

**Discharge Information and its' Relationship to Quality of Care and Transition
Outcomes**

Following Short Stay Hysterectomy: A Pilot Study

by

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Abstract

Vaginal or laparoscopic hysterectomy performed as day surgery has been broadly welcomed but this can diminish the time and opportunity for discharge nursing education leaving patients potentially under prepared to recover at home. It is unknown if the current discharge information and teaching is meeting clients' needs following short stay hysterectomy and what effect this has on satisfaction with care and recovery outcomes. The purpose of this study was to examine relationships between and among a set of variables: discharge information provided, perception of discharge information received, overall satisfaction with short hospital stay experience, satisfaction with discharge information, perceived confidence in self-care and post-operative recovery following short stay hysterectomy procedures. An integrated model of Donabedian's Quality of Care Model and Schumacher and Meleis's Nursing Model of Transitions was the guiding framework for this descriptive correlational study. Fifty one women, aged between 23 and 71, who underwent a short stay hysterectomy procedure, were contacted 48 to 72 hours after discharge for a telephone interview. Quantitative data analysis indicated that most women were satisfied to very satisfied with the short stay experience and with the discharge education they received. There was a high positive correlation between the discharge information provided and the perception of the discharge information received ($r = 0.85$). Women recovering at home scored themselves as having high levels of self-care confidence but reported varying levels of post-surgical recovery. The best predictor of self-care confidence was satisfaction with discharge information (adjusted $R^2 = 27\%$) and the best predictor of post-operative recovery was self-care confidence

(adjusted $R^2 = 22\%$). Findings from this study support the important role of discharge teaching for short stay hysterectomy patients. As well, the implications for nursing practice, education and research are discussed.

Table of Contents

ACKNOWLEDGMENTS.....	ii
ABSTRACT.....	iii
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	viii
LIST OF FIGURES.....	x
CHAPTER 1: Introduction.....	1
Background.....	1
Current trends in healthcare.....	3
Length of stay.....	5
Patient education.....	6
Research Problem.....	8
Purpose.....	9
Conceptual Frameworks Guiding the Study.....	10
Conceptual Framework #1.....	10
Types of transitions.....	10
Indicators of healthy transitions.....	12
Conceptual Framework #2.....	13
Research Questions.....	17
Definitions of Variables.....	17
Other Definitions.....	19
CHAPTER 2: Literature Review.....	21
Length of Hospital Stay.....	21
Approach to Hysterectomy.....	23
Vaginal Hysterectomy and Length of Stay.....	24
Laparoscopic Hysterectomy and Length of Stay.....	25
Cost-Effectiveness of Decreased Length of Stay.....	25
Hysterectomy Length of Stay in Canada.....	26
Information Provision and Day Surgery.....	28
Self-care.....	29
Pain.....	30
Identification and reporting of concerns.....	32
Patient Satisfaction.....	34
Information Provision and Patient Satisfaction.....	35
Information Provision and Patient Outcomes.....	38
Transition Outcomes.....	39
Mastery of self-care.....	39
Well-being and recovery.....	41
Summary.....	43
CHAPTER 3: Methodology.....	45
Study Design.....	45
Population and Sample.....	45
Setting.....	46
Recruitment and Consent.....	48

Procedure.....	49
Data Collection.....	50
Variables and Measurement Instruments.....	51
Descriptive information.....	51
Variable 1- Discharge information provided.....	52
Variable 2- Perception of discharge information received.....	52
Variable 3- Overall satisfaction with short hospital stay experience.....	53
Variable 4- Satisfaction with discharge information.....	54
Variable 5- Perceived confidence in self-care.....	54
Variable 6- Post-operative recovery.....	55
Pilot Test of Instruments.....	57
Data Analysis and Sample Size.....	57
Ethical Considerations.....	58
Quality Issues.....	60
CHAPTER 4: Data Analysis.....	61
Description of the Sample.....	61
Surgery related characteristics.....	64
Data Collection Instruments.....	67
Discharge information provided.....	67
Perception of discharge information received.....	68
Overall satisfaction with short hospital stay experience.....	69
Satisfaction with discharge information.....	70
Perceived confidence in self-care.....	71
Post-operative recovery.....	72
Reliability Analysis.....	72
Findings Corresponding to the Research Questions.....	75
Study question 1.....	76
Study question 2.....	77
Study question 3.....	78
Predictors of Transition Outcomes.....	79
Regression analysis for confidence in self-care.....	80
Regression analysis for post-operative recovery.....	81
Content Analysis of Suggestions to Improve Care.....	82
Summary.....	86
CHAPTER 5: Discussion.....	90
Demographic Characteristics.....	91
Discussion of the Research Questions.....	94
Information provision.....	94
Overall satisfaction.....	95
Satisfaction with discharge information.....	97
Confidence in self-care.....	98
Post-operative recovery.....	100
Relationship among Process and Outcome Variables.....	100
Predictors of Confidence in Self-care and Recovery.....	103

Strengths and Limitations.....	104
Implications.....	106
Nursing practice.....	106
Nursing education.....	108
Nursing research.....	110
Conclusion.....	111
REFERENCES.....	112
APPENDIX A: Letter to Gynaecologists.....	137
APPENDIX B: Script for Preadmission Nurse.....	138
APPENDIX C: Letter of Information and Consent Form.....	139
APPENDIX D: Education Record.....	143
APPENDIX E: Discharge Teaching Guide- Short Stay Hysterectomy.....	144
APPENDIX F: Gynaecology Discharge Instructions for Major Surgical Procedures Pamphlet.....	146
APPENDIX G: Data Collection Tools.....	148
APPENDIX H: Satisfaction Subscale of the SWOPS tool.....	158
APPENDIX I: Email from. Dr. Verran.....	159
APPENDIX J: Email from Dr. Kleinbeck.....	161
APPENDIX K: HREA Ethics Approval.....	162
APPENDIX L: UWO/Lawson Ethics Approval.....	164
APPENDIX M: Description of Dummy Coding of Variables into Binomials.....	165

List of Tables

Table 1: Mean Age Compared between Eligible and Non-Eligible Participants.....63

Table 2: Mean Age and Length of Hospital Stay in Hours between the Final Study Sample and Participant Dropouts.....64

Table 3: Surgery-related Characteristics Compared between Eligible and Non-Eligible Participants.....65

Table 4: Surgery-related Characteristics Compared between the Final Study Sample and Participant Dropouts.....66

Table 5: Descriptive Statistics of the Six Process and Outcome Study Variables (n = 51).....67

Table 6: Descriptive Statistics of the Components of Discharge Information Not Provided and the Patient’s Perception of Discharge Information Not Received (n = 51).....69

Table 7: Descriptive Statistics: Confidence in Self-Care (n=51).....71

Table 8: Mean Score of Each Item of the Post-discharge Surgical Recovery Scale (n = 51).....73

Table 9: Reliability Analysis of Internal Consistency using Cronbach’s Alpha Coefficient for the Interview Variables (n = 51).....74

Table 10: Spearman's Rho (r) Correlation Matrix of the Six Main Study Variables from the Follow-up Interview (n = 51).....77

Table 11: Tests of Difference between Information Provided and the Patient’s Perception of Discharge Information Received using McNemar’s 2-sided Test (n = 51).....77

Table 12: Regression Analyses for Confidence in Self-Care (n = 51).....81

<i>Table 13: Regression Analyses for Post-operative Recovery (n = 51).....</i>	<i>82</i>
<i>Table 14: Theme Identification: Overall Satisfaction Open Ended Question (n = 17)....</i>	<i>84</i>
<i>Table 15: Content Analysis: Overall Satisfaction Open Ended Question (n = 17).....</i>	<i>85</i>
<i>Table 16: Theme Identification: Satisfaction with Discharge Information Open Ended Question (n = 18).....</i>	<i>86</i>
<i>Table 17: Content Analysis: Satisfaction with Discharge Information Open Ended Question (n = 18).....</i>	<i>87</i>

List of Figures

Figure 1: The nursing model of transitions (Schumacher & Meleis, 1994).....	11
Figure 2: Quality of care assessment model (Donabedian, 1980).....	14
Figure 3: The model of this study.....	16
Figure 4: Participant selection.....	62
Figure 5: Cohen correlation coefficients measurement guidelines (Cohen, 1988).....	76

Chapter 1: Introduction

Background

Since the 1980's hysterectomy continues to rank as the most frequently performed surgical procedure on Canadian women, second to caesarean section deliveries (Canadian Institute for Health Information [CIHI], 2010a). In 2008–2009, an average of 338 hysterectomies were performed for every 100,000 Canadian women age 20 or older with an estimated total cost to be \$192 million (CIHI, 2010a). Similar and even higher hysterectomy rates have also been reported internationally (CIHI, 2010b). While hysterectomy rates have slowly declined over the last decade, it remains the most common surgical procedure for women in their middle years and beyond (CIHI, 2010a; Millar, 2001; Statistics Canada, 1992-1993). A hysterectomy may entail removal of the uterus and cervix (total) or removal of the uterus only (subtotal) (Lefebvre et al., 2002). A total hysterectomy can prevent the development of cervical cancer, therefore is often the procedure of choice while subtotal hysterectomies account for approximately 10% of all hysterectomies performed in Canada (Cohen & Young, 1998).

It is estimated that 90% of hysterectomies are elective procedures (Kramer & Reiter, 1997) and are performed for a variety of benign conditions such as fibroids, abnormal bleeding, endometriosis and uterine prolapse as well as for various ovarian and uterine cancers and endometrial hyperplasia. Over the past few decades, alternatives to hysterectomy have emerged such as endometrial ablation for abnormal bleeding (League, 2003) and artery embolization for fibroids (Smith, 2000) which may have resulted in a decrease of hysterectomy rates. However, Stewart, Shuster and Rocca (2012) report that

despite intensive assessments and alternative treatment options the rate of hysterectomy continues to be high and is still commonly used to treat gynaecological disorders.

Hysterectomy procedures can be performed in various ways. The uterus can be removed through the vagina known as vaginal hysterectomy (VH) or abdominally through an incision made in the abdomen. With the introduction of new technology and techniques, such as the laparoscope, the uterus can also be removed through small incisions made in the abdomen known as a laparoscopic hysterectomy (LH) (Cheung, Rosenthal, Morton & Kadanka, 2007; Lowell & Kessler, 2000). When the vaginal approach is done with the assistance of a laparoscope it is referred to as a laparoscopic assisted vaginal hysterectomy (LAVH) (Lefebvre et al., 2002). Removing the uterus through the vagina with or without the assistance of a laparoscope is less invasive than the abdominal approach and reduces overall trauma. There is evidence to support that when a vaginal hysterectomy is not possible, laparoscopic hysterectomy may avoid the need for an abdominal approach, since it has been associated with similar morbidity, operating times and length of hospital stay to the vaginal approach (Cheung et al., 2007; Morton, Cheung & Rosenthal, 2008).

Millar (2001) presents a descriptive analysis of national and provincial trends and reported that the proportion of vaginal hysterectomy in 1999-2000 had increased to 32 percent of all hysterectomies performed in Canada. However, why the abdominal route remains the predominant approach for hysterectomy in Canada is a matter for debate (McCracken & Lefebvre, 2007). According to Ontario's Guidelines Advisory Committee (2004) the vaginal route should be considered as a first choice for all benign indications

and the laparoscopic approach should be considered when it reduces the need for an abdominal hysterectomy. The Society of Obstetricians and Gynaecologists of Canada (SOGC) recommend that all patients requiring hysterectomy should be offered the vaginal approach if feasible, as the post-operative rates of morbidity and complications are lower with the vaginal approach than with any other method (Lefebvre et al., 2002). Millar (2001) agreed that post-operative rates of morbidity and complications are lower with the vaginal approach. Several study findings have concluded that vaginal hysterectomies tend to be associated with less discomfort and risk of infection, a lower complication rate and cost, a shorter hospital stay, an earlier resumption of normal activities and better quality of life outcomes (Garry et al., 2004; Kovac et al., 2002; Nieboer et al., 2009; Summitt, Stovall, Steege & Lipscomb, 1998; Van den Eeden et al., 1998; Warren, Ladapo, Borah & Gunnarsson, 2009) compared to the abdominal approach.

Current trends in health care. As baby boomers continue aging healthcare leaders are challenged to improve access and find effective solutions to contain the spiraling costs of health care. An analysis of hospitalization and surgery rates by the Canadian Institute for Health Information (2007) revealed that the overall number of surgeries being performed in Canadian hospitals increased 17 per cent between 1995-1996 and 2005-2006. Therefore, while more Canadians are undergoing surgery, the Canadian health care system continues to struggle with hospital overcrowding which directly affects access to care and patient safety.

Among industrialized countries of the Organisation for Economic Co-operation and Development (OECD) Canada ranks at 26 out of 32 for number of hospital beds per 1000 population (Ontario Health Coalition, 2011). In fact, among Canadian provinces, Ontario ranks last in numbers of hospital beds per person. When compared to the other OECD countries, Ontario is ranked number 28, followed only by Turkey, Chile and Mexico (Ontario Health Coalition, 2011). Ontario's governments have been reducing hospital bed capacity and almost 30,000 beds have been closed over the last 30 years (Ontario Health Coalition, 2011). This has resulted in lengthy wait lists and extraordinarily high acute care bed occupancy levels which is causing negative impacts on patient access to care and patient safety (Ontario Health Coalition, 2011). Canadian provinces and territories have attempted to improve access to health care and reduce wait times; one such strategy is expanding ambulatory and community care programs.

Current healthcare policy, aimed at decreasing the length of time spent in acute care settings following surgery has moved towards more day surgical units. In the United States, Greenburg et al. (1996) reports 50%-60% of all surgery is performed on an outpatient basis. Trends in Canadian health care have also shown an overall decrease in inpatient surgeries and a shift towards day surgery visits (CIHI, 2007). The concept of day surgery implies that patients come into hospital for their procedures and go home the same day, however, many units operate an 'extended' or to a maximum 23 hour stay policy (Kakande, Nassali & Kituuka, 2005). In Canada, the number of day surgery visits has increased from 1.3 million day surgery visits in 1995–1996 compared to almost 1.8 million visits in 2005–2006 (CIHI, 2007). Therefore, the number of surgeries being

performed in a day surgery setting has increased by 30.6% compared to an inpatient hospital setting which has gone down by 16.5% (CIHI, 2007). While Canadian healthcare leaders have supported a change in the model of care to keep patients out of hospital, such as increasing the use of day surgery, this has not been enough. Hospital overcrowding continues to cause significant access to care problems such as department backlogs, cancellation of surgeries, inadequate staffing ratios, higher infection rates, poorer health outcomes and higher mortality rates (Ontario Health Coalition, 2011). Given this reality, it is likely that the future of Canadian health care will include expanding day surgery units as traditional inpatient operations continue to be transferred into day case procedures.

Length of stay. According to Clarke and Rosen (2001) reducing length of hospital stay (LOS) is a policy aim for many health care systems. Thus, measures taken to manage budget restraints and bed capacity issues have resulted in shortened length of stay for all operative procedures. As the length of hospital stay continues to decline, there is an obvious need to balance the number of patients accessing care while at the same time maintaining the appropriateness of care offered. In support of this shift in care, Clark and Rosen (2001) report that there is a lack of evidence of an association between shorter length of stay and poorer health outcomes. Therefore, in certain circumstances it may be appropriate to reduce the inpatient stay and shift the care burden onto community resources, friends or family. This shift to reducing post-operative stay has led to questions about what is a reasonable length of time to keep a patient in hospital after a hysterectomy procedure?

Length of hospital stay following hysterectomy varies depending on the surgical approach. In 1998, Van den Eeden et al. reported that the average length of hospital stays in the literature ranged from 4.3 to 6.0 days for abdominal hysterectomy, 1.3 to 3.6 days for LAVH, and 1.0 to 3.3 days for VH. Using data from Statistics Canada, Millar (2001) compared average length of hospital stay, by type of hysterectomy 1981/82 to 1996/97. In fifteen years the average length of hospital stay for VH more than halved from 9.9 hospital days in 1981/1982 to 4.1 days in 1996/1997 (Millar, 2001). However, vaginal and laparoscopic hysterectomies are also now being performed as outpatient procedures (Galen, Jacobson & Weckstein, 1994; Gauta, 2011; Levy, Luciano & Emery, 2005; Moller et al., 2001; Morrison & Jacobs, 2004, Ottesen, Sørensen, Rasmussen, Smidt-Jensen & Kehlet, 2002; Perron-Burdick, Yamamoto & Zaritsky, 2011; Spruce, Almost & Smith, 2000; Stovall, Summit, Bran & Ling, 1992; Thiel & Gamelin, 2003). Having LAVH or VH as an outpatient, avoids overnight admission altogether and results in decreased length of stay in hospital and care delivered as an acute care patient. Just as other outpatient surgery is rapidly growing in Canada it is expected that outpatient hysterectomies will continue to be performed with increasing frequency.

Patient education. With the advent of same day discharge following hysterectomies, nurses are more responsible than ever for educating their clients and preparing them for discharge. However, it is becoming more of a challenge for nursing to complete needed patient education with less money for resources and less time (Aghakhani, Nia, Ranjbar, Rahbar & Beheshti, 2012). Nurses have a limited window of opportunity in the post-surgical period, to help patients reach a good level of self-care

through education and teaching, so the patient will feel ready and comfortable for discharge and recovery away from the hospital and professional help. Without good preparation patients may not care for themselves effectively at home (Mitchell, 2000). However, because of time constraints associated with short hospitalizations, it is possible that medical aspects of care will take preference over other interventions such as teaching and patient education.

For appropriate management and recovery, optimal patient satisfaction, and the future success of hysterectomies performed as day procedures, a sound plan for information provision and patient education is required. After discharge these patients may have limited access to health care professionals. Therefore, there is an urgent need to standardize and increase patient education. To cope with this shift in health care delivery, facilities can adopt a managed care system approach. Olivas, Del Tugno-Armanasco, Erickson and Harter (1989) were the first to present case management as a care delivery model which promised to control the care delivery process, manage costs and integrate quality care. Managed care delivery models use standardized resources and promote coordinated, continuity of care over the course of an illness from preadmission to discharge and post discharge (Olivas et al., 1989). This can include using standardized tools such as nursing care plans, protocols, order sets, teaching plans and developing educational materials for clients and family. Some research has indicated that using such standardized formats of care will guide clients through recuperation with minimal complications and a high level of satisfaction. For example, Levy et al., (2005) conducted a large investigation which evaluated a management protocol based on scientific

evidence in the care of patients undergoing hysterectomy and concluded that the protocol facilitated safe outpatient vaginal hysterectomy and recovery in a majority of patients.

Clinical management protocols and standardized tools can be used by facilities to ensure care is delivered in a predictable and timely manner and that patients are discharged following an appropriate length of stay. As the number of outpatient or short stay vaginal and or laparoscopic hysterectomies are expected to continue rising, having a standard teaching plan in the post-operative period will ensure that every patient receives the same instructions and information to increase their self-care knowledge, enhance their understanding of what to expect in the post recovery period, and possibly reduce stress.

Research Problem

Vaginal or laparoscopic hysterectomy performed as day surgery has been broadly welcomed because of improved cost effectiveness with no reported adverse effect on health outcomes. However, such advances have concentrated largely upon medical efficiency with little or no consideration for patient centered issues such as patient education and preparedness for discharge. There is little research pertaining to patient preparation as a determinant of satisfaction or health outcomes following day surgery. It is unknown if the current discharge information and teaching is meeting the client's needs during their recovery at home following short stay hysterectomy and what effect this has on overall satisfaction and patient outcomes.

A number of studies have reported the positive effects of information provision, patient education and teaching on patients' health outcomes and satisfaction. However, day surgery and shorter hospitalizations have been identified as a barrier to information

provision and patient education. To demonstrate accountability for outcomes which are responsive to nursing interventions, the contribution of nursing to effectively educate patients and prepare patients for discharge home following day surgery needs to be illustrated.

There is little literature which provides information about the experiences of women following discharge from hospital after a short stay hysterectomy procedure. This study has therefore responded to a need to investigate the impact of a restructured health care environment which attempts to provide a more efficient and cost-effective process while continuing to provide high quality care and positive patient outcomes. Developing an understanding of the role of information provision in quality of care and transition outcomes is important to the future success of hysterectomy performed as a short stay procedure in the Canadian health care system.

Purpose

The purpose of this study was to examine relationships between and among a set of variables: discharge information provided, perception of discharge information received, overall satisfaction with short hospital stay experience, satisfaction with discharge information, perceived confidence in self-care and post-operative recovery following short stay hysterectomy procedures. This study also explored the early recovery experience of women who had a hysterectomy as a short stay procedure and determined if clients were experiencing problems after discharge from hospital.

Conceptual Frameworks Guiding the Study

Two conceptual frameworks were chosen to guide this study. They included the Nursing Model of Transitions (Schumacher & Meleis, 1994) and Donabedian's Quality of Care Model (Donabedian, 1980).

Conceptual Framework #1

The concept of transitions is consistently cited throughout nursing literature and is related to the patterning of human behaviour in interaction with the environment (Murphy, 1990). Tyhurst (1957) first traced the term from a Latin verb "transire" and defined transition as "a passage of change from place or state or act or set of circumstances to another" (as cited in Schumacher & Meleis, 1994, p. 122). Subsequently, other authors have offered their own definitions and classifications of the concept of transition. Despite the variability in definitions several common themes have been found which include, disruption in routine, emotional upheaval and adjustment required of life changes (Murphy, 1990). In 1986, Chick and Meleis defined transition as one of the concepts central to the discipline of nursing and examined the relationship to nursing therapeutics, environment, client and health. They defined transition as a passage or movement from one state, condition, or place to another.

