signature of Participant

Date

I certify that under state law, I am the legally authorized representative of the Participant named above and that I am authorized to sign this form to release the Participant’s medical records and health information as described above.

Printed Name of Legal Representative

Relationship

Signature of Legal Representative

Date

Signature of Witness

Date