Types of transitions. The nursing literature describes many diverse situations as transitions which supports the claim of the centrality of transitions in nursing. Previously, Chick and Meleis (1986) defined three types of transitions relevant to nursing; developmental, situational and health-illness. Developmental transitions relate to changes throughout the stages in the life cycle, such as becoming a parent or going through

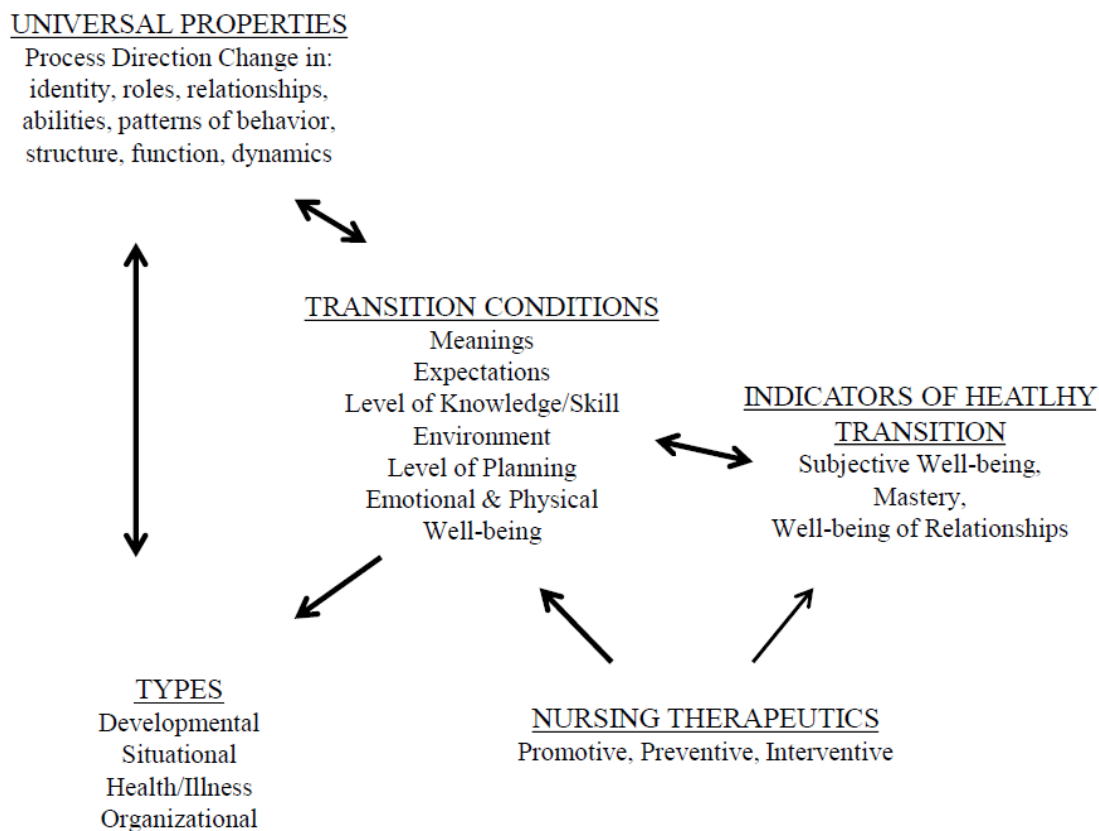


Figure 1. The nursing model of transitions (Schumacher & Meleis, 1994).

menopause (Schumacher & Meleis, 1994). Situational transitions are those which occur by virtue of change in positions or circumstance such as entering nursing practice or transition into a nursing home (Young & Wilkerson, 2000). Lastly, health and illness transitions occur with an alteration of health status or throughout the course of an illness. Examples include receiving a chronic illness diagnosis (Loveys, 1990), recovery from surgery (Wild, 1992) and the transition of being discharged from hospital to the home environment (Chielens & Herrick, 1990; Wong 1991).

Since organizations also experience transitions that affect the lives of persons who work within them and their clients, Schumacher and Meleis (1994) later added organizational as a fourth type which represents transition in the environment (see Figure 1). Organizational transitions include changes to the policies and practices related to managed care such as the move towards outpatient surgery and shortened hospital stays.

Indicators of healthy transitions. This study will focus on the concept of health-illness transitions. Clients undergoing a hysterectomy procedure will undergo many transitions as they recover from surgery. The transition of women from a post-operative hysterectomy short stay inpatient to the role of self-carer in their home environment was explored in this study. Since the goal or mission for the discipline of nursing is the promotion of health and a sense of well-being for individuals, nursing therapeutics within the transition framework are defined as actions or processes that facilitate transitions toward health and perception of well-being (Meleis & Trangenstein, 1994). Consequently the outcomes from clinical interventions while in hospital have the potential to directly impact health transition outcomes for clients. The patient education and teaching provided by nursing in hospital is a modifiable factor which can influence the patients' successful transition from a patient to becoming a self-carer in their home environment following surgery. Three indicators of health transitions identified in Figure 1 include a subjective sense of well-being, mastery of new behaviours, and the well-being of relationships.

During a successful transition the feelings of distress give way to a sense of well-being, such as effective coping and management (Schumaster & Meleis, 1994). This will

manifest in the client's level of understanding of their recovery experiences. These clients will feel well informed of what to expect during their early recovery, be able to recognize normal from abnormal healing and manage complications appropriately. Role mastery also denotes the client's achievement and ability to self-manage and be comfortable with their new situation (Meleis, Sawyer, Im, Messias & Schumacher, 2000). This could include the client's physical ability to meet their self-care needs in addition to their level of emotional coping. It may be difficult for clients to feel mastery early in the transition experience (Meleis et al., 2000); however, clients should feel safe and comfortable caring for themselves while recovering in their home environment. Clients who report having the necessary knowledge and ability to meet their self-care needs while recovering at home is indicative of a healthy transition experience.

According to Schumacher and Meleis (1994) the well-being of relationships is also indicative of a healthy transition. Following a hysterectomy procedure and a short hospital stay, it is highly recommended the client have a support person available during the first twenty-four hours after discharge. In addition to helping with physical needs, having a support person can help the client to focus on their own recovery and healing. Therefore, it is likely clients who have supportive relationships with others will be undergoing a healthier transition.

Conceptual Framework # 2

Donabedian's (1980) quality of care model was also chosen to help guide this research. It is an integrative model of the relations among variables that contribute to health status, quality of care and resource expenditure (Donabedian, 1980). It defines

health care quality in terms of outcomes, measured as the expected improvements in the health status attributable to care. The health services research and the quality improvement communities have used the structure, process, outcome model widely (Romano & Mutter, 2004) and it is the best known model for measuring quality of care. Donabedian (1980) suggested that quality of care measurement should include structure, process, and outcome variables. Figure 2 represents the relationships among these elements.



Figure 2. Quality of care assessment model (Donabedian, 1980).

This model illustrates that organizational structure affects the processes of care. Simultaneously, changes in the processes of care affect the outcomes of care, such as patient health status (Duffy & Hoskins, 2003). Structural measures are the professional and organizational aspects associated with the provision of care such as facility operations. Process refers to the activities exchanged within and between health care providers and patients. According to Donabedian (1988) outcomes are the health status measures and conditions resulting from care processes, which may include clinical outcomes, improvements in knowledge, functional well-being and patient satisfaction with care.

Donabedian (1984) indicated that there is a direct and linear relationship between the three components within the model, and that good structure promotes appropriate processes and better process will in turn promote good outcomes. Most recently Donabedian (1992) revised the model to reflect a more interactive relationship between the three components.

The model used to guide this research is an integrated model of Donabedian's Quality of Care Model and the Nursing Model of Transitions (see Figure 3). The independent variables are the organizational structures which entails the operation of a gynaecology short stay unit using standardized protocols and same day discharge following hysterectomy procedures. The process variables are the care interventions which include forms of information provision provided by nursing. This includes verbal and written discharge information provided by nursing in the post-operative period. In addition, the patients' perception of the discharge information received was explored. The dependent variables are the outcomes which include quality of care measures and transition outcomes.

The measurement of patient satisfaction fulfills three distinct functions: understanding patients' experiences of health care, identifying problems in health care, and evaluation of health care (Donabedian, 1988). According to Laschinger, McGillis Pedersen and Almost (2005) patient satisfaction is an accepted method of assessing the quality of care therefore was chosen as an outcome variable in this research. In this study, patient's satisfaction with their general experience and satisfaction with the discharge information were measured.

From the nursing model of transitions, well-being and mastery are two of the indicators of healthy transitions which were chosen for outcome measures in this research. The recovery process following surgery is an example of a health and illness

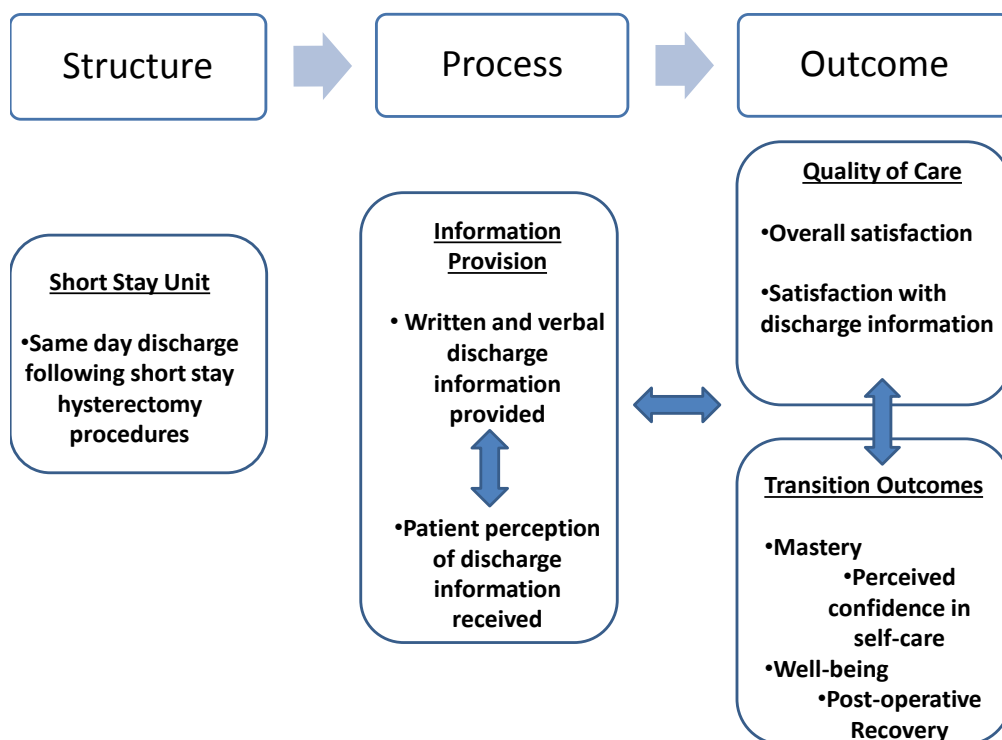


Figure 3. The model of this study.

transition (Meleis & Trangenstein, 1994). Therefore, subjective well-being as an indicator of healthy transition was measured by the subjects' perceived recovery. Mastery is indicative of successful transition at the individual level and includes several components such as self-confidence (Schumaster & Meleis, 1994). According to Meleis et al. (2000) "a dimension that reflects the nature of the transition process is the extent to which there is a pattern indicating that the individuals involved are experiencing an

increase in their level of confidence” (p. 24). Developing confidence is inherent in the recovery process (Meleis et al., 2000) therefore perceived confidence in self-care ability following surgery was measured in this study. Because this study chose to evaluate outcomes early in the recovery process, the well-being of relationships, the third indicator of healthy transitions in the Schumacher and Meleis model, was not measured.

Research Questions

The specific aims of this study were to explore the following questions 48-72 hours after discharge following short stay hysterectomy:

1. What is the relationship between information provided and the patient’s perception of the information they received?
2. What are the relationships between the quality of care measures of patient satisfaction and the patient’s transition outcomes?
3. What are the relationships between information provision and quality of care and transition outcomes?
4. What are significant predictors of the two transition outcome variables, perceived confidence in self-care and post-operative recovery?

Definition of Variables

The following are the conceptual and operational definitions of the variables used in this study.

Structures

Structures are conceptually defined as “the relatively stable characteristics of the providers of care, of the tools and resources they have at their disposal, and of the

physical and organizational settings in which they work” (Donabedian, 1980, p. 81).

Structures include the human, physical and financial resources that are needed to provide health care. In this study, the structure was operationally defined as organizational characteristics which include the operation of a short stay hysterectomy unit. Shorter hospitalizations may be associated with the nurses’ ability to provide appropriate discharge education.

Process

Process is conceptually defined as “a set of activities that go on within and between practitioners and patients” (Donabedian, 1980, p.79). In healthcare settings process can be measured by direct observation or by reviewing documentation by clinicians. In this study, the process variables include discharge information provided and the patient’s perception of discharge information received. This process is operationally defined as the nursing intervention of providing discharge education in the form of written and verbal instructions. This process will be measured by comparing nursing documentation of information provided to the patient reports of discharge information received.

Patient Outcome

Patient outcome is conceptually defined as the results occurring after an episode of health care or lack of care. Some research studies have supported the notion that both organizational structures and processes significantly influence patient outcomes. The clinical outcome is used to provide an evaluation of health care system effectiveness which entails attaining the greatest improvements in health achievable by the best care

(Donabedian, 1992). Patient outcomes include measures of quality of care and the indicators of healthy transitions as follows:

Overall satisfaction: Clients report of their satisfaction with overall short hospital stay experience.

Patient satisfaction with discharge information: Clients report of their satisfaction with the discharge information received.

Mastery: Clients perceived confidence in self-care

Well-being: Clients self-report of post-operative recovery

Other Definitions

Client or Patient

An adult who had a VH, LH or LAVH and was discharged the same day.

Patient Satisfaction

The client's expressed level of comfort and contentment that all post-operative needs were met. Satisfaction will be measured by questions through self-report during a telephone interview.

Discharge Information, "post-operative teaching," or "discharge education"

Gynaecology nurses will conduct discharge teaching using a verbal script and written discharge instructions that will be provided in the post-operative period, prior to the patient leaving hospital.

Vaginal Hysterectomy

A procedure in which the uterus is surgically removed through the vagina (SOGC, n.d.).

Laparoscopic Hysterectomy

A procedure that is performed using surgical instruments to remove the uterus through small incisions in the abdomen (SOGC, n.d.).

Laparoscopically Assisted Vaginal Hysterectomy

A surgical procedure which detaches the uterus from inside the body using laparoscopic instruments (tiny instruments passed through small cuts in the abdomen) and then the uterus is removed through a small cut at the top of the vagina (SOGC, n.d.).

Salpingo-oophorectomy

The surgical removal of a fallopian tube and an ovary (Turkington, 2002). This procedure can be one sided or include both sets of tubes and ovaries. A vaginal hysterectomy may or may not include salpingo-oophorectomy(s).

Salpingectomy

The surgical removal of one or both of a woman's fallopian tubes (Turkington, 2002). A vaginal hysterectomy may or may not include salpingectomy(s).

Short stay surgery, "same day discharge," or "day surgery"

Patients are admitted and operated on and discharged the same day without an overnight stay (Berg, Idvall, Nilsson & Unosson, 2011). (Before 11:59 pm on the day of surgery).

Chapter 2: Literature Review

This chapter reviews literature on length of hospital stay and quality of care outcomes including patient satisfaction and transition outcomes. The vaginal approach to hysterectomy is discussed including patient benefits, clinical outcomes and cost advantages. The literature pertaining to length of hospital stay following vaginal hysterectomy and its application to Canadian health care is discussed. A vast body of research has been devoted to the concept of information provision. Research studies which provide support for the proposed relationships between the structure, process and outcome variables in this study model are reviewed. Information provision for surgical patients is included with an emphasis on day surgery and discharge education. A discussion of the theoretical relationships among information provision and patient outcomes including patient satisfaction, well-being and mastery is also included.

Length of Hospital Stay

Access to inpatient beds and cost continue to be important in shaping health care policy and reducing waiting list times in Canada (Lefebvre et al., 2002). Since the average length of stay (LOS) for all types of hospitalizations has decreased and outpatient surgery is rapidly growing in Canada it is important to ensure patients are receiving a quality care experience without compromising health outcomes or patient satisfaction.

According to Clark and Rosen (2001) there is a lack of evidence of an association between shorter LOS and poorer health outcomes, however, “there is tension between reducing LOS in order to increase throughput (thus allowing more patients to be treated) and maintaining the appropriateness of care offered” (p. 166). In Clark and Rosen’s paper

(2001), two examples illustrate the point at which a minimum acceptable LOS may have been reached which includes “drive-through mastectomies” (Canavan, 1997) and “lunch time abortions” (The Guardian, 1997). Both of these day case procedures were proven technically feasible with no medical contraindications, however, it was thought to be an inappropriate length of time for holistic care, suggesting there may be a limit to reductions in LOS.

Shorter length of hospital stays expose patients to fewer nosocomial infections and reduces the risk of iatrogenic errors and consequently longer hospital stay (Thiel & Kamencic, 2006). It has even been reported that reduced LOS has shown reduced potential for post-operative complications such as deep vein thrombosis, pneumonia, and hospital acquired infections due to contact with other patients and the hospital environment (Giddins Blues, 2003). In addition, there is no firm evidence for an increase in readmission rates in response to reductions in LOS (Epstein, Bogen, Dreyer & Thorpe, 1991; Harrison, Graff, Roos & Brownell, 1995; Loudon, 2009; Klein et al., 1996). Vorhies, Wang, Herndon, Maloney and Huddleston (2012) recently conducted a retrospective study to investigate decreases in LOS after total knee arthroplasty. In this sample of 4057 patients a reduction in LOS was not associated with an increase in the readmission rate. Evidence for an effect of reduced LOS on patient satisfaction in the literature is mixed. Some studies report patients expressing an increased satisfaction with a longer LOS (Jaklevic, 1995; Michaels & Reese-Smith, 1992), while some the reverse (Melia & Morgan, 1991).

Approach to Hysterectomy

Several benefits to the vaginal hysterectomy approach are cited throughout the literature. According to Hancock and Scott (1993) the vaginal approach is superior to the abdominal approach since post-operative chest infections, thromboembolic conditions and intestinal ileus are rare, and abdominal wound dehiscence cannot occur. In addition, vaginal hysterectomy, which avoids the discomfort of an abdominal incision, facilitates early mobilization (Hancock & Scott, 1993) and results in fewer restrictions including the early resumption of activity and food intake (Moller et al., 2001).

It is also evident throughout the literature that either the vaginal, laparoscopically assisted vaginal hysterectomy (LAVH) or laparoscopic hysterectomy (LH) approach offer improved recovery times compared with the abdominal hysterectomy (Clinch, 1994; Garry et al., 2004; Kovac et al., 2002; Nieboer et al., 2009; Raju & Auld, 1994; Summitt et al., 1998; Van den Eeden et al., 1998; Warren et al., 2009). Published studies report that the vaginal and laparoscopic routes as opposed to the abdominal route reduce the need for post-operative hospitalization and the time for convalescence is shorter (Moller et al., 2001, Summit et al., 1998). Despite a shorter LOS most studies report the rate of complications is similar between hysterectomy approaches (Moller et al., 2001). Early discharge from hospital is a clear advantage to the vaginal hysterectomy approach which has allowed for recovery in the home environment and has changed the hysterectomy experience for many women (Giddins Blues, 2003). The satisfaction of patients is more likely to improve when they are allowed to recover in familiar surroundings with familiar caregivers. This may explain why most studies have showed a

high level of satisfaction with early discharge following hysterectomy (Summitt, Stovall, Lipscomb, Washburn, & Ling, 1994; Thiel & Gamelin, 2003).

Vaginal Hysterectomy and Length of Stay

Reiner (1988) was one of the first to describe his experience of his private practice in the United States which discharged patients home within 24 hours of vaginal hysterectomy. The 40 women in Reiner's study found the procedure acceptable and financially rewarding and no post-operative complications attributable to early discharge were encountered. More recent investigations have also reported no effect of a shorter LOS on health outcomes for patients undergoing vaginal hysterectomies (Levy et al. 2005; Moller et al., 2001; Ottesen et al., 2002; Penketh, Griffiths & Chawathe, 2007; Spruce et al., 2000; Stovall et al., 1992). According to Penketh et al. (2007) performing vaginal hysterectomy as a 24-hour day case procedure can be carried out on most women who traditionally would be treated as an inpatient by the abdominal route with no increased risks. Stovall and colleagues (1992) conducted a prospective study to determine both the safety of early discharge after vaginal hysterectomy and patient acceptance of the procedure. In this study (n = 35) the total in hospital stay ranged from 7.8 to 10.6 hours. Most women rated the entire outpatient experience positively and noted that they would recommend it to someone else. In a larger study by Levy et al., (2005) 93% of patients (n = 412) undergoing vaginal hysterectomy were discharged within 12 hours of admission using a clinical management protocol. These studies suggest that outpatient vaginal hysterectomy can be a safe procedure that is accepted by selected patients.

Laparoscopic Hysterectomy and Length of Stay

Same-day discharge may also be a safe option for healthy patients undergoing uncomplicated LH or LAVH (Perron-Burdick et al., 2011). It is evident throughout the literature that using a laparoscope to assist in hysterectomy procedures can also be safely performed as an outpatient procedure (Galen et al., 1994; Heaton & Walid, 2010; Morrison & Jacobs, 2004; Pollard & Ahluwalia, 2005; Perron-Burdick et al., 2011; Summitt et al., 1998; Thiel & Gamelin, 2003; Thiel & Kamenicic, 2006). Morrison and Jacobs (2004) reported that outpatient laparoscopic hysterectomy in a rural ambulatory setting was proven feasible, safe and cost effective, where the mean post-operative length of stay was 6 hours, 79 minutes. Moller et al., (2001) reports discharging patients in their pilot study in one day following LAVH. Taylor (1994) reports discharging patients as early as 3 hours and 50 minutes following a LAVH using laser technology. Perron-Burdick and colleagues (2011) conducted chart reviews (n = 527) and concluded that same-day discharge is a safe alternative to overnight admission for healthy patients undergoing uncomplicated laparoscopic hysterectomy and is associated with low readmission and complication rates.

Cost-Effectiveness of Decreased Length of Stay

There is also clear cost advantages associated with vaginal and/or laparoscopic hysterectomy due to decreased LOS. Because hysterectomy is one of the most commonly performed operations in Canada converting hysterectomy procedures from an inpatient to an outpatient or same-day discharge procedure should reduce overall costs and improve access for other patients requiring an inpatient bed (Gien, Kupets & Coven, 2011; Levy et

al. 2005; Thiel & Kamencic, 2006). Cost comparisons of the various hysterectomy procedures have reported that costs were highest for abdominal and lowest for the vaginal approach (Abenhaim, Dube, Dufort & Tulandi, 2001; Cohen & Young, 1998; Morrison & Jacobs, 2004, Schiavone et al., 2012; Van den Eeden et al., 1998). According to Thiel and Kamencic (2006) if 224 hysterectomy procedures were converted from an average 4.2 day hospital stay to an outpatient procedure it would save the Canadian health care system \$648 480. In their cost analysis of a Canadian teaching hospital, Abenhaim and colleagues (2001) reported a nursing cost per patient for laparoscopic hysterectomy of \$555.01 compared to \$1254.79 for abdominal hysterectomy. Using a large perspective database of 128,634 women who had a laparoscopic hysterectomy, Schiavone and colleagues (2012) reported that compared to same-day discharge, costs were \$207 greater for patients who had a 1 day stay and \$1383 greater for those with a stay of ≥ 2 days. The average direct cost for outpatient vaginal hysterectomy was 21.3% lower than for inpatient vaginal hysterectomy (Levy et al., 2005). Spruce and colleagues (2000) also realized the cost-effectiveness to the institution of vaginal hysterectomies performed as an outpatient procedure and reported a cost savings of \$1582.83 per case.

Hysterectomy Length of Stay in Canada

Although a number of reports have demonstrated the feasibility of outpatient and short stay vaginal hysterectomy (VH), the average post-operative stay after VH in Canada has been reported as 4.2 days (Abenhaim et al., 2001) and 3.0 days (Toma, Hopman & Gorwill, 2004). At the University of Saskatchewan in Canada, Thiel and Kamencic (2006) conducted 224 LH with a mean post-operative stay of 5 hours and 54

minutes. These researchers assessed the costs associated with outpatient LH and concluded “with the current constraints in the Canadian health care system, LH offers an opportunity to save significant health care costs while continuing to provide excellent results and patient satisfaction” (p. 798). Spruce et al. (2000) also published their study which was a pilot project to determine the feasibility and cost-effectiveness of completing vaginal hysterectomy as an outpatient procedure. They reported successfully discharging patients (n = 19) in as little as 4.3 hours and an average post-operative stay of 8.4 hrs. Although a small sample size was used, there were no differences in complication rates between inpatients or outpatients following the hysterectomy and it was concluded that outpatient hysterectomies improved the use of resources including inpatient beds and fiscal resources. However, since there are few studies which have directly reported the effect of performing outpatient VH or LH in Canada additional research is warranted.

According to Van den Eeden et al. (1998) the outcomes for the VH approach are best and result in better quality-of-life outcomes in addition to lower utilization and costs compared with either the laparoscopically assisted vaginal or abdominal hysterectomy approach. This finding is supported by the Society of Obstetricians and Gynaecologists of Canada who recommend that all patients be offered the vaginal approach (Lefebvre et al., 2002). However, Mollar et al. reported in 2001 that in spite of the benefits to the vaginal and laparoscopic approaches, the vast majority of hysterectomies continue to be performed abdominally.

Information Provision and Day Surgery

Due to the time constraints associated with day surgery it is possible that medical aspects of care will take preference over other interventions such as teaching and patient education. Patients are commonly admitted only a few hours prior to day surgery which provides minimal time for nurse-patient interaction. In addition, there is little time in the post-operative period for teaching and much of the post-operative care and monitoring is done at home by patients and their families following discharge (Pieper et al., 2006).

Many studies have investigated the various aspects of information provision required for the success of day surgery. Otte (1996) conducted a qualitative review of eight patients who had outpatient ear, nose and throat surgery and participants preferred the convenience of day surgery. However, unanimously all the participants reported being inadequately prepared in terms of informational and educational support. Jacobs (2000) explored informational needs of postsurgical patients (n = 45) following early discharge and many patients reported that they were not given the information they needed.

Suhonen and Leino-Kilpi (2006) conducted a literature review of surgical day patients' information needs. It was concluded that day surgery patients are the most challenging due to the limited timing available for information provision. This is of concern because patients following early discharge may have an increased need for information once they are at home and responsible for their own care. Teaching on the day of surgery may not be appropriate or feasible but if information is given before admission patients may not remember important information and instructions following discharge. As day surgery

and shorter hospitalizations continue to grow, both numerically and in surgical complexity, information dissemination will continue to be a considerable challenge.

Post-operative patients have specific informational needs, especially when they are discharged following short hospitalizations. Discharge teaching and education is crucial to the success of day surgery as responsibility is soon transferred to the patient and carer (Mitchell, 2000). A literature review revealed three imperative components of discharge teaching following surgery which include self-care needs such as activity and wound care, pain management routines and how to identify and report any potential complications that may occur after discharge (Jacobs, 2000; Pieper et al., 2006). Each are discussed in further detail below.

Self-care. Following all surgical procedures and discharge from hospital, patients have an altered ability to self-care. In Pieper et al., (2006) examination of the research literature it was concluded that incision/wound care, pain, and activity level are primary concerns of patients discharged following surgical procedures. Ensuring patients have the necessary knowledge to perform self-care is one of the key functions of discharge teaching (Leino-Kilpi, Iire, Suominen Vuoreniieimo & Valimaki, 1993). Jacobs (2000) studied patients' perceptions of information needed to manage self-care following a variety of abdominal surgical procedures. Areas in which patients reported inadequate information included complication recognition (56.8%), exercise (55.3%), trouble with urination (54.6%), and bowel trouble (46.3%). In a qualitative study by Kleinbeck and Hoffart (1994) participants were unsure of which activities they could perform around the house in the initial post-operative period and would have preferred more information

concerning recovery at home. Henderson and Zernike (2001) studied the impact of discharge information for patients (n = 185) undergoing abdominal or colorectal surgical procedures. Only 58% of patients reported receiving information about pain and wound care. Out of the 27% who did not receive wound care information, 63% accessed a healthcare facility after discharge because of wound-related problems that they did not know how to handle. Pieper et al., (2006) reported that having a lack of information about post-operative self-care after discharge has the potential to increase complications and that postsurgical patients often have self-care concerns in their preparation for discharge from the hospital. Nurses play a critical role in assisting clients to meet their self-care needs while in hospital. Following day surgery it is even more of a challenge but essential that nurses use appropriate education and instructions so that patients and their families will be able to meet their self-care needs while they recover in their home environment.

Pain. Many studies have highlighted post-operative morbidity following day surgery; however, the focus has mainly been on the degree and duration of pain. Pain management becomes an important issue following short hospitalizations since the patient and or family become solely responsible during the recovery period. According to Mitchell, Kenyon and Monks (1999) pain is the number one reason why patients are admitted to an inpatient bed following day surgery. Ghosh and Sallam (1994) reported that the majority of contacts made by patients with either the hospital or general practitioner in the first 48 hours after day surgery were due to problems with post-operative pain. Watt-Watson, Chung, Chan and McGillion (2004) examined pain management and interviewed patients (n = 180) several times in the first week following

ambulatory surgery. Results showed that pain was severe especially in the first 24 hours and about 20% of the patients' experienced analgesic adverse events. In this study the majority of patients reported not having received information at discharge about analgesic use in terms of inadequate pain relief and/or adverse events. Watkins (2001) conducted a literature review of 22 adult outpatient surgery studies which related to pain management and education in the postsurgical period and concluded that there is a clear need to improve pain education in the outpatient surgery population.

Mitchell (2004) also reviewed literature concerning effective pain management in day surgery. In this paper Mitchell (2004) recommends that nurses ensure that an effective assessment of pain prior to discharge has taken place and that patients should be given adequate verbal and written information about the correct administration of drugs prescribed for them to take at home. According to Lewin and Razis (1995) post-operative pain following day case surgery is a common problem and prescribing analgesia with clear instructions for the patient is crucial. In their study, Lewin and Razis (1995) trialed giving prepackaged analgesia along with a patient information leaflet and concluded that this would increase the patient's confidence in home analgesia and their acceptance of day surgery. Specifically gynaecological surgery has been associated with higher levels of pain and pain management can be a considerable problem during recovery at home (Codd, 1991; Mitchell, 2004, Mitchell et al., 1999). Therefore, pain management following vaginal hysterectomies performed as day surgery is a concern. It is imperative that discharge teaching includes a pain management plan and information about possible analgesic side effects.

Identification and reporting of concerns. Following day surgery patients recover in their home environment which means immediate access to professional help and advice that is available to in-hospital surgical patients has been lost. This has been identified in the literature as potentially problematic for patients recovering from outpatient surgery (Pineault, Contandriopoulos, Valois, Bastian & Lance, 1985). A follow-up survey of 953 day surgery patients by Ghosh and Sallam (1994), found that 2.5% of respondents needed to contact the hospital within 24 hours of discharge and 5.7% contacted community services in the first 48 hours because of complications. Donoghue, Pelletier, Duffield and Torres (1997) following an in-depth interview of 21 participants post-cystoscopic day surgery reported some patients did not know who to contact or what to do in the case of unexpected symptoms presenting post-operatively. It is recommended by the Canadian Guidelines to the Practice of Anesthesia that all outpatients have a plan for emergency and routine follow-up care (Merchant et al., 2012). Therefore, it is necessary that patients be informed how to contact professional help if needed.

Patients also need to be able to recognize when problems or complications arise which is another theme identified in the literature. Jacobs (2000) studied patients' perceptions of information needed to manage self-care following a variety of abdominal surgical procedures and reported patients needing information about prevention, identification and management of potential complications. In the study by Donoghue et al. (1997) the interviews of men following cystoscopic day surgery revealed patients feeling inadequately informed of possible post-operative problems they could potentially

experience at home. Charles and colleagues (1994) undertook a large investigation using a telephone survey to examine medicine and surgical patients' (n = 4599) reports about their care in Canadian hospitals. In terms of discharge information, the patients identified several deficits, including the highest being a lack of information regarding the complications to watch for at home (39%). Mitchell (2000) recognizes that with early discharge some patients may encounter events at home for which they will feel unprepared, so it is strongly recommended that explanations are given at discharge regarding the handling of perceived problems at home.

Information dissemination appears to be a considerable challenge for day surgery. While it is known that not all patients require the same level of information or instructions, it is clear from the literature that day surgery patients need to receive more information about their expected recovery. It is also evident that nurses can make a significant contribution through the provision of discharge information which is critical to the success of short hospitalizations. Findings from the literature illustrate the importance of having education and teaching plans, especially for those undergoing short hospitalizations. Using standardized care plans will help ensure that clients are receiving quality care and the same instructions and information. Educating patients undergoing early discharge following hysterectomy and their family members about self-care measures, pain management and knowing how to seek help if complications arise is essential to a successful recovery. As the practice of preparing patients for discharge and recovery at home improves, there is the potential it will decrease complications and readmission into the healthcare system.

Patient Satisfaction

Urden (2002) defines patient satisfaction as an individual and subjective perception which consists of both a cognitive evaluation and an emotional reaction to the components of care delivery. Patient satisfaction as an outcome of health care delivery has been widely adopted as an indicator of quality of care (Greeneich, 1993; O'Connell, Young & Twigg, 1999). In particular, patient satisfaction with nursing has been cited as the most important predictor of patients' overall satisfaction (Mahon, 1997; Urden, 2002; Wagner & Bear, 2009). Wagner and Bear (2009) reported that the consequences of achieving high levels of patients' satisfaction with nursing care include compliance with healthcare regimens which leads to better health outcomes. Similarly Sitzia and Wood (1999) stated that patients who are satisfied with their nursing care are more likely to be adherent to treatment and therefore to have better outcomes. Baker (1997) presented a pragmatic model which linked together empirical evidence about patient satisfaction in general practice and satisfaction was found to influence patients' future behaviour such as compliance with advice or whether clients change care providers. Therefore, because patient satisfaction with nursing care can affect health outcomes, it is thought to be an important indicator of quality care.

Patient satisfaction is also an important index of quality improvement in health care organizations (Lo, Stuenkel & Rodriguez, 2009). According to Greeneich (1993) patient satisfaction with nursing care is a measure of organizational effectiveness. Bear and Bowers (1998) also recognize client satisfaction as an important quality assurance measure. Nursing as a profession has an accountability to foster a culture which supports

patient satisfaction and therefore, must evaluate the outcome of their services. Therefore, according to Urden (2002), measuring satisfaction should be used to determine how well an organization is delivering healthcare and to demonstrate improvement in aspects of care delivery.

While there is a demand on the Canadian health care system to decrease LOS following procedures such as hysterectomy, there continues to be a lack of literature evaluating patient satisfaction. Several published studies have demonstrated overall high levels of patient satisfaction following outpatient vaginal and or laparoscopic hysterectomy in European countries (Moller et al., 2001; Ottesen et al., 2002; Perron–Burdick et al., 2011) and the United States (Galen et al., 1994; Levy et al., 2005; Morrison & Jacobs, 2004; Pollard & Ahluwalia, 2005; Reiner, 1988; Stovall et al., 1992; Thiel & Gamelin, 2003). However, more Canadian studies evaluating satisfaction with shortened LOS following these procedures is needed.

Information Provision and Patient Satisfaction

There is scholarly research and evidence to support the impact of nursing interventions such as patient education on patient satisfaction. According to Raper (1996) the more information and education that nurses provide, the higher the level of satisfaction. Guilbert and Roter (1997) evaluated coping at home after surgery and concluded the most important determinant of satisfaction was patient preparation (i.e., effective communication and instruction). More specifically McGrath et al. (2004) stated that the use of discharge instructions was one of the factors related to patient satisfaction that affects clinical outcomes. Lo and colleagues (2009) agreed that discharge

instructions can positively impact both patient satisfaction and clinical outcome. In 2003, Kessels stated that instructions and information provided to patients should be simple and specific since 40% to 80% of medical information provided is not retained by the client. Therefore providing discharge teaching that will be effective in meeting the needs of patients is a vital component of patient satisfaction (Lo et al., 2009).

Since there is less time spent recovering in hospital and less time available for teaching, patient satisfaction following shorter LOS is an important issue in the delivery of health care services. According to Devine and Cook (1986) many studies have demonstrated that patient education has a direct impact on patient satisfaction and the ability to reduce hospital LOS. In a prospective study of patient satisfaction following day surgery (n = 251), Lemos et al. (2009) found the “totally satisfied” group reported greater and more detailed post-operative clinical information than the “not totally satisfied” group at both interviews, one at discharge and one 30 days after surgery. Leinonen, Leino-Kilpi, Ståhlberg and Lertola in 2001 surveyed 894 patients’ level of satisfaction with their perioperative experience and found nursing care overall was deemed excellent but reported negatively on the educational aspects of the nurse’s role. Sigurdardottir (1996) undertook a postal survey which explored satisfaction with care between two day surgery facilities (n = 70 in each facility). Lack of information was found to be a main area of concern and patients reported infrequently receiving information pamphlets regarding their operation and treatment. This is of concern since it is known, that the provision of written in addition to verbal information significantly increases knowledge (Johnson, Sandford & Tyndall, 2003). Willis, Watson, Harper and

Humphreys (1997) also used a postal questionnaire to assess patient satisfaction following day surgery (n = 224) and found strong positive correlations between level of satisfaction and written information. While overall satisfaction was high, it was concluded that improvements in the provision of information could still be made. In conclusion, there is good evidence to suggest a positive correlation between the provision of information and patient satisfaction following day surgery.

It is clear from the literature the importance of information provision and the relationship to higher levels of patient satisfaction and clinical outcomes. Few studies have examined the effects of information provision and gynaecology patients. In Williams and Clark's (2000) qualitative study of women following hysterectomy, participants alluded to the importance of support from family and friends and information from healthcare providers. Garrud, Wood and Stainsby (2001) studied 41 patients attending an outpatient gynaecology clinic who were scheduled for an elective laparoscopic procedure. They investigated whether increased provision of risk information would increase patient's anxiety level. Results showed that detailed risk information did not increase anxiety and instead was associated with greater knowledge about laparoscopy and higher levels of satisfaction. Bran, Spellman and Summitt (1995) used a protocol in their ambulatory clinic to successfully perform vaginal hysterectomy on an outpatient basis and reported that the preoperative and post-operative education provided to patients was the key to their success.

In summary it is clear that information provision is important to women undergoing gynaecology surgery. However, there is limited literature which specifically

examines information provision in the post-operative period and the outcome effect of this intervention on gynaecologic surgical patients. With the trend for vaginal hysterectomy to be performed on an outpatient basis there is a need to investigate the effect of this organizational change on the provision of information and patient outcomes.

Information Provision and Patient Outcomes

In addition to satisfaction other studies have found significant positive correlations between patient outcome and information provision. Devine and Cook (1983) performed a meta-analysis of 102 studies to examine how psychoeducational interventions such as providing health information can influence recovery, pain and psychological well-being. Their findings revealed that psychoeducational interventions reduced surgical pain and medical complications, increased psychological well-being and heightened satisfaction with care. Galloway and colleagues (1993) examined information needs and the effect of symptoms on activities of persons following hospital discharge for lung cancer surgery and concluded that these patients had many information needs and that providing information might help to optimize patient functioning. In a survey of 105 patients following day surgery, Lindén and Engberg (1995) found thirty-six percent of subjects felt the information provided was insufficient and in addition, found a significantly positive correlation between reduced level of information and post-operative morbidity. Pieper et al. (2006) examined research literature from 1990 to 2004 about information needs of post-operative patients prior to their discharge and concluded that unmet discharge needs can contribute to poor patient outcomes and readmission. They also concluded that patients generally want a high level of information and that discharge

information helps to optimize their functioning especially during the first two weeks at home. These studies provide evidence to suggest that information and education improves post-operative outcomes in patients recovering from surgery.

Transition Outcomes

Mastery of self-care. One of the roles of nursing is to educate patients on how to cope with their health transition and participate fully in self-care as they recover at home. According to Carroll (1995) nurses can be pivotal in the recovery process by supporting initial mastery of self-care behaviors to promote optimal health. Orem (2001) developed a grand theory of self-care which defined self-care as “the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health and well-being” (p. 117). When a patient is unable to meet the demand of the requisites for self-care due to a change in health a deficit exists and nursing care is needed. Riegel and colleagues (2004) expanded on this work and defined self-care “as a process of maintaining health through treatment adherence and symptom monitoring” (p. 352). Building on this prior work, the middle-range theory of self-care was developed which defined the core elements of self-care to be self-care maintenance, monitoring and management (Riegel, Jaarsma & Strömberg, 2012). Having confidence in the ability to perform self-care is important in each stage of the self-care process (Riegel et al., 2012).

Self-care is considered essential in the management of chronic illness and evolved from clinical practice caring for adults with heart failure (Riegel et al., 2012). Although these theories of self-care were developed in the context of chronic illness, the researcher believes that there is a self-care demand imposed by learning new self-care knowledge

and skills following surgery. When this is accompanied by short hospital stays, it could foster feelings of decreased confidence in the knowledge and ability to provide self-care after discharge. Bandura (1982) defined perceived self-efficacy as judgments as to how well one can execute required courses of actions. Eccles and Wigfield (2002) elaborate on Bandura's definition and describe self-efficacy as an individual's confidence in his or her ability to execute a course of action and to accomplish a task or solve a problem. Similarly Callaghan (2005) defines a concept of "self-care self-efficacy" as the judgment of one's ability to perform self-care behaviors. It is theorized that having self-confidence in your ability to self-manage will contribute to health, well-being or recovery (Foster & Fenlon, 2011). Carroll (1995) describes "the relationship between the decision-making phase (self-care agency) and the productive phase of self-care/recovery behaviors, during the recovery process, is mediated by how people judge their specific capabilities, their self-efficacy expectations" (p. 51). Few empirical studies have demonstrated the link between self-efficacy, self-care behaviors and health status (Carlson, et al., 2001; Lorig et al., 1999).

Orem (1985) also postulates that an important goal of nursing interventions is enabling the patient to be an agent of his or her own care. In their study Hanucharunkui and Vinya-nguag (1991) confirmed this proposition and stated nurse-patient interactions designed to promote patient participation in self-care will expedite the rate of recovery following surgery and enhance patient satisfaction. Having knowledge during the recovery phase can help build patients confidence so they can make the bridge to self-care mastery. According to Morris (2012) "the mastery of self-care is dependent on the

quality, quantity, and consistency of patient teaching” (p. 4). This is a critical role of nursing. However, the number of studies related to the effect of education on the ability of patients’ self-care following short hospitalizations is limited. In addition, there is limited evidence which supports a link between post-operative confidence in self-care and overall satisfaction with the care received. Therefore, understanding how nursing variables such as discharge education provided can affect confidence in self-care is essential.

Well-being and recovery. When discharge occurs the same day of surgery, patients spend their entire recuperative process at home. The patient assumes responsibility for their own self-monitoring of health and evaluating signs and symptoms (Kleinbeck, 2000). During this time the patient’s perception of well-being may be altered. Having a perception of well-being during recovery can indicate that a healthy transition is occurring. Kiefer (2008) discussed well-being in terms of unique interactions among an individual’s physical, mental, social, and environmental status. In a concept analysis by Allvin, Berg, Idvall, and Nilsson (2007) post-operative recovery was defined as an energy-requiring process of returning to normality and wholeness regarding activities of daily living and psychological well-being. Therefore, the transition experience and concept of well-being can be measured by the patients’ level of perceived recovery.

Baker (1989) conceptualizes the process of recovery in three phases, including passivity, activity resumption and stabilization. The first phase is passivity, which is the focus of this study’s evaluation period in which individual’s complete self-care and sedentary activities but have not resumed regular activity. Surgical recovery is also

described by Baker (1989) as having three attributes including, biological healing, resumption of functional and social activities and a feeling of “returning to normal”. Knowledge about how patients experience and manage the recovery process after discharge following short stay surgery is necessary.

Nurses play a critical role in helping to prepare patients for their recovery experience. Enabling patients following short stay surgery to develop ways of monitoring their health status is likely to increase their ability to manage their post-operative symptoms and resume their usual activities without delay as they recovery in their home environment. This can be accomplished through the provision of information prior to discharge. Increasing patient knowledge by delivering comprehensive discharge instructions will help to enable clients to work toward a level of perceived surgical recovery and personal well-being.

It is critical that nurses accurately find ways to meet patients’ informational needs prior to discharge especially for those undergoing short hospitalizations. The use of a prescribed comprehensive educational plan and the development of educational materials can be used to assist in this process. Due to rapid discharge following day surgery having a defined discharge protocol and education plans may further enhance patient satisfaction and promote overall quality care outcomes. It is theorized that having an education plan that can be consistently and effectively administered can be used to assist patients be discharged safely and recover successfully at home following hysterectomy procedures.

Summary

In summary, discharging patients the same day following vaginal and laparoscopic hysterectomy procedures has been proven to be a safe alternative to overnight stays and is thus a feasible option for many women. Same-day discharge has demonstrated cost-effectiveness and improved the utilization of inpatient beds and fiscal resources. However, such advances have concentrated largely upon medical efficiency with little or no consideration for patient centered issues such as patient education and preparedness for discharge. There is little research pertaining to discharge information as a determinant of satisfaction or its impact on health outcomes following day surgery.

Studies have shown that short hospital stays following hysterectomy procedures are associated with a high level of patient satisfaction in European countries and the United States. However, more Canadian studies evaluating satisfaction and the experiences of women with shortened LOS following these procedures is needed. It is clear from the literature that providing discharge teaching that is effective in meeting the needs of patients is a vital component of patient satisfaction and there is a good evidence that a positive correlation exists between the provision of information and patient satisfaction following day surgery.

Given the shorter length of hospital stay, information dissemination appears to be a considerable challenge for day surgery environments. Many studies have investigated the various aspects of information provision required for the success of day surgery. However, there is limited literature which specifically examines information provision in the post-operative period and the outcome effect of this intervention on gynaecologic

surgical patients. It is also evident from the literature that nurses can make significant contributions to patient satisfaction and recovery through the provision of discharge information. Ensuring patients receive information about their self-care needs, pain management and expected recovery is critical to the success of short hospitalizations.

This study responded to a need to investigate the impact of an important component of nursing care in a restructured health care environment which attempts to provide a more efficient and cost-effective process while continuing to provide high quality care and positive patient outcomes. Developing an understanding of the role of information provision in quality of care and transition outcomes is important to the future success of hysterectomy performed as a short stay procedure in the Canadian health care system.

Chapter 3: Methodology

The following describes the research process, including research design, participants, recruitment, data collection methods, and the statistical analyses used to investigate the problem. Ethical considerations and quality issues are also discussed.

Study Design

This study investigated the discharge information provided to patients following a short stay hysterectomy procedure and its' relationship to patient outcomes. A descriptive correlational design was used to address the research questions. This study identified and explored the relationship between the following research variables: discharge information provided, perception of discharge information received, overall satisfaction with short hospital stay experience, satisfaction with discharge information, perceived confidence in self-care, and post-operative recovery.

Population and Sample

The target population included all women who underwent same day vaginal or laparoscopic hysterectomy surgery. The accessible population and sample for this study are those women who met the inclusion criteria for same day hysterectomy surgery at the London Health Sciences Centre (LHSC) in Ontario, Canada. Patients who meet the following criteria are generally those selected for short stay vaginal/laparoscopic hysterectomy surgery at LHSC or at the discretion of the surgeon:

- vaginal hysterectomy or laparoscopic assisted vaginal hysterectomy or laparoscopic hysterectomy (with or without salpingo-oophorectomy(s) or salpingectomy(s))

- absence of a required concomitant surgery procedure such as an anterior or posterior repair
- absence of other major medical or psychiatric illnesses
- home support person available to drive client home and assist client for the first 24 hours following discharge

All women who met the following inclusion criteria were invited to participate in this study:

- scheduled by their surgeon for short stay vaginal or laparoscopic hysterectomy procedure (with or without salpingo-oophorectomy(s) or salpingectomy(s))
- did not require concomitant procedure such as an anterior or posterior repair
- spoke and understood English
- could be easily contacted by telephone

Women were excluded from this study if they were undergoing some form of bladder or posterior repair as it was considered that the recovery process and level of intervention would be different. Following the participants' discharge from hospital, the researcher reviewed their medical charts on the gynaecology unit to determine if the inclusion criteria were met including length of hospital stay in hours to ensure the patient was discharged the same day. The women who were admitted overnight or not discharged by 11:59 pm on the day of surgery were excluded from the study.

Setting

One major hospital, Victoria Campus at London Health Sciences Centre (LHSC) in Southwestern Ontario, was chosen for this study because of the number of

hysterectomy operations performed annually and the region's importance as a growth center. Approximately 300 vaginal or laparoscopic hysterectomy procedures are performed in any given year. This excludes abdominal hysterectomy procedures and any operations which include anterior or posterior repairs. This project was supported by the manager of Women's Health Services and the gynaecologists working for LHSC. A formal letter explaining the study was sent to the surgeons before the recruitment process began.

Victoria Hospital, LHSC, operates a 20-bed inpatient gynaecology unit which offers post-operative care for women undergoing gynaecological procedures and women with gynaecological cancer. Historically on this unit following vaginal and/or laparoscopic hysterectomy the majority of patients were admitted overnight and discharged home the next day after surgery. Recently this unit made organizational changes and opened beds for short stay gynaecology surgery. These inpatient beds are used for women recovering from short stay procedures such as vaginal hysterectomy and who are discharged the same day. This is a structural change for this unit which may have affected the processes of care during the post-operative period such as discharge teaching. Consequently there was a need to investigate patient outcomes in light of these changes.

Women who entered the study recovered after their hysterectomy procedure on the gynaecology unit. The women who were discharged home the same day were contacted by the principle investigator (P.I.) 48 to 72 hours later by phone at their home to answer the study questions.

Recruitment and Consent

All gynaecological surgeons at the LHSC received a letter letting them know about the study (see Appendix A). If they had any concerns about the study and their patients' participation, they were asked to contact the P.I.

Patients scheduled for these short stay surgical procedures had a preadmission interview approximately two weeks before their scheduled surgery date. For the women who had their interview done in person at the Victoria Hospital, LHSC preadmission clinic, the nurse completed her interview and then informed the client about the research study using the written script (see Appendix B). She asked the patient for their permission to have the P.I. speak with them to further explain the study. When the patient agreed, the preadmission nurse invited the P.I. who was located on site to meet with the patient. The P.I. then explained the purpose of the study, reviewed the research protocol and had the patient read the consent (see Appendix C). The P.I. answered any questions they had. If the patient agreed to participate, they signed the consent and were given a copy to take home. When the P.I. was unavailable to meet with the patient at this clinic visit or when the patient was not able to wait for the P.I., the preadmission nurse asked the potential participant for permission to give the P.I. her phone number and the P.I. contacted them at a later date by phone.

For the patients who had their preadmission interview over the phone, the nurse informed the client about the research study using the written script and then asked for permission to transfer the call to the P.I. who was in her office in the Victoria campus, LHSC. If they agreed, the P.I. spoke with the patient by phone, explained the purpose of

the study, the study protocol, and consent. If the client verbally agreed to participate, the investigator sent them two copies of the consent in the mail. The patient was asked to sign one of them, and to immediately return it by mail in the pre-addressed and stamped envelope provided.

Procedure

Participants followed the usual pre and post-operative process. Prior to surgery patients were counseled either in the surgeon's office or in the preadmission clinic regarding the anticipated surgical procedure, the hospital admission procedure and preoperative preparation and post-operative care. Clients were admitted the morning of surgery and underwent any medical tests that were required. Following surgery they were transferred to the recovery room. In approximately two hours patients were discharged from the recovery room and admitted to the gynaecology inpatient unit to one of the short stay beds. On this unit, clients received nursing care and teaching that was guided by the preprinted patient care orders, short stay protocol, and standards of nursing care. Prior to discharge the nursing staff ensured the patient met the discharge criteria and felt comfortable with discharge. The nursing staff documented their teaching on the education record (see Appendix D). Nurses were expected to review all post-operative discharge instructions with the short stay patients including verbal instructions using a teaching guide (see Appendix E) and written discharge information in the form of a pamphlet (see Appendix F) which was to be given to the client and family.

The P.I. who is a gynaecology clinical nurse specialist, along with members of a multidisciplinary committee helped to update and develop the education plan and all the

materials for gynaecology nurses to follow when caring for patients who have a short stay hysterectomy procedure.

As part of a quality assurance initiative at the hospital, the gynaecology clinical nurse specialist (P.I.) routinely conducted a follow-up phone call with clients who underwent short stay hysterectomy surgery within a few days following discharge. Patients who did not consent to participate in this research study still received this standard telephone follow-up. Patients who consented to participate in this research study completed the data collection tools first, at the beginning of the phone call.

Data Collection

Once the patient was discharged, the researcher reviewed the patient chart to confirm their eligibility to remain in the study (i.e., type of surgical procedure and length of stay). Information about the patient's age, the reason for the surgery, and the nursing documentation of the discharge information provided was collected from the chart.

The researcher then conducted a telephone interview with the client 48 to 72 hours after discharge from hospital. Carr and Worth (2001) believe telephone interviews can be a flexible and cost effective method of data collection when evaluating health care and have been found to be an effective strategy for the identification of patient concerns (Pidd, McGrory & Payne, 2000; Waterman, Leatherbarrow, Slater & Waterman, 1999). The telephone interview was chosen for this study because it was thought to cause only minimal disruption to participants as they are recovering at home following surgery (Carr & Worth, 2001). In addition, telephone interviews have been proven useful to collect

quantitative and qualitative data (Musselwhite, Cuff, McGregor & King, 2007) which were both inclusive of this study's design.

Patients were interviewed between 48 to 72 hours post-discharge. This time frame was chosen because it was thought participants would be able to accurately recall the events of their day surgery experience and what information they were given. By this time period the client should have been rehabilitating in their environment and have taken on a level of self-care. They should have been able to identify any deficits in their ability to self-care and gaps in the discharge education they were provided. Also by 48 to 72 hours after discharge the client should have been able to recall their early discharge experience and rate their level of satisfaction in regards to information provision and overall experience. Since pain has been reported as the most severe in the first 24 hours following day surgery (Watt-Watson et al., 2004), study participants should have been able to report any issues with pain management and/or analgesic adverse events since their surgery. As well, by this time period patients may have encountered complications or morbidity symptoms which may have caused difficulties in their resumption of normal activities and functions at home.

Variables and Measurement Instruments

Data collection for this study included descriptive information and measurement instruments for the six study variables (see Appendix G).

Descriptive information. The descriptive information was collected on all study participants which was retrieved by the P. I. from the patient's medical chart. This included age, type of hysterectomy surgical procedure, reason for the hysterectomy, and

length of hospital stay in hours. These demographics were used to help describe the sample and to confirm the eligibility of the participants who remained in the study.

Variable 1- Discharge information provided. Discharge information provided as per nursing documentation on the Education Record was retrieved from the patient's medical chart. The Education Record is a standardized hospital form which documents what discharge teaching was completed and whether this was in the form of verbal or written instructions. The expectation was that each nurse completed and documented both verbal and/or written instructions for each of the five post-operative components of education on this form. Each component scored one point if the nurse documented verbal instructions. If the nurse also documented that written instructions were given, it scored a point as it was assumed the gynaecological discharge instruction pamphlet was given to the patient. The scores for this variable had the potential to range from 0 - 6 with higher scores reflecting higher amounts of discharge information provided.

Variable 2- Perception of discharge information received. The participant's perception of the discharge information they received was collected during the telephone interview using an author developed tool which was based on the Education Record. The P.I. asked "During your discharge teaching did your nurse review the following?" Probes were built into this tool which helped to define each component of the discharge education. In addition the question "Were you given a copy of the Gynaecological Discharge Instructions Pamphlet?" was asked. Participants were given the option of answering "Yes", "No" or "Not Sure" for each of the five components. Only the answer "Yes" from the participant scored a point. The range of scores for this variable had the

potential to range from 0 - 6 with higher scores reflecting the perception of higher amounts of discharge information received.

Variable 3- Overall satisfaction with short hospital stay experience. This variable was measured using a modified version of the 4-item Overall Satisfaction subscale of the Satisfaction with Outpatient Services (SWOPS) Questionnaire developed by Keegan and McGee (2003) (see Appendix H). Because there were few tools measuring patient satisfaction with outpatient or short stay health services, the SWOPS was developed by the Royal College of Surgeons in Ireland for use in Irish hospitals (Keegan & McGee, 2003). The complete SWOPS tool consists of 6 subscales, including an Overall Satisfaction subscale. The questionnaire was tested in two adult general hospital outpatient clinics (n = 364) and all subscales were found to have high reliability coefficients ranging from .84 to .95. Therefore the tool developers concluded that each discrete subscale can be used independently. The rationale for using a modified version of the Overall Satisfaction subscale of the SWOPS in this study is that it is short, easy to understand, was developed for an outpatient/short stay experience, has been tested in telephone interviews, and has a reliability coefficient of .84. The wording of the items were changed slightly to reflect the context of this study, that is women having a short stay hysterectomy procedure. The scaling of the 4-items is the same as the original and consists of a 5-point Likert scale from 1= “very dissatisfied or very poor” to 5 = “very satisfied or very good”. The four items were summed to achieve a total score. As well, a fifth open-ended question was added to the scale: “Is there anything else we could have done to improve your short stay experience?”

Variable 4- Satisfaction with discharge information. This was measured using a 5-item author constructed tool that was designed to capture the participant's level of satisfaction with the discharge information received. The literature was extensively reviewed and a published tool used to evaluate satisfaction with discharge information following surgery was not found. In reviewing the literature, three imperative components of discharge teaching following day surgery included self-care needs, pain management routines and how to identify and report any potential complications that may occur after discharge (Pieper et al., 2006). Questions 2, 3 and 4 ask about satisfaction with these three components of discharge teaching. A question asking the participant to rate their overall satisfaction with the discharge information was also included. This question is similar to Keegan and McGee's (2003) first question in their information subscale of the SWOPS tool. The scaling of these 4-items is a 5 point Likert scale from "very dissatisfied" (1) to "very satisfied" (5). As well, a fifth open-ended question was added to this tool: "Is there any additional information that you would have found helpful?"

Variable 5 - Perceived confidence in self-care. Perceived confidence in self-care was measured using the Self-Care: Condition Management Patient Questionnaire. Verran (2001) developed this questionnaire based on Lorig and colleagues (1996) self-management behaviours and their development of a Self-Efficacy Scale. The Self-Care: Condition Management Questionnaire is a 10-item instrument with a 10 point Likert-type response scale. The score can potentially range from 10-100 with higher scores reflecting higher levels of perceived confidence in self-care ability. The scale can be subcategorized

into Simple Self Care subscale (6 items) and Complex Self Care (4-items). Cronbach alpha's for the subscales ranged from .76 to .82 and .79 for the total scale showing acceptable internal consistency (Verran, 2001). Some of the wording in this instrument was modified with permission by Dr. Verran to better reflect the recovery experience of participants in this study (Personal email communication, Sept. 28, 2012, see Appendix I).

Variable 6 -Post-operative recovery. Post-operative recovery was measured with the Post discharge Surgical Recovery Scale (PSR scale) developed by Kleinbeck (1994, 2000). It is a self-report measure of at-home post-operative recovery that was designed to be administered on day two following discharge from day surgery. Kleinbeck (2000) defines perceived surgical recovery as “the self-report of the extent or degree to which an individual’s life has returned to pre-illness state” (p. 462). The items on the scale elucidate different aspects of post-operative recovery including health status, activity, fatigue, work ability and expectations, which were identified using an ethnographic analysis of semi-structured interviews (Kleinbeck, 2000). The P.I. attempted to contact Dr. Kleinbeck to obtain permission to use the PSR scale and was unsuccessful. However, in another dissertation Dr. Kleinbeck stated, “The reason I retained copyright for the Postdischarge Surgical Recovery scale was to protect integrity of the scale. It has been used in research now sufficient number of times that I do not feel that protection is needed any longer. You may publish the scale in your dissertation along with the psychometrics” (as cited in Poole, 2007, p. 163) (see Appendix J).

For the current study the PSR scale was used to develop an understanding of the at home post-operative recovery experience from the perspective of women following short stay hysterectomy procedures. The PSR scale comprises 15 items rated on a 10-point semantic differential scale of key recovery outcomes reported by patients. In Kleinbeck (2000) it was reported that the PSR scale exhibited strong internal consistency in two samples ($\alpha = .88-.91$). Raw scores can potentially range from 15 to 150. “Items 1-3, and 12-15 are reversed coded so higher scores represent greater recovery. Range on all items is 1-10” (Kleinbeck, 2000, p. 468).

Kluiwers, Riphagen, Vierhout, Broilmann and de Vet (2008) provide a systematic review of the literature on general post-operative, recovery specific quality of life instruments and their measurement properties. The PSR scale had the maximum number of positive quality criteria, including content validity, internal consistency, construct validity and floor and ceiling effect. Therefore it was concluded that this measurement tool be used in future studies of post-operative recovery, especially for short stay surgical patients on day two after their operation.

Berg, Idvall, Nilsson, Arestedt and Unosson (2010) evaluated the psychometric properties of a translated version on the PSR scale for Swedish day surgery sampling. In conclusion, they found their Swedish version of the PSR scale to demonstrate acceptable psychometric properties of data quality, internal consistency with a Cronbach’s coefficient of 0.90, dimensionality and responsiveness thus strengthening the PSR scale as a potential instrument of recovery at home.

Pilot Test of Instruments

Prior to beginning recruitment, the telephone interview was pretested with five women between the ages of 40 and 70 to determine if the terminology and instructions were understandable and to determine how long it took to answer the questions. It was determined the interview took approximately 15 minutes to complete. The researcher made careful notes on any questions or problems encountered and made the necessary modifications. The terminology was found to be understood and remained unchanged. However, the researcher made notes of how best complete the PSR scale. This tool was originally designed to be completed as a written self-report using a 10-point semantic differential scale. However, in this study it was completed using verbal communication. A clear explanation of the PSR tool was given and an example provided (see Appendix G). The P.I. was able to formulate the questions by first presenting the contrasting adjective pairs and reminding the participant of the 10-point scale. The P.I. also confirmed after completing the example that the participant understood how to answer the tool. No problems were encountered with this pilot test.

Data Analysis and Sample Size

All statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS version 20). All coding and variable naming was documented. Raw data were entered into a data file in SPSS. Intercoder reliability checks and consistency checks were performed to identify mistakes.

Descriptive analyses were conducted on demographic and surgical-related variables and reported as means and standard deviations or as frequencies and

percentages as appropriate for the level of data. Summary scores were calculated for the six major variables (two information and two satisfaction variables as well as self-care confidence and post-surgical recovery) and reliability analyses using Cronbach's alpha were conducted, which measures the internal consistency of measurements obtained with an instrument. It is a measure of the extent to which items assess the same characteristic (Goldstein, Elliott & Guccione, 2000). This type of reliability analysis was chosen because it has been used to assess the reliability of measurements obtained with other patient satisfaction instruments (Carey & Seibert, 1993). Summary scores were reported as means and standard deviations. Correlation analyses were conducted to investigate the strength of relationship among variables and multiple regression analyses were done to identify predictors of self-care confidence and recovery. Analyses of the open ended questions were done using thematic content analyses to identify common and unique responses.

This was a descriptive correlational pilot study which used a convenience sample. Therefore, a sample of approximately 50 participants was thought large enough to find trends towards moderate relationships of $r = .40$ using a 2-tailed alpha of 0.05 with 80% power (Hulley & Cummings, 1988, p. 218).

Ethical Consideration

The design of this study included both quantitative and qualitative data. The inclusion of both these was thought to be essential to the purpose of evaluating the women's experiences. Open ended questions permits consideration of the women's

opinions, feelings, and experiences which enrich the data and facilitate an understanding of their post-operative care experience.

This study was non-invasive and involved minimal risk, as participants were required to reflect on their post-operative experience, focusing on the education they received. Therefore, participants were not subjected to any unnecessary or additional risk, harm or discomfort. Privacy and confidentiality was maintained. Each participant was given a number, so identifiers such as names were not used.

Autonomy, beneficence, respect for human dignity, and justice (Polit & Beck, 2008) were a primary focus to ensure an ethically sound study. Ethical approval was obtained from the Newfoundland and Labrador Health Research Ethics Authority (see Appendix K) and the Lawson Health Research Institute- University of Western Ontario Research Ethics Board (REB) (see Appendix L). Access to participants was negotiated with management staff of the preadmission clinic and gynaecology department. Individuals who expressed an interest in participating after receiving their study invitation were presented with the research plan and purpose, how confidentiality was to be maintained, and what risks and/or benefits were involved for the participant (Patton, 2002).

All participants were provided with the consent letter describing the aims and objectives of the research project (see Appendix C). At the time of obtaining consent, participants were given the opportunity to consent or decline as their participation was completely voluntary. The researcher ensured the participants had the chance to ask questions prior to consenting and answered any outstanding questions. Participants were

informed that they had the right to withdraw from the study at any time without repercussion and that participation would not affect quality of care received. Any clients who expressed they were feeling unwell, distressed or concerned about their health or recovery during the telephone interview, were acknowledged and encouraged by the investigator to contact their surgeon for medical advice.

Confidentiality was maintained and measures were taken to protect participants' personal information in keeping with REB protocol. The data were kept at LHSC in a locked drawer in the P.I.'s locked office. No one other than the P.I. saw the data. In addition, permission to collect information from their medical chart was included on the consent letter.

Quality Issues

This study design had some limitations including the use of only one hospital and the use of a consecutive convenience sample to recruit participants. Three tools were author developed and so had limited reliability and validity. As with all correlational research there is less certainty in providing insight into cause and effect relationships than in experimental research. It is recognized that other variables may have influenced the participants' appraisal of the information they were provided. This had the potential to influence their responses to the questionnaire.

Chapter 4: Data Analysis

Chapter 4 provides a description of the sample, psychometric estimations and results of the statistical methods employed to analyse the data and to answer the research questions. Statistical tests were performed by using the significance level 0.05 and 95% confidence interval. All statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS version 21).

Description of the Sample

Ninety-nine (99) clients who initially met the inclusion criteria for this study were invited by the P.I. to participate during their preadmission appointment which was either in person at the hospital or on the telephone. Ninety-seven (97) clients chose to participate and signed the written consent. Those who had their preadmission completed over the phone were mailed a package and given instructions to mail back the signed consent.

The flow of participants in this study is shown in Figure 4. Of the 97 women initially enrolled in the study, 94 had their surgery procedure(s) performed and 3 had their surgeries cancelled. Of the remaining 94 eligible participants, 39 were not eligible to continue in the study because they were admitted to hospital overnight. Two (2) surgery start times were rescheduled until too late in the day for the patient to be discharged the same day, 3 women had intraoperative complications for which they were admitted to hospital for an extended stay and 34 women had complications in the early post-operative period which required admission to hospital overnight. Of the remaining 55 participants eligible to participate in the telephone interview, the P.I. was unable to

contact 4 by telephone in the 48 to 72 hours post-operative window of recovery. This resulted in a final study sample of 51 women who completed the data collection. The attrition rate was 7% (4 out of 55 who were eligible for a follow-up call).

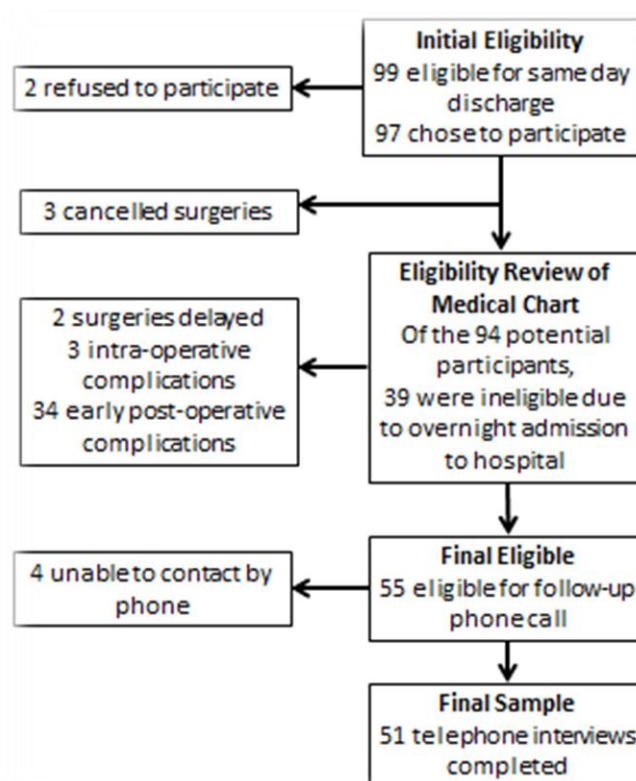


Figure 4. Participant selection. How participants flowed through the study and the final study sample.

The age of participants, and some surgical-related data were collected on the initial eligible sample ($n = 94$) from their medical records after hospital discharge. The surgical data included the surgical approach to hysterectomy, any additional surgical procedures performed and the reason for surgery. In addition the length of hospital stay was recorded in hours for the patients who were eligible for the follow-up phone call.

The mean age of the initial eligible sample ($n = 94$) was 44.37 years and ranged from 23 to 71 years. The mean age of the final eligible sample ($n = 55$) was 44.96 years and also ranged from 23 to 71 years. Using a two-tailed independent t -test, the mean age of the eligible participants ($n = 55$) was compared with the mean age of the participants who became ineligible ($n = 39$) because they were admitted to hospital for an overnight stay (see Table 1). There was no statistically significance difference between the mean age of participants who were discharged the same day of surgery and the mean age of participants who were admitted to hospital overnight ($t = -0.75, p = .456$).

Table 1

Mean Age Compared between Eligible and Non-Eligible Participants

Variable	Eligible same day discharge ($n = 55$)				Non Eligible overnight admission ($n = 39$)				t - Test	p
	Range	M	SD	95% CI	Range	M	SD	95% CI		
Age	23-71	44.96	9.45	[42.41, 47.52]	26-66	43.54	8.55	[40.77, 46.31]	-0.75	.456

Note. CI = confidence interval.

The length of stay in hospital was also collected from the medical charts from the final eligible sample ($n = 55$). Length of stay ranged from 5 hours to 12 hours with a mean stay of 7.94 hours. The final study sample ($n = 51$) was compared to the participant dropouts ($n = 4$) to look for statistically significant differences in the age and length of hospital stay variables. This was done using a two-tailed independent t -test. As shown in Table 2, no statistically significant differences were found between these two groups on the variables of age ($t = 1.38, p = .174$) and length of hospital stay ($t = 0.18, p = .859$).

Table 2

Mean Age and Length of Hospital Stay in Hours between the Final Study Sample and Participant Dropouts

Variable	Final Study Sample (<i>n</i> = 51)				Participant Dropouts (<i>n</i> = 4)				<i>t</i> - Test	<i>p</i>
	Range	<i>M</i>	<i>SD</i>	95% CI	Range	<i>M</i>	<i>SD</i>	95% CI		
Age	23-71	45.45	9.40	[42.81, 48.09]	24-49	38.75	8.96	[24.50, 53.00]	1.38	.174
LOS	5.00- 12.00	7.94	1.41	[7.55, 8.34]	6.00- 9.00	7.81	1.02	[6.18, 9.45]	0.18	.859

Note. CI = confidence interval.

Surgery-related characteristics. Information about the surgical approach to hysterectomy was collected from the medical chart on all 94 potential participants. The majority of patients had a laparoscopically assisted vaginal hysterectomy (LAVH) approach (59.6%) second to a vaginal hysterectomy (38.3%). Due to intraoperative complications with the vaginal or laparoscopic approach, two patients' surgical approach was converted to an abdominal hysterectomy and therefore they were admitted to hospital and were not eligible for follow-up.

During the hysterectomy procedure approximately 50% of women in the potential participant group (*n* = 94) had an additional surgical procedure performed. Of the women who underwent an additional procedure, 28.7% (*n* = 27) had their fallopian tube(s) and ovary(s) removed, while 17% (*n* = 16) had one or both fallopian tube(s) removed. Three women (3.2%) had a trans-vaginal taping (TVT) procedure at the same time as their hysterectomy for urinary incontinence.

The reason for having surgery was also obtained from the medical charts. The most common reason for having a hysterectomy was abnormal uterine bleeding (*n* = 46,

49%) followed by pelvic pain ($n = 20$, 21.3%) and either being diagnosed with cancer or being at high-risk ($n = 19$, 20.2%). In addition having fibroid(s) ($n = 7$, 7.4%) or gender reassignment ($n = 2$, 2.1%) were also reasons for having a hysterectomy procedure.

Table 3

Surgery-related Characteristics Compared between Eligible and Non-Eligible Participants

Characteristic	Eligible Same Day Discharge ($n = 55$)		Ineligible Overnight Admission ($n = 39$)		<i>p</i>
	Frequency	Percent	Frequency	Percent	
<i>Surgical Approach</i>					
Vaginal	22	40	14	35.9	.300
LAVH	33	60	23	59	
Abdominal	0	0	2	5.1	
<i>Additional Surgical Procedures</i>					
None	18	32.7	21	53.8	.681
Salpingo- oophorectomy(s)	9	16.4	9	23.1	
Salpingectomy(s)	1	1.8	7	18.0	
TVT	0	0	2	5.1	
<i>Reason for Surgery</i>					
Fibroids	2	3.6	5	12.8	.391
Abnormal Bleeding	29	52.7	17	43.6	
Pelvic Pain	11	20.0	9	23.1	
Cancer/high risk for Cancer	11	20.0	8	20.5	
Gender Reassignment	2	2.2	0	0	

Table 3 compares the surgery-related characteristics of the surgical approach, additional surgical procedures, and reason for hysterectomy between those who were discharged the same day ($n = 55$) and those who were ineligible for follow-up due to overnight admission ($n = 39$). Fisher's exact two sided test was used to test for statistically significant associations between these two groups. The Fisher's exact test was

chosen over the chi-square test because it can be used regardless of how small the expected frequency whereas the chi-square test assumes that each cell has an expected frequency of five or more. In this data set more than 20% of the counts were less than five, and therefore the Fisher's exact test was more appropriate. No statistically significant differences were found in these two groups in regards to surgical approach, additional surgical procedures performed or reason for hysterectomy.

The surgery-related characteristics were also compared using the Fisher's exact two-sided test between the dropouts and the final study sample. Results are displayed in Table 4 which shows no statistically significant differences between dropped participants and the final study sample in regards to the surgery-related characteristics.

Table 4

Surgery-related Characteristics Compared between the Final Study Sample and Participant Dropouts

Characteristic	Final Study Sample (<i>n</i> = 51)		Participants Dropouts (<i>n</i> = 4)		<i>p</i>
	Frequency	Percent	Frequency	Percent	
<i>Surgical Approach</i>					
Vaginal	20	39.2	2	50	1.00
LAVH	31	60.8	2	50	
<i>Additional Surgical Procedures</i>					
None	25	49	2	50	.833
Salpingoophorectomy(s)	16	31.4	2	50	
Salpingectomy(s)	9	17.6	0	0	
TVT	1	2.0	0	0	
<i>Reason for Surgery</i>					
Fibroids	2	3.9	0	0	.169
Abnormal Bleeding	28	54.9	1	25	
Pelvic Pain	10	19.6	1	25	
Cancer/high risk for Cancer	10	19.6	1	25	
Gender Reassignment	1	2.0	1	25	

Data Collection Instruments

Table 5 presents the means, standard deviations, medians, range and skewness of the six process and outcome variables in this study: discharge information provided, perception of discharge information received, overall satisfaction with short hospital stay experience, satisfaction with discharge information, perceived confidence in self-care and post-operative recovery.

Table 5

Descriptive Statistics of the Six Process and Outcome Study Variables (n = 51)

Variable	# of items	M	SD	Median	Range		Z *
					Potential	Actual	
Discharge Information Provided	6	5.04	1.87	6	0-6	0-6	-1.64/.33 = -4.92**
Perception of Discharge Information Received	6	5.12	1.52	6	0-6	1-6	-1.42/.33 = -4.26**
Overall Satisfaction	4	18.20	2.74	19	0-20	10-20	-1.73/.33 = -5.19**
Satisfaction with Discharge Information	4	17.33	3.98	20	0-20	4-20	-1.72/.33 = -5.16**
Perceived Confidence in Self-Care	10	92.31	10.22	100	10-100	43-100	-2.93/.33 = -8.79**
Post-operative Recovery	15	84.39	19.12	81	15-150	48-132	0.23/.33 = 0.69

* Skewness statistic divided by the standard error of skewness

**Z < -1.96, the distribution is significantly skewed at the 5% significance level ($\alpha = .05$)

Discharge information provided. Discharge information provided as per nursing documentation on the education record was retrieved from the patient's medical chart (see Appendix D). Each component documented scored a point. The possible total scores for this variable ranged from 0 to 6 with higher scores reflecting higher amounts of

discharge information provided. In this sample, the total score ranged from 0 to 6. Two education records (3.9%) were blank and received a score of 0. It is unknown whether the nurses did not complete the form or if they truly did not provide any discharge information. Thirty-six patients (70.6%) had all six components signed off and scored 6 out of 6 which created a negatively skewed distribution. The Z-test for the significance of skewness is -4.92 ($Z < -1.96$) which indicated that this distribution is significantly skewed. As shown in Table 5, the mean score was 5.04, $SD = 1.87$ which indicates that most participants in this study were provided with the appropriate discharge information according to the nursing documentation.

Perception of discharge information received. The participant's perception of the discharge information they received was asked during the follow-up telephone interview using an author developed tool which is based on the education record (see Appendix D). Only the answer "Yes" from the participant scored a point. The possible range of total scores for this variable was from 0 to 6 with higher scores reflecting the perception of higher amounts of discharge information received. In this sample the range of scores was from 1 to 6. Thirty-four participants (66.7%) reported having received information on all six components and scored 6 out of 6, which created a negatively skewed distribution ($-4.26, Z < -1.96$). As shown in Table 5, the mean score was 5.12, $SD = 1.52$, indicating that most participants in this study recalled being provided with the appropriate discharge information.

The specific components of the discharge teaching not provided and what the patient recalled not being taught was also explored. Table 6 outlines the number and

percentage of participants who did not have each component of discharge information signed off on the nursing education record. Twelve participants (23.5%) did not have monitoring signed off, 10 (19.6%) did not have wound care signed off and 10 (19.6%) did not have activity signed off. When looking specifically at which components of discharge information the women did not recall receiving, 11 women (21.6%) recalled not being given information on wound care and 11 (21.6%) recalled not being given information on activity restrictions (see Table 6).

Table 6

Descriptive Statistics of the Components of Discharge Information Not Provided and the Patient's Perception of Discharge Information Not Received (n = 51)

Component of Discharge Information	Information Not Provided		Perception of Discharge Information Not Received	
	n	%	n	%
Monitoring	12	23.5	7	13.7
Pain Management	8	15.7	9	17.6
Wound Care	10	19.6	11	21.6
Activity	10	19.6	11	21.6
Discharge Planning	5	9.8	3	5.9
Written Instructions	4	7.8	4	7.8

Overall satisfaction with short hospital stay experience. This variable was measured using a modified version of the 4-item Overall Satisfaction subscale of the Satisfaction with Outpatient Services (SWOPS) Questionnaire developed by Keegan and McGee (2003) (see Appendix G and H). The scaling of the 4-items is the same as the original and consists of a 5-point Likert scale from very dissatisfied or very poor (1) to very satisfied to very good (5). The four items were summed with a total score out of 20,

with higher scores reflecting a greater overall satisfaction with the participants hospital stay. As well, a fifth open-ended question was added to the scale: “Is there anything else we could have done to improve your short stay experience?” (The content analysis of this item is reported later in this chapter). For this sample the total range of scores was from 10 to 20 and the median was 19, which created a negatively skewed distribution ($-5.19, Z < -1.96$). Twenty-four participants (47.1%) chose very satisfied for each item and scored 20/20. As shown in Table 5, the mean score was 18.2, $SD = 2.74$, indicating most participants were satisfied ($n = 6, 11.8\%$) or very satisfied ($n = 37, 72.5\%$) with their overall hospital stay experience.

Satisfaction with discharge information. This variable was measured using a 5-item author constructed tool that was designed to capture the participant’s level of satisfaction with the discharge information received (see Appendix G). The scale consisted of 4 items, using a 5-point Likert scale from very dissatisfied (1) to very satisfied (5). These four items were summed with a total score out of 20, with higher scores reflecting a greater satisfaction with discharge information. As well, a fifth open-ended question was added to this tool: “Is there any additional information that you would have found helpful?” (The content analysis of this item is reported later in this chapter). For this sample the total range of scores was from 4 to 20 and the median was 20, which created a negatively skewed distribution ($-5.16, Z < -1.96$). Twenty-six (60.0%) participants chose very satisfied for each item and scored 20/20. As shown in Table 5, the mean score was 17.33, $SD = 3.98$, indicating most participants were satisfied

($n = 12$, 23.5%) or very satisfied ($n = 32$, 62.7%) with the discharge information they received.

Perceived confidence in self-care. Perceived confidence in self-care was measured using Verran's (2001) Self-Care: Condition Management Patient Questionnaire (see Appendix G). This questionnaire is a 10-item instrument with a 10 point Likert-type response scale. The score can range from 10-100 with higher scores reflecting higher levels of perceived confidence in self-care ability. For this sample the total range of scores was from 43 to 100, but resulted in a negatively skewed distribution (-8.79 , $Z < -1.96$). As shown in Table 5, the mean score was 92.31, $SD = 10.22$, indicating participants overall felt confident in their self-care. Verran (2001) divided this instrument into two subscales: a simple self-care subscale (6 items) and a complex self-care subscale (4-items). As shown in Table 7, at this stage in their recovery participants scored themselves on average 56 out of 60 for having confidence in the simple self-care behaviours and 36 out of 40 for confidence in the complex self-care behaviours.

Table 7

Descriptive Statistics: Confidence in Self-Care (n = 51)

Variable	# items	<i>M</i>	<i>SD</i>	Median	Range		<i>Z</i> *
					Potential	Actual	
Simple Self Care Questions 2,5,6,8,9,10	6	56.33	6.54	60	6-60	20-60	-3.97/.33=-11.92**
Complex Self Care Questions 1,3,4,7	4	36.41	4.30	40	4-40	19-40	-1.83/.33=-5.50**
Total	10	92.31	10.22	100	10-100	43-100	-2.93/.33=-8.79**

Post-operative recovery. Post-operative recovery was measured using the Post-discharge Surgical Recovery Scale (PSR scale) developed by Kleinbeck (1994, 2000) (see Appendix G). The PSR Scale was designed to measure the perceived recovery in patients who are discharged home shortly after a surgical procedure. Scale items measure the extent to which the individual perceives a return to their usual pre-illness functional state. Responses to the ten- point bipolar opposite phrases reflect how the person feels today. Half of the items were reversed to minimize the risk of response bias. The extent of perceived recovery may range from 15 to 150, with increasingly higher scores representing progressive movement towards recovery. A score of 75 is at the middle of the scale. For this sample the median score was 81 and the total range of scores was from 48 to 132. The Z-test for the significance of skewness was 0.69 ($Z < 1.96$) which indicates that this distribution approximated a normal distribution. As shown in Table 5, the mean score was 84.39, $SD = 19.12$, indicating the participants had varying levels of perceived recovery 48 to 72 hours after discharge following a short stay hysterectomy procedure. Patients scored themselves highest on their ability to self-care, feeling alert and feeling better than they expected (see Table 8). They scored themselves the lowest on their readiness to go to work, the need for a day time nap and the need for more recovery time.

Reliability Analysis

Reliability was assessed using the Cronbach's alpha coefficient, which measures the internal consistency of measurements obtained with an instrument. Internal

Table 8

Mean Score of Each Item of the Post-discharge Surgical Recovery Scale (n = 51)

Scale Items	<i>M</i>	<i>SD</i>
Readiness to work	3.10	2.51
Need for a nap during the day	3.53	2.89
Recovery time	3.57	2.25
Activity level	4.22	2.02
Condition of bowels	4.53	3.10
Energy	4.90	2.18
Readiness to get out of the house	4.92	2.70
Ability to move around like normal	5.33	2.24
Ability to exercise	5.39	2.77
Feeling well	5.69	2.40
Normal self	5.96	2.58
Pain	7.20	1.82
Feeling better than was expected	8.51	1.75
Alertness	8.53	1.95
Ability to care for self	9.02	1.54

consistency reliabilities for the six data collection measurements for this study are presented in Table 9. The alpha coefficients ranged from .81 to .95, which were all considered acceptable. According to Anastasi (1968) test developers typically strive for an instrument with a reliability coefficient in the range of .80 to .90 (as cited in Goldstein et al., 2000, p. 859). The instruments used for variable 1, 2 and 4, were researcher developed and found to have alpha coefficients of .92, .81 and .89 respectively. According to Nunnally & Bernstein (1994) these values are well within the accepted parameters suggested for new instruments. The instrument used for variable 3, was based on a modified version of the Overall Satisfaction subscale of the SWOPS with a reported alpha coefficient of .84 (Keegan & McGee, 2003). In this study sample, the overall satisfaction instrument was found to have a coefficient of .95.

Verran (2001) reported acceptable internal consistency coefficients for the simple self-care and complex subscales of .82 and .76 respectively and .79 for the total scale. As shown in table 9 the simple self-care and complex subscale had Cronbach's alpha coefficients of .92 and .84 respectively and .93 for the total scale showing a high level of internal consistency in this sample of post-hysterectomy patients.

Table 9

Reliability Analysis of Internal Consistency using Cronbach's Alpha Coefficient for the Interview Variables (n = 51)

Variable	Cronbach's Alpha
1- Discharge Information Provided (6 items)	.92
2- Perception of Information Received (6 items)	.81
3- Overall Satisfaction (4 items)	.95
4- Satisfaction with Discharge Information (4 items)	.89
5- Perceived Confidence in Self-care	.93
Simple Self-care (6 items)	.92
Complex Self-care (4 items)	.84
6- Post-operative Recovery (15 items)	.83

Kleinbeck (2000) reported that the PSR scale, which measures post-operative recovery, exhibited strong internal consistency in two samples ($\alpha = .88 - .91$). Berg, Idvall, Nilsson, Granzen, Arestedt and Unosson (2010) evaluated the psychometric properties of a translated version on the PSR scale for Swedish day surgery sampling and reported an internal consistency with a Cronbach's coefficient of 0.90. In this study, Cronbach's alpha was found to be 0.83 which is acceptable (see Table 9).

Findings Corresponding to the Research Questions

This descriptive correlational study investigated three sets of relationships: 1) the relationship between information provided and the patient's perception of the information they received, 2) the relationships between the quality of care measures (patient satisfaction with the hospital experience and with the information they received) and the patient's transition outcomes (self-care confidence and recovery), and 3) the relationships between information provision and quality of care and transition outcomes. As well, we were interested in the best predictors of the transition outcomes.

To determine whether, and to what degree, relationships existed between the variables of interest, a correlation analysis was conducted using Spearman's rank correlation coefficients (r or ρ). Spearman's ρ was chosen since it is a non-parametric test, and does not make any assumptions regarding the parameters for the population. It does not assume a linear relationship between variables and can be used for variables measured at the ordinal, interval or ratio level (Neuman, 2003). Because all but one of the variables of interest had a significantly skewed distribution (see Table 5), the Spearman correlation was more appropriate than the Pearson correlation (Munroe, 2005).

The correlation coefficients reported below indicate the strength of the association between variables and all decisions regarding statistical significance of the findings were based on a criterion alpha level of 0.05. The Cohen correlation coefficients measurement guidelines (1988) were used for interpretation of the strength of the relationships between variables (see Figure 5). Results of the correlational analyses are presented in Table 10.

Correlation	Negative	Positive
Small	-0.29 to - 0.10	0.10 to 0.29
Medium	-0.49 to - 0.30	0.30 to 0.49
Large	-0.50 to - 1.00	0.50 to 1.00

Figure 5. Cohen correlation coefficients measurement guidelines (Cohen, 1988)

Study question 1. The relationship between information provided and the patient's perception of the information they received was investigated using Spearman's rank correlation. As noted in Table 10, there was a significant positively large relationship between information provided by the nurse as documented in the patient's chart and the perception of information received (i.e., what the patient recalled being taught) ($r = 0.849, p = .000$).

It was also of interest to the researcher to evaluate the difference between the discharge information topics signed off on the nursing documentation and what the patient recalled being taught. In order to answer this question McNemar's chi-square was used to compare the six categories of discharge information. This test is useful for within-subject designs where the same individuals are measured twice, matched on some variable or when two measures are used. It assesses the significance of the difference between two correlated proportions from the same sample and is appropriate when analysing data from matched pairs of subjects with a dichotomous (yes-no) response (Adedokun & Burgess, 2012). McNemar's 2-sided test was computed for each topic which found there was no statistically significant difference between what the nurses documented and what the patient recalled being taught (see Table 11).

Table 10

Spearman's Rho (r) Correlation Matrix of the Six Main Study Variables from the Follow-up Interview (n = 51)

		Information Provided	Information Received	Overall Satisfaction	Satisfaction Information	Confidence Self-care	Post-operative Recovery
Information	<i>r</i>	1.000	.849*	.543*	.713*	.371*	.412*
Provided	<i>p</i>	.	.000	.000	.000	.007	.003
Information	<i>r</i>	.849*	1.000	.433*	.826*	.406*	.391*
Received	<i>p</i>	.000	.	.002	.000	.003	.005
Overall	<i>r</i>	.543*	.433*	1.000	.488*	.492*	.235
Satisfaction	<i>p</i>	.000	.002	.	.000	.000	.097
Satisfaction	<i>r</i>	.713*	.826*	.488*	1.000	.557*	.405*
Information	<i>p</i>	.000	.000	.000	.	.000	.003
Confidence	<i>r</i>	.371*	.406*	.492*	.557*	1.000	.429*
Self-care	<i>p</i>	.007	.003	.000	.000	.	.002
Post-operative	<i>r</i>	.412*	.391*	.235	.405*	.429*	1.000
Recovery	<i>p</i>	.003	.005	.097	.003	.002	.

*Correlation is significant at the 0.05 level (2-tailed).

Table 11

Tests of Difference between Information Provided and the Patient's Perception of Discharge Information Received using McNemar's 2-sided Test (n = 51)

Topic	<i>p</i>
Monitoring	0.063
Pain Management	1.00
Wound Care	1.00
Activity	1.00
Discharge Planning	0.688
Written Information	1.00

Study question 2. The second aim of this study was to describe the relationships between the quality of care measures of patient satisfaction with the overall hospital

experience and satisfaction with discharge information provided and the patient's transition outcomes (self-care confidence and post-operative recovery). All correlations were significant at the 0.05 level, except for the relationship between overall satisfaction and perceived recovery (see Table 10). Overall satisfaction was found to have a positively medium relationship with confidence in self-care ($r = .492, p = .000$) but not with perceived recovery ($r = .235, p = .097$). This indicated that the higher the satisfaction scores the higher the confidence in self-care. There were also significant positive moderate to large relationships found between satisfaction with discharge information and confidence in self-care ($r = .557, p = .000$) as well as perceived recovery ($r = .405, p = .003$). This indicates that higher ratings of satisfaction with discharge information are related to higher scores of the two transition outcome variables of confidence in self-care and recovery.

Study question 3. The third aim of this study was to describe the relationships between information provision and quality of care and transition outcomes. Information provided was found to have a statistically significant positive strong correlation with the quality of care measures of overall satisfaction ($r = .543, p = .000$) and satisfaction with discharge information ($r = .713, p = .000$). As expected, the more information that was provided by nursing, the higher the degree of satisfaction reported by the patient. Information provided was also found to have significant positive correlations of medium strength with the transition outcomes of confidence in self-care ($r = .371, p = .007$) and perceived recovery ($r = .412, p = .003$). This indicates the more information provided by nursing; the higher the patient's level of confidence in self-care and recovery.

The patient's perception of discharge information received was also found to have statistically significant correlations. It was found to have a moderately positive correlation with overall satisfaction ($r = .433, p = .002$) and a large positive correlation with satisfaction with discharge information ($r = .826, p = .000$). As expected the more information the patient recalled being taught the higher their satisfaction scores.

The patient's perception of discharge information they received was also found to have statistically significant positive moderately strong correlations with the transition outcomes of confidence in self-care ($r = .406, p = .003$) and perceived recovery ($r = .391, p = .005$). This indicated the more information the patient recalled being taught, the higher the patient rated their level of confidence in self-care and post-operative recovery.

Predictors of Transition Outcomes

Multiple linear regression analysis was used to determine the significant predictors of the two outcome variables, confidence in self-care and post-operative recovery in this sample of women following short stay hysterectomy procedures. Linear regression analysis presupposes some basic assumptions about the nature of data: reliability, a normal distribution, a linear relationship, homoscedasticity, and lack of multi-collinearity (Munroe, 2005). As shown in Table 9, all variables had Cronbach's alpha coefficients that indicated the internal consistency reliability of each study measure was acceptable. As noted in Table 5, of the six study variables, only recovery as measured by the PSR approximated a normal distribution. The remaining five study variables, information provided, information received, overall satisfaction, satisfaction with discharge information and confidence in self-care were not normally distributed and

were negatively skewed to the right. Therefore, reflection (reflecting the data to the left) and a log₁₀ transformation were used in an attempt to normalize the distributions (Norman & Striener, 2000). Following the transformations, satisfaction with discharge information and confidence in self-care responded and the transformed scores were normally distributed (skewness = 1.93 and 0.32 respectively which were less than 1.96). The remaining three independent variables continued to be significantly skewed. Therefore, they were coded as dummy variables for the regression analysis (See Appendix M, for the description of dummy variable coding).

Scatterplots of the study variables in the following two regression analyses were examined for homoscedasticity and were determined to approximate linear relationships. The study variables were also tested for multicollinearity, by measuring variance inflation factors and tolerance values. According to Munroe (2005) the more the tolerance value approaches zero the greater the intercorrelation of the independent variables. For these analyses, all tolerance values were greater than 0.1 (range: 0.16 to 0.86) and thus the independent variables were deemed to be acceptable for this analysis.

Regression analysis for confidence in self-care. A standard multiple linear regression analysis was performed to determine the relationship between the dependent variable, confidence in self-care, and the proposed predictors (information provided, information received, overall satisfaction, and satisfaction with discharge information) as independent variables. All independent variables were entered together into the equation.

Table 12

Regression Analyses for Confidence in Self-Care (n = 51)

Independent Variable	B	95% CI	Standardized Beta	p	Tolerance
On Confidence in Self-Care					
Information Provided	.14	-5.29 to 0.81	.12	.34	.18
Information Received	.88	-5.72 to 0.75	.08	.79	.16
Overall Satisfaction	-.10	-4.59 to 0.27	-.07	.60	.86
Satisfaction with Information	.81	0.30 to 1.32	.69	.003	.31
$R^2 = 0.33$ Adjusted $R^2 = 0.27$ $F(4, 46) = 5.56, p = .001$					

The results of the regression analysis for confidence in self-care indicated that the prediction model explained 27% of the variance ($F = 5.56, p < 0.05$) (see Table 12).

Satisfaction with discharge information was found to be the only significant predictor of confidence in self-care (standardized beta = 0.69, $p = 0.003$). Therefore having greater satisfaction with the discharge information provided was a significant predictor of higher levels of confidence in self-care following surgery.

Regression analysis for post-operative recovery. A standard multiple linear regression analysis was performed to determine the relationship between the dependent variable, recovery, and the proposed predictors (information provided, information received, satisfaction with discharge information and confidence in self-care) as independent variables. All independent variables were entered together into the equation.

Table 13

Regression Analyses for Post-operative Recovery (n = 51)

Independent Variable	B	95% CI	Standardized Beta	p	Tolerance
On Post-operative Recovery					
Information Provided	15.29	-11.22 to 42.87	.34	.24	.18
Information Received	-6.16	-32.80 to 20.48	-.14	.64	.17
Satisfaction with Information	-4.24	-27.00 to 18.52	-.09	.71	.26
Confidence in Self-Care	-13.18	-25.28 to -1.08	-.33	.033	.68
$R^2 = 0.28$ Adjusted $R^2 = 0.22$ $F(4, 46) = 4.47$, $p = .004$					

The results of the regression analysis for recovery indicated that the prediction model explained 22% of the variance ($F = 4.47$, $p < 0.05$) (see Table 13). Confidence in self-care was found to be the only significant predictor of recovery (standardized beta = -0.33, $p = 0.033$). Due to the reflection and data transformation procedures that were conducted on this variable, lower scores indicate higher levels of self-care confidence. Because the recovery data were normally distributed and did not require transformation, higher scores were indicative of greater levels of recovery. Therefore the significant standardized beta value of -0.33 indicates that having greater levels of confidence in self-care is a significant predictor of higher levels of recovery following surgery.

Content Analysis of Suggestions to Improve Care

For program evaluation and quality assurance purposes, participants were also asked two open ended questions on the quality of care measurement tools that assessed

satisfaction with the overall hospital experience and satisfaction with the discharge information received. The questions were:

1. Do you have any suggestions for how we could have improved your short stay experience?
2. Is there any additional information that you would have found helpful?

There were no missing quantitative data, however, several participants did not provide responses to these open ended questions. Only 17 out of 51 participants (33%) had suggestions for improving their short stay experience and 18 out of 51 participants (35%) commented on additional information they would have found helpful. Therefore, the majority of participants did not have comments or suggestions to make.

Boyatzis's (1998) inductive approach to analysing qualitative data was used. This form of thematic analysis uses a data-driven approach and process of coding data without trying to fit it into pre-existing categories. The theme categories are constructed based on patterned responses or meanings within the data set and then analysed (Braun & Clarke, 2006).

Five themes emerged from the 17 responses to the question "Do you have any suggestions for how we could have improved your short stay experience?" These themes were: time, care, communication, rushed (discharge), and pain. See Tables 14 and 15 for the themes and the responses. Time, refers to suggestions made by the participant that have to do with the process and how the patient physically flowed through the various areas of care during their stay in hospital. This theme occurred most often and was reported a total of 10 times by 10 different participants. Often complaints were made of

being “held up” or “having to wait” in the recovery room and not being moved or discharged home when they felt ready. Communication was reported by four participants, which referred to being informed of how the surgery went. Comments about nursing care, feeling rushed to be discharged and complaints about managing pain were also made by participants.

Eighteen participants had responses to the question, “Is there any additional information that you would have found helpful?” Five themes emerged indicating participants would have found more information on bowel care, vaginal bleeding, pain, activity, and generally more information on all topics helpful (see Table 16 and 17). The most reported theme was bowel care. Seven participants reported that receiving additional information about bowel care would have been helpful and four participants would have found more information on everything helpful. The need for more information about catheter care was mentioned once by a participant but this was an exception since patients are not routinely discharged with a catheter in place following these surgeries. In addition, only one participant reported that they required more information on incision care.

Table 14

Theme Identification: Overall Satisfaction Open Ended Question (n = 17)

Theme Code	# of theme occurrences
1-Time(Process and Flow)	10
2-Care	3
3-Communication	4
4-Rushed (Discharge)	2
5-Pain	2

Table 15

Content Analysis: Overall Satisfaction Open Ended Question (n = 17)

Overall Satisfaction: Do you have any suggestions for how we could have improved your short stay experience?	Key Words	Theme	Theme Code
“long wait in recovery, wanted more fluids in recovery”	Wait Wanted more	Time/Care	1, 2
“would have liked an earlier OR time“	Time	Time	1
“shift change was noisy, felt my discharge was delayed by 1 hour because night nurse did not come and see me but I also understand she had other patients to see”	Delayed Nurse	Time/Care	1, 2
“I didn't want residents/students”	Resident Students	Care	2
“stuck in recovery room”	Stuck	Time	1
“kept in recovery for my whole postop stay and it was stressful”	Kept Stressful	Time	1
“shorter pre-op waiting time”	Waiting	Time	1
“I had a long wait in recovery”	Wait	Time	1
“I have complaints about the evening nurse”, “she was condescending”	Nurse	Care	2
“ I didn’t see my surgeon”, “ I was not told of the results” , “nurse did not do discharge teaching”, “I was told I had to wait to see the resident before I could go home”, “I felt pushed out because they needed a bed for someone else”	Surgeon Nurse Wait Pushed	Care/Communication/Time/ Rushed	2, 3 ,1, 4
“shorter time in recovery”, “wanted more clarity about what happened in my surgery”	Time Clear	Time/Communication	1, 3
“no one talked to my husband following surgery”	Talked	Communication	3
“my partner was not keep up to date and informed as to how I was doing”	Informed	Communication	3

There is a need for “less confusion in the pre-op area”	Confusion	Care	2
“different pain meds because Tylenol 3’s I got didn’t work”	Pain	Pain	5
“felt rushed to leave and my pain could have been managed better”	Rushed Pain	Rushed/Pain	4, 5
“it was frustrating that my bed maybe wasn’t available” when it was time to move from recovery to the gynecology floor	Frustrating Available	Time	1

Table 16

Theme Identification: Satisfaction with Discharge Information Open Ended Question (n = 18)

Theme Code	# of theme occurrences
1-Bowel	7
2-Vaginal bleeding	2
3-Pain	2
4-All	4
5-Activity	3

Summary

Ninety-nine (99) clients were approached to participate in this study and 97 consented. Of the 97, 94 had surgery. Of this sample, 39 were admitted to hospital overnight and were not eligible for the follow-up, while 55 were discharged the same day from hospital and therefore met the inclusion criteria for a follow-up interview. Four were not able to be contacted in the post-operative period to complete the interview for an attrition rate of 7%.

Table 17

*Content Analysis: Satisfaction with Discharge Information Open Ended Question
(n = 18)*

Satisfaction with Discharge Information- Is there any additional information that you would have found helpful?	Key Words	Theme	Theme Code
“bowel care information for at home”	Bowel	Bowel	1
“bowel care information for at home and clearer about normal versus abnormal vaginal clots”	Bowel Vaginal clots	Bowel/ Vaginal bleeding	1, 2
“more informed about how much pain would be in”	Pain	Pain	3
“bowels and constipation prevention”	Bowel	Bowel	1
“everything. Especially incision and dressing care”	Everything Incision	All Incision	4
“everything, catheter care”	Everything Catheter	All Catheter	4
“more of everything”	Everything	All	4
“more information about other options for pain medications”	Pain	Pain	3
“bowel care, gas pain, not to drink from a straw”	Bowel Gas	Bowel	1
“care of vaginal incisions and vaginal bleeding”	Vaginal bleeding	Vaginal Bleeding	2
“to take stool softeners”	Stool	Bowel	1
“how to cough properly”	Cough	Activity	5
“everything”	Everything	All	4
“how to manage gas pains and prevent constipation”	Gas Constipation	Bowel	1
“what to do about gas pain”	Gas	Bowel	1
“help with gas pain”	Gas	Bowel	1
“when can I shower, bathe, swim?”	Shower	Activity	5
“activity guidelines for at home”	Activity	Activity	5

The final sample consisted of 51 women with a mean age of 45 years. The majority of patients had a laparoscopically assisted vaginal hysterectomy approach (61%) second to a vaginal hysterectomy (39%). Twenty six participants had an additional

surgical procedure performed at the time of hysterectomy, including fallopian tube(s) and ovary(s) removal (31%), the removal of one or both fallopian tube(s) (18%), and one woman had a trans-vaginal taping procedure. The most common reason for having a hysterectomy was abnormal uterine bleeding (55%) followed by pelvic pain (20%) and being diagnosed with cancer or being a high-risk for cancer (20%). Having fibroid(s) and gender reassignment were also reasons for having a hysterectomy procedure.

No statistically significant differences were found between the participants who were eligible for follow-up and discharged the same day of surgery and participants who were admitted to hospital overnight in regards to age and the surgery-related characteristics. In addition, no statistically significant differences were found between the final study sample and the four dropped participants in regards to age, length of hospital stay or the surgery-related characteristics. Therefore, the final sample of 51 women appears to be representative of the population of women undergoing surgery at this hospital on selected demographic and surgery-related variables.

Almost all the participants in this study were provided with the appropriate discharge information according to the nursing documentation and recalled being provided with the appropriate discharge information. There was no statistically significant difference between what the nurses documented and what the patient recalled being taught. Most participants were satisfied or very satisfied with their overall hospital stay experience. At 48 to 72 hours after surgery, patients scored themselves as having high levels of confidence in self-care but varying levels of recovery.

Significant positive correlations were found between the six study variables except for the relationship between overall satisfaction with the short stay experience and post-operative recovery. Higher overall satisfaction scores were associated with higher ratings of confidence in self-care. Higher ratings of satisfaction with discharge information were related to higher scores of the two transition outcome variables of confidence in self-care and recovery. In addition, the more information the patient recalled being taught, the higher the patient rated their level of confidence in self-care and recovery. Having greater satisfaction with the discharge information provided was a significant predictor of higher levels of confidence in self-care and greater levels of confidence in self-care was a significant predictor of higher levels of recovery following surgery.

The majority of participants did not give suggestions for improvements to their overall experience or discharge information. From the participants who did offer suggestions for overall improvements, five themes emerged which included: nursing care, feeling rushed to be discharged, pain management, communication and time. Time, which was most commonly reported, referred to suggestions made by the participant that had to do with the process and how the patient physically flowed through the various areas of care during their stay in hospital. Five themes also emerged from participant responses to what additional information they would have found helpful. These included generally more information on all topics, vaginal bleeding, pain, activity and the most commonly reported theme, bowel care.

Chapter 5: Discussion

Current health care reform in Canada includes reducing length of hospital stay and the expansion of day surgery in an effort to decrease costs, reduce wait times and improve access to acute care beds. However, this can diminish the time and opportunity for discharge nursing education leaving patients potentially under prepared to recover at home. This study has therefore responded to a need to investigate whether the current discharge information and teaching meets clients' needs during their recovery at home following short stay hysterectomy and what effect this has on overall satisfaction and patient outcomes. An integrated model of Donabedian's Quality of Care Model (Donabedian, 1980) and the Nursing Model of Transitions (Schumacher & Meleis, 1994) was the framework used in this study of patients recovering from short stay hysterectomy surgery. The following variables were studied: discharge information provided, perception of discharge information received, overall satisfaction with short hospital stay experience, satisfaction with discharge information, perceived confidence in self-care and post-operative recovery. The process variables were discharge information provided and perception of discharge information received. The outcome variables were satisfaction as a quality of care outcome and perceived confidence in self-care and recovery as indicators of a healthy transition. The relationships among the variables, as well as the best predictors of confidence in self-care and post-operative recovery, were investigated.

This chapter provides a discussion of the research findings in relation to the four research questions identified at the outset of the study. Findings are compared and

contrasted to the existing literature where applicable. Study strengths and limitations and the implications and significance of the study to nursing will be discussed.

Demographic Characteristics

In the current study, the initial eligible sample and the final study sample had an average age of 45 years with a range of 23 to 71 years. This sample is typical of the group undergoing hysterectomy procedures at the tertiary care center where this study was conducted. A hospital in a neighbouring city reported a mean age of 40 years with a range from 31 to 53 years for women undergoing outpatient vaginal hysterectomy (Spruce et al., 2000). Other studies of women's experiences with outpatient vaginal hysterectomy surgery have similar findings. Engh and Hauso (2012) reported on a sample with a mean age of 46 years and a range from 32 to 69 years, and Zakaria and Levy (2012) reported a mean age of 46 years with a range from 27 to 86 years. These findings are also comparable to the sample of patients undergoing same day discharge after laparoscopic hysterectomy in two studies that reported a mean age of 45 years with a range from 33 to 67 (Lassen, Moeller-Larsen & DE Nully, 2012) and 45 years with a range from 27 to 67 years (Perron-Burdick et al., 2011).

Surgery-related characteristics were also examined. The mean length of stay in hospital after surgery in this study was 8 hours and ranged from 5 to 12 hours. This is similar to the findings by Spruce et al. (2000) at a nearby centre who reported a mean of 8 hours and a range from 4 to 11 hours following vaginal hysterectomy. Stovall and colleagues (1992) conducted a study to determine the safety of early discharge after vaginal hysterectomy and mean hospital stay was 9 hours and ranged from 8 to 11 hours.

A recent study by Rettenmaier et al. (2012) reported a shorter length of stay, a mean of 6 hours for women treated with laparoscopic hysterectomy (LH) for endometrial cancer. An even shorter mean length of stay was reported by Thiel and Gamelin (2003) of 5 hours following LH and a pilot study reported discharging patients as early as 3 hours and 50 minutes following laparoscopic assisted vaginal hysterectomy using laser technology (Taylor, 1994).

In this study, 39% of participants had a vaginal approach while 61% had a laparoscopic approach to hysterectomy. Similar studies examining the feasibility of same day discharge following hysterectomy procedure chose either the vaginal or laparoscopic approach in their design. Warren and colleagues (2009) who evaluated clinical and economic outcomes reported that 23% of women underwent laparoscopic and 20% underwent vaginal hysterectomy. Although the Society of Obstetricians and Gynaecologists of Canada (SOGC) recommend the vaginal route be considered as a first choice for all benign indications, this is still debatable and the approach chosen is often a result of surgeon or institutional preference (Lefebvre et al., 2002).

In this study, 51% of participants had a concomitant procedure at the time of hysterectomy. Thirty-one percent had salpingo-oophorectomy while 18% had salpingectomy and only 2% of the sample had a transvaginal taping. Levy and colleagues (2005) reported 43% of their sample had additional procedures performed at the time of vaginal hysterectomy which included salpingo-oophorectomy, colporrhaphy, enterocele repair and urethral slings. In Spruce et al. (2000), 32% of participants underwent an additional procedure which included oophorectomy (16%), salpingo-oophorectomy (5%)

and anterior repair (11%). In a more recent publication, which used a perspective database to identify 34,070 women who underwent same day discharge after LH from 2000 to 2010, oophorectomy, colporrhaphy, antiincontinence procedure and lymphadenectomy were cited as concomitant procedures (Schiavone et al., 2012). Looking at these studies as a whole it seems additional procedures performed at the time of hysterectomy vary depending on the institutional protocol for eligibility for same day discharge.

The indications for hysterectomy in this sample included abnormal bleeding (55%), pain (20%), cancer or cancer risk (20%), fibroids (4%) and gender reassignment (2%). The SOGC supports these indications for hysterectomy except for gender reassignment which was the reason hysterectomy was performed for two participants enrolled in the present study. Gender reassignment is scarcely cited in the literature as an indication for hysterectomy however, it is performed for this reason at the tertiary care center where this study was conducted. Similarly, in a recent study the indications for outpatient laparoscopic hysterectomy were bleeding disturbances (54%), cervical dysplasia (19%) and chronic pain (27%) (Lassen et al., 2012). Perron-Burdick et al. (2011) stated the most common reasons for hysterectomy among patients discharged home the same day in their study were fibroids (46%), bleeding (27%) and pelvic pain (16%). In the present study sample, the majority of women (55%) underwent hysterectomy for abnormal uterine bleeding. Similarly, Engh and Hauso (2012) reported 62% of women who had an outpatient vaginal hysterectomy had a pre-operative diagnosis of bleeding or myoma (62%) and other indications included prolapse, dysplasia

and pain. In the study by Thiel and Gamelin (2003) nine indications for LH were listed with abnormal uterine bleeding being the highest at 33%.

In summary, this study sample was comparable to samples in other similar studies of women undergoing same day hysterectomy procedures in terms of age and other surgically-related variables with the possible exception of other recent publications who cite a shorter length of stay. In addition, the sample in this study may be less variable in terms of the additional procedures performed at the time of hysterectomy.

Discussion of the Research Questions

The following section addresses information provision and the first research question which examined the relationship between information provided and information received. Then the study variables overall satisfaction, satisfaction with discharge information, confidence in self-care and recovery are addressed. Then research questions two and three are discussed which examined the relationships between information provision and quality of care and transition outcomes.

Information provision. The provision of relevant and appropriate information to patients during hospitalization is a fundamental aspect of health care (Henderson & Chien, 2004). Many studies have investigated the various aspects of information provision required for the success of day surgery. It has been recognized that day surgery patients are the most challenging group of patients regarding the timing of information provision (Suhonen & Leino-Kilpi, 2006). In this study, the information provided as evidenced by nursing documentation was significantly correlated with what the patient recalled being taught 48 to 72 hours after discharge ($r = 0.849$ $p = .000$). Few studies have

investigated the patient's ability to recall what information was provided in the post-operative period. Da Assunção et al. (2013) found that patients undergoing day case knee arthroscopy have limited recall of the surgical information conveyed to them after surgery. However, in that study, reduced post-operative cognition was thought to be due to sedative drugs, since the information was provided 35 minutes after surgery and recall improved as the time to delivery of information increased. Murphy et al. (2004) demonstrated that 30% of patients undergoing laparoscopy for acute abdominal pain were either not given or did not reliably recall basic information regarding the procedure. In this present study no statistically significant differences were found between the nursing documentation of information provided and the patient's perception of what was received. Therefore, it is likely patients were able to accurately recall what information they were provided in hospital prior to their discharge.

Overall satisfaction. This study measured patient satisfaction following a short stay hysterectomy procedure. Findings indicated a positive skew toward higher levels of satisfaction with low variability in the data. Eighty-four percent (84%) of participants rated their experience as satisfied or very satisfied with a mean score of 18.4 and a median score of 19 out of 20. Although various instruments were used, previous studies of patient satisfaction for hysterectomy surgeries done as day surgery have similar findings. Patients' satisfaction rates were 85 to 95 percent with a median score of 10 (0-10) following fast track hysterectomy (Ottesen et al., 2002). In 2011, a randomized trial compared day-case surgery with inpatient laparoscopic hysterectomy and found that patients were equally satisfied (Kisic-Trope, Qvigstad & Ballard, 2011). The median

score of satisfaction of the day case group was 90 (0-100). A recent retrospective study investigated satisfaction following LH and reported almost 94% of the women were highly satisfied with the outcome (Tchartchian, Gardanis, Bojahr & de Wilde, 2013). Engh and Hauso (2012) reported a mean satisfaction score of 9 (0-10) following vaginal hysterectomy as an outpatient procedure and 94% said they would recommend this approach to a friend who needed a hysterectomy. In one Canadian hospital, 63 women (95%) reported being satisfied with their outpatient total laparoscopic hysterectomy and would recommend it to others (Thiel & Gamelin, 2003). In summary, this study, similar to other studies, demonstrated high post-operative patient satisfaction after short stay hysterectomy. This is important for widening acceptance of this innovative new operation standard.

Since satisfaction rates were high, it was not surprising the majority of participants did not offer suggestions for improving their overall experience when asked in the phone interview 48 to 72 hours post-discharge. However, the most significant area of concern reported, related to the waiting process and how the person physically flowed through the various areas of care during their stay in hospital. Similarly Bain, Kelly, Snadden and Staines (1999) reported dissatisfaction with day case surgery to be largely related to waiting times between admission, operation and discharge. Participants also perceived that they could have been better informed as to how their surgery went. Similarity in Otte's (1996) study of patients' experiences of day case surgery participants perceived there was a breakdown in communications during their clinical encounter and this often resulted in feelings of confusion and anxiety. In their study, Lemos and

colleagues (2009) suggest that controlling post-operative pain, increasing information provided to patients and reducing the wait time for surgery to be predictive factors of patient satisfaction. Since day surgery has decreased the amount of time spent in hospital it is imperative that health care providers ensure communication is clear and understood (Otte, 1996). Therefore, in addition to enhancing communication and information provided, the provision of quality healthcare appears to be largely dependent on organizational issues to improve patient flow and reduce pre and post-operative waiting.

Satisfaction with discharge information. This study also specifically measured patient satisfaction with the discharge information provided by the nurses which included both verbal and written discharge instructions (see Appendix E and F). Most participants were very satisfied with the discharge information they received. This is one of very few studies that have explored patient satisfaction with discharge education following short stay hysterectomy procedures.

Since satisfaction rates with the discharge information were high, only a few participants offered suggestions for improvement. However, seven participants reported that receiving additional information about bowel care would have been helpful. In addition more information on vaginal bleeding, pain and activity was requested by some participants. Jacobs (2000) explored the informational needs of postsurgical patients following early discharge and reported patients could experience problems resulting from decreased activity and needed information for dealing with bowel elimination. In her study, Jacobs found patients placed a high level of importance on activity restrictions and receiving information about monitoring and preventing potential complications. Similarly

Henderson and Chien (2004) found patients rated highly the need for information about signs and symptoms indicating post-operative complications and when to seek medical help. Using these findings to improve education and teaching for all patients including hysterectomy patients, who will be managing their own care following short-term surgical procedures will make content more meaningful and contribute to greater patient knowledge and satisfaction.

Confidence in self-care. The day surgery patient does not have the advantage of post-operative surveillance by professionals following discharge (Kleinbeck, 2000), and instead post-operative care is transferred to the patient and the family. Overall participants in this study felt very confident in their self-care and in how they were managing their recovery at home. In addition to following their discharge instructions, they felt confident managing their basic life activities, judging changes in their condition, seeking help, and accessing resources.

While self-care has been studied in the context of chronic illness, there is limited research exploring this concept in the early recovery period following surgical procedures. In contrast to self-care in chronic illness, the self-care deficit which exists following day surgery is temporary, however the concepts of “self-care maintenance, self-care monitoring and self-care management” (Riegel, Jaarsma & Strömberg, 2012, p. 199) are still applicable to the day surgery context.

Several conditions for managing post-operative recovery at home emerged in a phenomenographic study of recovery from the perspective of day surgery patients. These included preparation for surgery as well as readiness to act on post-operative self-care

needs (Berg, Arestedt & Kjellgren, 2013). Adequate self-care activity requires knowledge of symptom recognition, necessary skills and confidence in the judgement of what actions to take (Riegel & Dickson, 2008). Berg and colleagues (2013) reported self-care being crucial to post-operative recovery at home, as patients constantly assess bodily symptoms and signs in order to intervene properly and take relevant measures to solve their everyday problems. Boughton and Halliday (2009) conducted a qualitative study which explored the impact of being discharged from hospital with residual or continuing clinical care needs. Generally, patients felt if they were given more information about how to undertake self-care such as hygiene and diet they would have been less anxious (Boughton & Halliday, 2009). By instilling a sense of confidence and control through the provision of clear verbal and written information, reported uncertainties may be reduced and thus minimize patient stresses, anxieties and insecurities (Berg et al., 2013; Boughton & Halliday, 2009).

It is evident from this literature and from the theoretical model guiding this study, that information provision influences confidence in self-care which plays an important role in the success of the recovery transition. Participants in this study reported having a high level of self-confidence which indicates that the post-operative discharge instructions provided by nursing at the health care centre where this study was conducted were of good quality. Nurses were expected to provide both verbal instructions using the teaching guide (see Appendix E) and written discharge information in the form of a pamphlet (see Appendix F). Thus it appears that a standardized approach to this discharge teaching intervention was successful in helping participants feel confident in

their self-care and in the management of their recovery at home. According to Wilkinson and Whitehead (2009) nurses have an ethical duty to be aware of the factors which influence an individual's ability to self-care and need to shift from feeling responsible for patients to feeling responsible to patients to assist in the facilitation of their self-care.

Post-operative Recovery. Participants had varying levels of perceived recovery 48 to 72 hours after discharge following their short stay hysterectomy procedure. This was similar to the finding by Kleinbeck and Hoffart (1994) who also reported the rate of recovery differed among patients four to five days after outpatient laparoscopic surgery. Persson and Kjølhedde (2008) studied the factors associated with post-operative recovery after laparoscopic hysterectomy and concluded that personality factors may have an impact on the post-operative recovery, since women with high stress-coping abilities had a faster recovery in their study. In the present study patients scored themselves highest on their ability to self-care, feeling alert and feeling better than they expected. This was similar to Kleinbeck and Hoffart (1994) who also reported patients feeling surprised at how well they felt the first day after outpatient laparoscopic cholecystectomy surgery. In the present study, 48 to 72 hours after surgery participants scored themselves as not feeling ready to go to work, needing a daytime nap and more recovery time. This is not surprising since at this centre patients are informed to restrict activities and refrain from working for 4 to 6 weeks following these hysterectomy procedures.

Relationships among Process and Outcome Variables

Information provision had a positive significant relationship with perception of information received, overall satisfaction and satisfaction with the discharge information.

As expected, the more information that was provided by nursing, the higher the degree of satisfaction reported by the patient. This is similar to Wasfi, Pai and Abd-Elseyed's (2008) evaluation of patient satisfaction with cataract surgery, which found in general the more information provided, the more satisfaction. Clark and colleagues (2005) also found instructions given about how to care for yourself at home to have a strong and positive correlation with overall patient satisfaction. In review of the literature, information giving was a very important factor influencing patient satisfaction with care (Aiello, Garman & Morris, 2003; Doering, McGuire & Rourke, 2000; Hogan, 2000; Jakobsson, Hallberg, Loven & Ottosson, 1994; Nguyen, Briancon, Empereur & Guillemin, 2002; Sorlie, Sexton, Busund & Sorlie, 2000). Therefore, dissatisfaction with the discharge episode is likely to negatively influence patients' overall perception of quality in the hospital (Clark et al., 2005). In Otte's (1996) study of experiences of day case surgery, patients advocated that good preparation is essential and that more information was desired which would increase levels of satisfaction. Findings from the literature and from this study suggest that satisfaction as an indicator of quality is positively impacted by the provision of information.

Information provided was also found to have a significant positive correlation with the transition outcomes indicating the more information provided by nursing, the higher the patient's level of confidence in self-care and recovery. Overall satisfaction with hospital stay had a positive significant relationship with confidence in self-care but interestingly was not significantly related to recovery scores. However, satisfaction with

discharge information was significantly correlated to both higher levels of confidence in self-care and recovery.

It is known that patients who undergo same day discharge following surgery have an increased need for information once they are at home and responsible for their own care. Providing education to patients is a crucial first step as patients can carry out adequate self-care behaviours only if they know what to expect and why self-care tasks are important to their recovery. One of the key functions of discharge information is to ensure that patients have the necessary knowledge to perform self-care (Leino-Kilpi et al., 1993). Teaching techniques can be used to effectively build self-confidence and offer realistic management strategies for at home self-care (Kleinbeck & Hoffart, 1994). Barnason and Zimmerman (1995) found that information protocols, which focused on “survival” skills for self-care management post-discharge, to be effective. The practical aspect of providing quality information is that patients can become active participants in their care and in turn have sufficient self-care skills to prevent complications (Leino-Kilpi et al., 1993).

“Numerous studies have illustrated the positive effects of teaching on post-operative outcomes, such as a reduction in anxiety levels, recovery time, post-operative complications and analgesia use and an increase in satisfaction and compliance with treatment” (Roach et al., 1995; Shuldham, 1999 as cited in Tse & So, 2008, p. 619). Henderson and Zernike’s (2001) findings revealed that patients who leave the hospital with little or no discharge information may not be confident in the management of their health condition and therefore are more likely to develop concerns or problems that

require them to access a health facility. No studies reviewed have demonstrated negative effects from the provision of information for patients recovering from day surgery.

In summary, provision of information in this study was associated with higher levels of self-care and recovery. In addition, the higher the satisfaction with information provided, the higher patients scored their recovery 48 to 72 hours after discharge. This would suggest that the current educational approach at this centre prepares patients adequately for self-management of their recovery following discharge. It also appears that satisfaction as an indicator of quality of care is important and may positively impact patients in the early recovery experience following short stay hysterectomy procedures. These findings support the important role nurses have in the education of patients at the time of discharge following surgery.

Predictors of Confidence in Self-care and Recovery

The final research question to be addressed in this study was: what were the best predictors of confidence in self-care and recovery at 48 to 72 hours after discharge post hysterectomy? In this study, the only predictor of confidence in self-care was satisfaction with discharge information. Limited literature exists exploring predictors of self-care following surgery, however, a few studies have examined predictors of self-care in the context of chronic illness. Chriss, Sheposh, Carlson and Riegel (2004) found significant predictors of higher self-care for heart failure to be increased age and male gender. Qian and Yuan (2012) found patients with cancer who had less depression, better physical function, more social support, and higher vitality tended to have higher levels of self-care self-efficacy.

In this study, the only predictor of recovery was found to be confidence in self-care. A greater level of confidence in self-care significantly predicted higher levels of recovery following surgery. Berg and colleagues (2011) found that age, perceived health and emotional state on post-operative day one, in addition to type of surgery predicted post-operative recovery fourteen days after day surgery. Preoperative expectations, anxiety, depression and physical health status have also been found to be predictors of post-operative recovery (Chunta, 2009). In addition, Kopp and colleagues (2003) reported life satisfaction and active coping style being important predictors of recovery from surgery.

It is not surprising that satisfaction with information given at the time of discharge appears to have a significant impact on confidence in self-care and that greater confidence appears to predict higher rates of recovery. Having unanswered questions and ongoing concerns could interfere with the clients' confidence in their own ability to make a successful recovery at home. Patient preparation ensures the patient is in the best possible condition to have an active role and take responsibility for enhancing their recovery after discharge. Being well informed of what to expect during the early recovery period is essential for patients recovering from day surgery. This way the patient can recognize normal from abnormal healing and manage potential complications and seek help appropriately.

Strengths and Limitations

The results of this study should be interpreted with some caution. It was a pilot study so a relatively small sample size was used. In addition it was a consecutive sample

which allowed the invitation of all patients scheduled to undergo a short stay hysterectomy procedure at one hospital in Southwestern Ontario. This study should be replicated in various agencies to increase generalizability of the findings. Unfortunately process and outcome measures were not collected on those who were admitted overnight in hospital ($n = 39$), therefore it is not certain to what extent respondents are representative of hysterectomy patients more widely. Furthermore, although all participants were treated with the same service, they were not all treated by the same surgeon. Whilst studies that only include patients treated by a single surgeon can be criticised on the grounds of representativeness of their sample, those involving patients from a range of clinicians might also have limitations.

Considering the retrospective nature and reliance on the patient for self-report, the information collected is based largely on patients' perceptions. It needs to be acknowledged that while patients' perceptions are useful for a study of this nature it does not necessarily reflect if information was, or was not given, because patients may have received information but not understood it. In addition, it is possible that patients do not remember what information was provided or not. Social desirability might have also played a role. It is possible patients did not want to indicate dissatisfaction or identify incompleteness of information provided because they did not want to sound ungrateful and were still in follow-up at the health care centre.

The validity of the questionnaires used in this study were not formally evaluated although an expert panel was consulted and a pilot study was conducted, indicating good content validity. In addition, the internal consistency reliabilities for the six data

collection measurements were determined and all considered acceptable. In addition, the results of this study are not generalizable because the short stay program for women undergoing hysterectomies and the educational program at this hospital are most likely very different from programs used at other centres.

Implications

Nursing practice. The findings of this study support the guidelines developed at the London Health Sciences Centre for the content that should be included when preparing patients to manage their own care following short stay hysterectomy procedures and when developing teaching programs to meet the needs of these surgical patients. Discharge instructions should include guidelines for activity, pain management, identifying complications, bowel care and when and how to seek help. Patients should always be given information concerning potential complications that may arise and how to prevent them (Jacobs, 2000). Written information regarding pre and post-operative instructions specific to short stay hysterectomy procedures should be created that will be complemented by verbal instructions provided by nursing.

Selection criteria and protocols need to be developed to ensure patients are appropriately selected for short stay hysterectomy surgery. In addition, nurses need to modify their intervention strategies to aid families who will be managing their own care at home following surgery. Patients undergoing short hospital stays have an increased need to be empowered (Otte, 1996). Therefore, it is essential that providers develop a culture which promotes the principles of empowerment to increase confidence in self-care skills prior to discharge following surgery.

An important quality care improvement initiative is gathering information about patient satisfaction with teaching and education. This gives feedback to nurses about whether the information they are giving meets the expectations and needs of the patient and gives direction as to possible changes in relation to education. It is essential to recognize the patient's need for information and to be aware of effective communication skills for health professionals. Nurses should encourage patients to ask questions or seek clarification throughout their hospital stay and prior to discharge.

With an empowering approach nurses can become a more integral part of the information scheme and enable patients to become more confident in their ability to carry out post-operative tasks (Pellino et al., 1998). Johnson and colleagues (2003) recommend provision of both verbal and written information on discharge from acute hospital settings. Once home, written instructions serve as a continuous information resource (Clark et al., 2005). In addition to verbally counseling patients who will recovery at home, discharge instructions should be given in writing and reviewed with patients prior to discharge (Gilmartin, 2007; Kleinbeck & Hoffart, 1994). When possible written instructions should be made available in multiple languages which represent the multi-cultural society they serve.

Patient satisfaction is an individual's cognitive evaluation of, and emotional reaction to, his or her health-care experience (Shirley & Sanders, 2013). Shirley and Sanders (2013) found modifiable factors that contribute to satisfaction include physician-patient communication, the setting of appropriate expectations, minimization of waiting

times, and provision of continuity of care. Using satisfaction as an indicator of quality of care to evaluate current practices and health care experiences is important.

This study highlights the continued importance of nurses providing discharge advice. Providing well-informed discharge instructions for post-operative patients is a fundamental responsibility of primary care providers (Lo, Stuenkel & Rodriguez, 2009). Henderson and Zernike (2001) similarly state that nurses can make a significant contribution through the provision of discharge information to patients prior to their discharge home. Even though more information about surgical procedures is readily available to the lay population, and surgery is becoming less invasive, the time spent in hospital is decreasing as more surgeries are being done as day surgery. When working with patients undergoing surgery and same day discharge nurses need to incorporate teaching strategies to address patient learning needs, with consideration of the limited time available for teaching. Nurses need to be aware that patients who leave the hospital with little or no discharge information are more likely to develop concerns or problems that require them to access a health facility (Henderson & Zernike, 2001).

Nursing education. The results of this study have important implications for both basic nursing education and continuing education for nurses and physicians. Results from this study emphasize the importance of educating nurses in their role in empowering patients to develop their self-care skills and increase their confidence to recover safely at home. Nurses have an important role to play in helping patients' transition from hospital to home through the provision of effective discharge information. Strategies to support patient education and engagement should therefore be a fundamental plank of nursing

education. Nursing curricula should also emphasize the importance of quality improvement initiatives and should also incorporate patient satisfaction as a desired outcome of nursing care.

Students should be taught in their basic program that involving patients and families in decisions concerning their care is an important part of their health. Nurses should also learn how to effect change using patient advocacy and enhance patient well-being. In the case of outpatient hysterectomies, nurses can advocate for patients who don't fit the criteria to undergo day surgery or who do not fit the criteria for same day discharge. Continuing education for nurses should include education on approaches to hysterectomy and the importance of the least invasive surgical route.

Community health nurses also need education about symptoms patients may experience post-hysterectomy surgery, their pattern of recovery, and the importance of early identification of problems. Since most patients' recovery is done at home, the community health nurse is in a unique position to assist patients in the recovery process.

Physicians should be aware that same day discharge following hysterectomy is a feasible option for patients, which has been associated with a high level of satisfaction. Physicians need to use selection criteria and protocols to appropriately select patients suitable to undergo same day discharge following hysterectomy.

Finally, there is the need for healthcare organizations to use a quality of care model like Donabedian's (1980) to make continuous quality improvements with the intent of improving efficiency and effectiveness. Organizations should also have an established interprofessional collaboration between the hospital and community

practitioners such as community health nurses and general practitioners so patients know where to get assistance if needed.

Nursing research. As far as we are aware, this was the first study to evaluate the education provided after a short stay hysterectomy procedure, and identify additional informational needs 48 to 72 hours after discharge. Future studies need to be done to test whether the information provided is complete and whether their approach sufficiently prepares patients to manage their self-care tasks in daily life after discharge. Further research on the need for information in the long term after a hysterectomy procedure is also warranted. The informational needs of patients prior to discharge and at specific intervals following discharge should be explored to determine how the needs of patients change over time. Further research of this sort should also be conducted using a prospective design, following women's experience of having a hysterectomy over time and exploring their informational needs and satisfaction in relation to different types of hysterectomy procedures.

Further research could be useful in examining women's experiences of hysterectomy procedures in terms of satisfaction with aspects of care provided, information provision and decisional regret. Conducting a prospective trial would be useful to evaluate patient satisfaction with regard to different approaches to hysterectomy. Future research is also required to further test the data collection instruments used in this study to determine their reliability and validity. With recent enhancements to mobile handheld technology, the optimal methods of delivering information to patients could also be investigated.

Conclusion

This study examined a number of variables as postulated in an integrated model of Donabedian's Quality of Care Model (Donabedian, 1980) and the Nursing Model of Transitions (Schumacher & Meleis, 1994). The relationship between these study variables in the early recovery period following short stay hysterectomy procedures was examined. Previous studies of outpatient hysterectomies have not specifically investigated satisfaction with discharge information, nor have they examined the outcome variables of confidence in self-care and recovery.

In conclusion, this study identified high levels of satisfaction amongst women undergoing short stay hysterectomy. Providing quality information was found to be significantly positively associated with patient confidence in self-care and perceived self-recovery. It also demonstrated the importance of appropriate information provision to meet patient's post-surgical needs and identified areas in which information provision could be improved.

Although the findings cannot be generalized, it represents work that has not been previously done with women undergoing short stay hysterectomy procedures and offers the opportunity for further research. Also, findings from this study support some results from previously conducted studies of information provision and patient satisfaction following day surgery. It adds to the current body of nursing knowledge related to the early recovery trajectory of same day hysterectomy surgery patients.

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Appendix A

Letter to the Gynaecologists

Dear Gynaecologist,

I, Kate Narduzzi, am currently pursuing a graduate degree at Memorial University of Newfoundland School of Nursing. I will be conducting a nursing research study to complete thesis requirements involving patients undergoing hysterectomy as a short stay procedure. The purpose of this study is to determine the effect of discharge information on quality of care and transition outcomes. Informed consent will be obtained from each patient during their preadmission visit and they will be informed to expect a telephone interview between 48-72 hours post discharge. During this telephone interview participants will be asked questions relating to their perception of the discharge information provided, overall satisfaction with their short stay, satisfaction with discharge information, perceived confidence in self-care and post-operative recovery. The relationships between and among these variables will be examined in the data analysis.

If you have any concerns please contact me at (519)..... Upon completion of this study, you will be informed of the aggregate findings. Thank you for your consideration in this endeavor.

Sincerely,

Kate Narduzzi, RN, BScN, MN candidate

Appendix B

Script for Preadmission Nurse

Kate Narduzzi is a Master of Nursing student at Memorial University. As part of her program, she is conducting a study that will look at the information and teaching you will be given after your surgery and how you are recovering at home. Your participation will include a 15 to 20 minute phone call a few days after your surgery.

If preadmission visit is done via telephone

May I transfer your call so she can explain more about the study?

If yes, PI will continue to explain the study details to them based on the letter of information/consent

If preadmission visit is done in person

May I have her speak with you further to explain more about the study?

If yes, PI will continue to explain the study details to them based on the letter of information/consent

If PI is unavailable or if the patient is unable to meet or speak with PI at this time

May I have your permission to give her your name and phone number so that she can call you to explain more about the study?

If yes, preadmission nurse will give the PI the patients name and phone number

Appendix C

Letter of Information and Consent Form

**Consent to Take Part in Research**

TITLE: Discharge information and its' relationship to quality of care and transition outcomes following short stay hysterectomy: a pilot study

INVESTIGATOR(S): Kate Narduzzi, RN, BScN, Master of Nursing student, Memorial University of Newfoundland

Academic Supervisor: Sandra LeFort, RN, PhD, Professor, School of Nursing, Memorial University of Newfoundland

You are being invited to take part in a research study because you are scheduled to have a short stay hysterectomy and this study is interested in finding out how useful the discharge information is to women and how women are doing after their short stay surgery.

Taking part in this study is voluntary. It is up to you to decide whether to be in the study or not. You can decide not to take part in the study. If you decide to take part, you are free to leave at any time. This will not affect the treatment you will receive.

Before you decide, you need to understand what the study is for, what risks you might take and what benefits you might receive. This consent form explains the study.

Please read this carefully. Take as much time as you like. If you like, take it home to think about for a while. Mark anything you do not understand, or want explained better. After you have read it, please ask questions about anything that is not clear.

The researcher will:

- discuss the study with you
- answer your questions
- keep confidential any information which could identify you personally
- be available during the study to deal with problems and answer questions

1. Introduction/Background:

More and more Canadian women are having a hysterectomy and then going home the same day. After the surgery, nurses provide information to women about how to take care of themselves. But we know very little about how women recover at home and if the information they are given is helpful. This study is interested in finding out how useful the discharge information is to women and how women are doing after their short stay surgery. This information may help us improve the quality of care we provide to women who have a short stay in hospital after hysterectomy surgery.

2. Purpose of study:

This study is being done to find out:

- how satisfied you are with your short stay in hospital

Discharge information and its' relationship to quality of care and transition outcomes following short stay hysterectomy



- how satisfied you are with the discharge information you receive
- how you are recovering at home

3. Description of the study procedures:

If you agree to take part in the study, two things will happen.

1. The researcher will look at your patient chart in the hospital after you are discharged home.
2. Two to 3 days later, the researcher will call you at home. She will ask you questions about your stay in hospital, the information you received, and your recovery at home.

4. Length of time:

You will be expected to participate in one telephone interview 2 or 3 days after your discharge from hospital. The interview will last 15 to 20 minutes.

5. Possible risks and discomforts:

There are no known risks or discomforts to participation in this study. The only inconvenience is the time it will take to participate in the telephone interview.

6. Benefits:

It is not known whether this study will benefit you. But information gathered may provide benefits to society as a whole which include improvements in the discharge information given to women following their short stay hysterectomy procedure.

7. Liability statement:

Signing this form gives us your consent to be in this study. It tells us that you understand the information about the research study. When you sign this form, you do not give up your legal rights. Researchers or agencies involved in this research study still have their legal and professional responsibilities.

8. What about my privacy and confidentiality?

Protecting your privacy is an important part of this study. Every effort to protect your privacy will be made. However it cannot be guaranteed. For example we may be required by law to allow access to research records.

When you sign this consent form you give us permission to

- Collect information from you
- Collect information from your health record
- Share information with the people conducting the study
- Share information with the people responsible for protecting your safety

Access to records

Only the researcher will see study records that identify you by name. Other people may need to look at the study records that identify you by name. This might include the research ethics board.



You may ask to see the list of these people. They can look at your records only when supervised by a member of the research team.

Use of your study information

The research team will collect and use only the information they need for this research study.

This information will include your

- age
- type of surgery
- reason for surgery
- hours you stayed in the hospital
- the discharge information you were provided
- information from the study interview

Your name and contact information will be kept secure by the research team in London, Ontario. It will not be shared with others without your permission. Your name will not appear in any report or article published as a result of this study.

Information collected for this study will kept for five years.

If you decide to withdraw from the study, the information collected up to that time will be destroyed.

Information collected and used by the research team will be stored in London Ontario. Kate Narduzzi is the person responsible for keeping it secure.

Your access to records

You may ask the researcher to see the information that has been collected about you.

9. Questions or problems:

If you have any questions about taking part in this study, you can meet with the investigator who is in charge of the study at this institution. That person is: Kate Narduzzi (519) 281-7806, kate.narduzzi@mun.ca or you may call her academic supervisor, Sandra LeFort (709) 777-2232 or by email at slefort@mun.ca

Or you can talk to someone who is not involved with the study at all, but can advise you on your rights as a participant in a research study. This person can be reached through:

Ethics Office
Health Research Ethics Authority
709-777-6974 or by email at info@hrea.ca

You may also contact Dr. David Hill, Scientific Director, Lawson Health Research Institute (519) 667-6649.

After signing this consent you will be given a copy.



Signature Page

Study title: Discharge information and its' relationship to quality of care and transition outcomes following short stay hysterectomy: a pilot study

Name of principal investigator: Kate Narduzzi

To be filled out and signed by the participant:

I have read the Letter of Information and have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

Signature of participant Name printed Year Month Day

To be signed by the investigator or person obtaining consent

I have explained this study to the best of my ability. I invited questions and gave answers. I believe that the participant fully understands what is involved in being in the study, any potential risks of the study and that he or she has freely chosen to be in the study.

Signature of investigator Name printed Year Month Day

Telephone number: _____

Appendix E

Discharge Teaching Guide –Short Stay Hysterectomy

DISCHARGE TEACHING GUIDE--- SHORT STAY HYSTERECTOMY

You must have someone drive you home from the hospital and have someone available to help you at home for at least the first 24 hours after surgery

You must not drive, operate machinery, take sedative drugs or drink alcohol for 24 hours following surgery because you have received an anesthetic

BLADDER/BOWEL

- Normal bowel and bladder routines should resume
- You may become constipated due to inactivity and the narcotic pain medication taken post-operatively
- You can take a stool softener such as Colace or a gentle laxative such as Milk of Magnesia (unless otherwise directed by your physician)
- If you have blood in your urine, are passing small amounts of urine frequently, have difficulty emptying your bladder or having bowel movements contact your surgeon

BLEEDING

- Bleeding or spotting from your vagina for up to 6 weeks is normal. It may be red or brown in colour and should gradually decrease in amount over time.
- Do not douche
- You can use sanitary pads. Be sure to change them frequently throughout the day even if they are not completely soiled.
- Do not use tampons
- If you experience sudden increases in vaginal bleeding or the passing of any large-sized clots from your vagina contact your surgeon

DIET

- You do not have to be on a special diet
- Drink lots of fluids and choose high fibre foods such as: natural bran, fruits, vegetables, lentils and whole grain products.

ACTIVITY

- You can shower or bath the day after your surgery
- Slowly increase your activity
- Walking is encouraged but don't overdo it
- If you get tired or have an increase in pain, STOP and rest
- Be careful using stairs due to the risk of falling
- Do not have sexual intercourse for 6 weeks
- Arrange a follow-up appointment to see your Gynecologist in 6 weeks and then you can discuss if you are ready to resume sexual activity
- Do not vacuum or do any activity that is straining to your abdominal muscles
- Do not lift anything heavier than 10 lbs for 6 weeks, then nothing heavier than 20 lbs for 3 months

INFECTION

- Foul smelling or greenish vaginal discharge
- Fever over 38°C or 100.4°F or chills

DISCHARGE TEACHING GUIDE--- SHORT STAY HYSTERECTOMY

PAIN MANAGEMENT

- It is normal to experience some pain
- If pain is increasing or not manageable with pain medication contact your surgeon
- If you experience pain or swelling in your leg(s) contact your surgeon
- Review any prescriptions, including scheduled and prn medications and the resumption of home medications
- Take your prescription to the pharmacy on the way home (LHSC Pharmacy is open weekdays until 1700)
- Do not drive while you are taking narcotic pain medications

LIFE AFTER HYSTERECTOMY

- You will no longer have menstrual periods.
- You will not be able to become pregnant.
- You may not need PAP smears if your cervix was removed. Your healthcare provider can discuss this and other changes with you further
- If your ovaries have been removed you might go through menopausal symptoms (hot flashes, mood swings, sleep disturbances, vaginal dryness etc.). This may cause more severe symptoms than a natural menopause.

LAPAROSCOPY (LAVH)

- Shoulder discomfort is normal to experience for a few days
- Sutures/stitches, if used will dissolve on their own
- The small dressings covering your incisions may be removed the day after surgery
- Call your surgeon or go to Emergency if your incision separates or begins to bleed large amounts of bright red blood
- Monitor incisional sites several times a day for signs of infection including, redness around the incision that may be hot to touch, increased pain, leaking thick yellow/green drainage or pus

HELP

- Review how to contact their surgeon.
- Go to the closest emergency room
- After hours call 519-685-8500 and press "0" and ask switchboard for the Gynaecologist on call

Appendix F

Gynaecology Discharge Instructions for Major Surgical Procedures Pamphlet

Patient Information

Gynaecological Discharge Instructions for Major Surgical Procedures

Thoughts for Home

Please bring these instructions with you to the hospital on the day of your surgery.



**London Health
Sciences Centre**

800 Commissioners Road East,
London, Ontario N6A 5W9
Telephone: 519-685-8500

- To reduce the risk of constipation, drink lots of fluids and choose foods that are high in fibre. Types of foods high in fibre include: natural bran, fruits, vegetables, lentils and whole grain products. You can take a stool softener such as Colace or a gentle laxative such as Milk of Magnesia (unless otherwise directed by your physician).

Other important points to remember:

- You may have some bleeding or spotting from your vagina for up to 6 weeks after your operation. It may be red or brown in colour and you may use sanitary pads. Do not douche as this could cause a serious infection.
- If you have an incision, you may feel numbness around the abdominal incision. This numbness will improve over time.
- Do not use tampons for 6 weeks
- If you have had a hysterectomy you will not have menstrual periods
- If you had a short hospital stay you must not drive, operate machinery, take sedative drugs or drink alcohol for 24 hours following surgery because you have received an anesthetic.

Remember: If you are uncertain or worried about anything, please do not hesitate to call.

NS8175 (Rev. 2012.03/27)

Common Questions

Q: When will I return to normal activity?

A: Do not lift heavy objects for the first six weeks after your operation. 'Heavy' refers to anything over 10 lbs eg. a full laundry basket, bags of heavy groceries etc. Also, do not vacuum or do any exercises that may strain your abdominal muscles. For the next three months, do not lift anything heavier than 20 lbs.

There are no lifting restrictions for laparoscopy patients who have not had a hysterectomy.

- Slowly increase your activity to your usual level, you are encouraged to walk but be careful not to 'overdo' it. If you are tired or having pain, stop what you are doing and rest. You may use stairs but do not place yourself in a situation where a fall could occur.
- Do NOT have sexual intercourse for 6 weeks. You will have a follow up appointment with your gynaecologist and you can discuss whether or not you are ready to resume sexual relations at that time as well as other forms of physical activity.

Q: What should I eat after my surgery?

A: You do not have to be on a special diet after your surgery unless otherwise stated by your physician. Because you are less active after your surgery, you may become constipated.

Thoughts for Home ...

The surgery that I had is called:

It was performed on:

Like any surgery, the possibility of complications can arise. Before my surgery, I was informed by my surgeon of some of the potential complications that could occur during or even after my surgery. It is important for me to understand and remember all of the signs and symptoms to look for.

Read on for reasons to **REACT**.

SURGEON INFORMATION

Name: _____

Telephone (DAYTIME): _____

Telephone After Hours:
(519)685-8500 Press '0' for operator.
Ask for the gynaecology doctor who is on-call.

Laparoscopy

If you had a laparoscopy:

- You may have shoulder and/or abdominal discomfort for a few days.
- A small dressing may cover your incision - remove this the day following surgery
- Sutures, if used, will dissolve on their own
- You may shower or take a bath the day after your procedure

Reasons to REACT:

The following are signs and symptoms that if you experience, you need to **REACT** by contacting your surgeon or heading to your nearest hospital's EMERGENCY DEPARTMENT.

Pain

- It is normal to experience some pain after surgery however, if you notice that the pain has increased and is not relieved by pain medication = **REACT**
- If you experience pain or burning upon urination = **REACT**
- If you experience pain or swelling in your legs = **REACT**

Infection

- If you develop a fever (temperature over 38°C/100.4°F) or experience chills = **REACT**
- If you experience foul smelling discharge from your vagina that is greenish in colour = **REACT**
- If you notice an increase in redness or pain in your incision or if the incision is hot to touch and/or the incision begins to leak yellowish coloured drainage = **REACT**

Bleeding

- If you experience any sudden increases in vaginal bleeding including passing any large size clots from your vagina = **REACT**
- If your incision separates or begins to bleed a large amount of bright red blood = **REACT**
- If you notice blood in your urine = **REACT**

Bladder/Bowel

- If you experience difficulty emptying your bladder or if you find that you are having to pass small amounts of urine often = **REACT**
- If you are not passing gas or have not had a bowel movement for an extended period of time = **REACT**

Appendix G
Data Collection Tools

Descriptive Information

Age: (in years) _____

Surgical Procedure

1. Vaginal Hysterectomy
2. Laparoscopic Assisted Vaginal Hysterectomy
3. Laparoscopic Hysterectomy

Additional Surgical Procedure

1. with R or L Salpingoophorectomy
2. with Bilateral Salpingoophorectomy
3. with R or L Salpingectomy
4. with Bilateral Salpingectomy

Reason for Hysterectomy:

1. Uterine Fibroids (myomas)
2. Abnormal Uterine Bleeding
3. Pelvic Pain
4. Uterine Prolapse
5. Endometriosis
6. Other _____

Length of Stay _____

(In hours from the time of admission to PACU and discharge)

Variable 1: Discharge Information Provided

Discharge Information provided as per documentation on the Education Record in the patient's medical chart

Components	Verbal Instruction	
	Yes	No
Monitoring	(1)	(0)
Pain Management	(1)	(0)
Wound Care	(1)	(0)
Activity	(1)	(0)
Discharge Planning	(1)	(0)

Written Instructions Given	Yes	No
	(1)	(0)

Variable 2: Perception of Information Received

During your discharge teaching did your nurse review the following?			
Monitoring (probe: signs and symptoms of complications to watch for)	Yes (1)	No (0)	Not Sure (0)
Pain Management (probe: plan for managing your pain at home)	Yes (1)	No (0)	Not Sure (0)
Wound Care (probe: how to care for your incisions(s))	Yes (1)	No (0)	Not Sure (0)
Activity (probe: activity restrictions)	Yes (1)	No (0)	Not Sure (0)
Discharge Planning (probe: how to seek help if you had complications or problems at home?, Were you informed to have a follow-up visit with your surgeon in 6 weeks?)	Yes (1)	No (0)	Not Sure (0)
Were you given a copy of the Gynaecological Discharge Instructions Pamphlet?	Yes (1)	No (0)	Not Sure (0)

Variable 3: Overall Satisfaction with Short Hospital Stay Experience

Based on Keegan and McGee's (2003) Overall Satisfaction Subscale of the Satisfaction with Outpatient Services (SWOPS) Questionnaire

1. Overall, how satisfied were you with your treatment during your short stay at the hospital?

Very Dissatisfied	Dissatisfied	Neither	Satisfied	Very Satisfied
(1)	(2)	(3)	(4)	(5)

2. Overall, how good do you think the medical care is for women like you who have a short stay hysterectomy?

Very Poor	Poor	Average	Good	Very Good
(1)	(2)	(3)	(4)	(5)

3. Overall, how good do you think the nursing care is for women like you who have a short stay hysterectomy?

Very Poor	Poor	Average	Good	Very Good
(1)	(2)	(3)	(4)	(5)

4. Overall, how good do you think the entire short stay process (from preadmission to discharge) is for women who have a hysterectomy?

Very Poor	Poor	Average	Good	Very Good
(1)	(2)	(3)	(4)	(5)

5. Do you have any suggestions for how we could have improved your short stay experience?
-

Variable 4: Satisfaction with Discharge Information

1. Overall how satisfied are you with the discharge information given to you by your nurse?
Very Dissatisfied Dissatisfied Neither Satisfied Very Satisfied
(1) (2) (3) (4) (5)

 2. How satisfied are you with the instructions given about how to care for yourself at home?
Very Dissatisfied Dissatisfied Neither Satisfied Very Satisfied
(1) (2) (3) (4) (5)

 3. How satisfied are you with the instructions given about managing your pain?
Very Dissatisfied Dissatisfied Neither Satisfied Very Satisfied
(1) (2) (3) (4) (5)

 4. How satisfied are you with the instructions given about identifying complications and seeking help?
Very Dissatisfied Dissatisfied Neither Satisfied Very Satisfied
(1) (2) (3) (4) (5)

 5. Is there any additional information that you would have found helpful?
-

Variable 5: Perceived Confidence in Self-Care

Adapted from Verran (2001) Self-care: Condition management Patient Questionnaire

Having surgery often means doing different tasks and activities to manage when you get home. We would like to know how confident you are in doing certain activities. For each of the following questions, please indicate the number that corresponds to your confidence that you can do the tasks regularly at the **present time**.

How confident are you that you can.....

1. Do all the things necessary to manage your recovery at home.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

2. Judge when changes in your condition mean you should seek medical help.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

3. Recovery safely without contacting your health care provider.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

4. Do things to reduce how much your current condition affects your everyday life.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

5. Take your medications as prescribed and as needed to manage your symptoms.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

6. Recognize problems due to your surgery or its treatment such as difficulties due to unexpected responses to medications.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

7. Manage basic life activities such as dressing, bathing or eating without help from others.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

8. Get help if necessary.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

9. Follow your discharge instructions.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

10. Get information about your recovery from reliable health care resources.

Not at all confident 1 2 3 4 5 6 7 8 9 10 Totally confident

My bowels are in poor condition	1 2 3 4 5 6 7 8 9 10	no problems with diarrhea, gas or constipation
Ready to go to work	1 2 3 4 5 6 7 8 9 10	unable to work
Like doing more exercise	1 2 3 4 5 6 7 8 9 10	unable to do much exercise
Able to handle all my own personal care	1 2 3 4 5 6 7 8 9 10	need for help in caring for myself
Almost back to my normal self	1 2 3 4 5 6 7 8 9 10	very different from my normal self

Appendix H

Satisfaction Subscale of the SWOPS tool

Overall Satisfaction subscale (items included in other dimensions) (Alpha .84) (p. 36)

	Very Satisfied	Satisfied	Neither	Dissatisfied	Very Dissatisfied
Overall, how satisfied are you with your treatment at the outpatient clinic?	142 (40)	159 (45)	36 (10)	11 (3)	3 (1)
	Very Good	Good	Average	Poor	Very Poor
Overall, how good do you think the medical care is at the outpatient clinic?	171 (49)	130 (37)	43 (12)	6 (2)	2 (1)
Overall, how good do you think the nursing care is at the outpatient clinic?	209 (60)	102 (29)	33 (9)	3 (1)	1 (1)
Overall, how good do you think the running of the outpatient clinic is?	138 (39)	105 (3)	75 (21)	27 (8)	4 (1)

Keegan, O. & McGee, H. (2003). A Guide to Hospital Outpatient Satisfaction Surveys.

Practical Recommendations and the Satisfaction with Outpatient Services

(SWOPS) Questionnaire. Dublin: Royal College of Surgeons in Ireland.

Appendix I

Email from Dr.Verran

From: Verran, Joyce [Joyce.Verran@ucdenver.edu]
Sent: 2012/08/20 5:47:24 PM
To: Kate Narduzzi [Kate.Narduzzi@lhsc.on.ca]
Subject: hello

Kate:

I have attached a variety of information for you: 1) The final report for the IMPACT grant; 2) copies of the self-care scale and the well cared for scale; and, 3) the results of psychometric testing of these two instruments.

The psychometric table gives the item numbers that belong to each subscale of the instrument and the final report will show the publications from the study which primarily related to the second aim of computational modeling.

We have used both of these scales in our current grant and they perform equally as well for reliability and validity information.

You have my permission to utilize the scales if you wish in your research with appropriate acknowledgment. I would appreciate a copy of the abstract for your final report and any publications that report scale findings.

My best wishes for your research endeavors.

Joyce A. Verran PhD, RN, FAAN
Professor
[\(520\) 349-9107](tel:5203499107) (cell)
[\(520\) 296-3610](tel:5202963610) (FAX-home)

From: Kate Narduzzi [Kate.Narduzzi@lhsc.on.ca]
Sent: 2012/09/27 10:00 AM
To: Verran, Joyce [Joyce.Verran@ucdenver.edu]
Subject: RE: hello

Hello Dr. Verran,

I have chosen to use your Condition Management questionnaire in my thesis. Thank you so much for giving me permission and sharing your tool. I wanted to share it with you since I have changed some of the wording to work for my study since I am evaluating

level of confidence in self-care for women following hysterectomy surgery. For example the word condition is often replaced with recovery.

As promised I will use appropriate acknowledgment and share with you a copy of my final report or any publications.

thank you
Kate

From: Verran, Joyce [Joyce.Verran@ucdenver.edu]
Sent: 2012/09/27 5:12:40 PM
To: Kate Narduzzi [Kate.Narduzzi@lhsc.on.ca]
Subject: hello

Those are reasonable changes for your study. My best wished for your research. Please let me know how it goes.

Joyce A. Verran PhD, RN, FAAN
Professor
[\(520\) 349-9107](tel:(520)349-9107) (cell)
[\(520\) 296-3610](tel:(520)296-3610) (FAX-home)

Appendix J

Email from Dr. Kleinbeck

The following is from p.163. of,

Poole, E. (2007). *The relationship of preoperative teaching received, preoperative teaching valued, and selected conditioning factors to post-operative recovery in ambulatory laparoscopic abdominal surgery patients.* (Doctoral Dissertation). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 3246956).

Preview

Page 1 of 1



Date: Saturday, September 24, 2005 10:36 AM
From: pnds@aorn.org
To: ellenpoole@cox.net
Subject: PSR scale for dissertation

Hi Ellen,

Am pleased to hear that you are in the data collection phase for dissertation. Congrats. The reason I retained copyright for the Postdischarge Surgical Recovery scale was to protect the integrity of the scale. It has been used in research now sufficient number of times that I do not feel that protection is needed any longer. You may publish the scale in your dissertation along with the psychometrics.

Susan V.M. Kleinbeck, RN, PhD, CNOR
PNDS Nursing Consultant
pnds@aorn.org

Appendix K

HREA Ethics Approval



Ethics Office
Suite 200, Eastern Trust Building
95 Bonaventure Avenue
St. John's, NL
A1B 2X5

November 2, 2012

Kate Narduzzi
 21872 Highbury Ave
 Arva, ON
 N0M 1C0

Dear: Ms. Narduzzi

Reference # 12.225

RE: Discharge information and its' relationship to quality of care and transition outcome following short stay hysterectomy: a pilot study

This will acknowledge receipt of your correspondence.

This correspondence has been reviewed by the Chair under the direction of the Board. **Full board approval** of this research study is granted for one year effective **November 2, 2012**.

This is to confirm that the Health Research Ethics Board reviewed and approved or acknowledged the following documents (as indicated):

- Application, approved
- Proposal, approved
- Consent version October 26, 2012

MARK THE DATE

This approval will lapse on **November 1, 2013**. It is your responsibility to ensure that the Ethics Renewal form is forwarded to the HREB office prior to the renewal date. *The information provided in this form must be **current to the time of submission** and submitted to HREB **not less than 30 nor more than 45 days** of the anniversary of your approval date.* The Ethics Renewal form can be downloaded from the HREB website <http://www.hrea.ca>.

The Health Research Ethics Board advises THAT IF YOU DO NOT return the completed Ethics Renewal form prior to date of renewal:

email: info@hrea.ca

Phone: 777-8949

FAX: 777-8776

Ms. K. Narduzzi
Reference # 12.225
November 2, 2012

Page 2

- *Your ethics approval will lapse*
- *You will be required to stop research activity immediately*
- *You may not be permitted to restart the study until you reapply for and receive approval to undertake the study again*

Lapse in ethics approval may result in interruption or termination of funding

It is **your responsibility to seek the necessary approval from the Regional Health Authority or other organization as appropriate.**

Modifications of the protocol/consent are not permitted without prior approval from the Health Research Ethics Board. Implementing changes in the protocol/consent without HREB approval may result in the approval of your research study being revoked, necessitating cessation of all related research activity. Request for modification to the protocol/consent must be outlined on an amendment form (available on the HREB website) and submitted to the HREB for review.

This research ethics board (the HREB) has reviewed and approved the research protocol and documentation as noted above for the study which is to be conducted by you as the qualified investigator named above at the specified site. This approval and the views of this Research Ethics Board have been documented in writing. In addition, please be advised that the Health Research Ethics Board currently operates according to *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans; ICH Guidance E6: Good Clinical Practice* and applicable laws and regulations. The membership of this research ethics board is constituted in compliance with the membership requirements for research ethics boards as defined by *Health Canada Food and Drug Regulations Division 5; Part C.*

Notwithstanding the approval of the HREB, the primary responsibility for the ethical conduct of the investigation remains with you.

We wish you every success with your study.

Sincerely,



Dr. Fern Brunger
Chair, Non-Clinical Trials
Health Research Ethics Board

C C VP Research c/o Office of Research, MUN
VP Research c/o Patient Research Centre, Eastern Health
HREB meeting date:

email: info@hrea.ca

Phone: 777-8949

FAX: 777-8776

Appendix L

UWO/Lawson Ethics Approval



Use of Human Participants - Ethics Approval Notice

Research Ethics

Principal Investigator: Ms. Kate Narduzzi
File Number:103147
Review Level:Delegated
Approved Local Adult Participants:50
Approved Local Minor Participants:0
Protocol Title:Discharge information and its' relationship to quality of care and transition outcomes following short stay hysterectomy: a pilot study
Department & Institution:Brescia/Women's Studies,London Health Sciences Centre
Sponsor:
Ethics Approval Date:November 13, 2012 **Expiry Date:**April 01, 2013
Documents Reviewed & Approved & Documents Received for Information:

Document Name	Comments	Version Date
Other	Script for Preadmission Nurse to approach participants	2012/10/08
Revised Western University Protocol	Revised western protocol section 5.	2012/11/06
Revised Letter of Information & Consent	Revised letter of information and consent with track changes	2012/11/06
	Revised Data Collection form with track changes	2012/11/06

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/CH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced revision(s) or amendment(s) on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

The ethics approval for this study shall remain valid until the expiry date noted above assuming timely and acceptable responses to the HSREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the University of Western Ontario Updated Approval Request Form.

Members of the HSREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the HSREB.

The Chair of the HSREB is Dr. Joseph Gilbert. The HSREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 0000940.

Signature 

Ethics Officers to Contact for Further Information

<input type="checkbox"/> Janice Sutherland (jsuther@uwo.ca)	<input checked="" type="checkbox"/> Grace Kelly (grace.kelly@uwo.ca)	<input type="checkbox"/> Shantel Walcott (swalcot@uwo.ca)
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This is an official document. Please retain the original in your files.

Appendix M

Description of Dummy Coding of Variables into Binomials

Variable 1- Information Provided (as charted by the nurse):

- 0 was coded for all values from 0 to 4
- 1 was coded for all values from 5 to 6.
- So, this can be categorized as low to medium levels of information given versus high levels of information given

Variable 2- Perception of Information Received:

- 0 was coded for all values from 0 to 4
- 1 was coded for all values from 5 to 6.
- So, this can be categorized as low to medium levels of information perceived versus high levels of information perceived

Variable 3-Satisfaction with Overall Experience

- Because there were no values below 10, 0 was coded for all values from 10 to 15
- 1 was coded for all values from 16 to 20.
- So, this can be categorized as medium levels of satisfaction versus high levels of satisfaction