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# Exploring How Men and Women Approach Patient Educational Resources: How this Impacts Patient Experience

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UNIVERSITY OF CALGARY

Exploring How Men and Women Approach Patient Educational Resources: How this Impacts  
Patient Experience

by

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A THESIS

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## **Abstract**

Patient education (PE) resources are provided to patients with the aim of engaging them in their health outcomes. Medicine, and as a result patient education, has evolved over many decades but has been skewed to favor one gender. This emphasis on representation of one gender has upheld a hegemonic status quo, excluding almost half of the patient population. Thus, there is a need for a more inclusive approach to patient education. This research used a case study methodology to investigate patient education as part of the Enhanced Recovery After Surgery (ERAS) protocol. ERAS is a set of clinical practice changes that have contributed to patients being discharged from hospital sooner with fewer re-admissions and complications after colorectal surgery when compared to traditional surgical practices. In process of the development of ERAS patient education for the surgery process, differences that men and women may experience have not been well considered in the development of the patient education. This research was conducted with patients who underwent a colorectal ERAS surgical procedure. This study considers patient and healthcare provider (HCP) perspectives in regard to engagement with PE to determine if there are biological sex and gender specific considerations or processes that may result in improved patient outcomes and/or satisfaction. Participants identified gaps in the PE pertaining to sex and gender as well as other areas of personalization such as nutritional and post-care instructions. Participants indicated that involving patients as partners in development of

PE may be a way to address gaps and improve outcomes. Study findings may be used to help design patient educational tools that consider a sex and gender approach, in order to be more inclusive and prioritize the needs of the patient populations that HCP aim to engage with ERAS.

*Keywords:* sex, gender, patient education, post structural feminist theory, Enhanced Recovery After Surgery (ERAS ®)

## **Preface**

This thesis is original, unpublished, independent work by the author, N. M. Viceer. The data reported in Chapters 4-5 were covered by Ethics ID REB18-0527, issued by the University of Calgary Conjoint Faculties Research Ethics Board for the project “Exploring How Men and Women Approach Patient Educational Resources and how this Impacts Patient Experience” on November 7, 2018.

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### **Dedication**

This is dedicated with love to my immediate family; my parents and my daughters. To my dad who would have been the proudest and who instilled in me that I could do anything I put my mind to and to my mom who instilled in her children the value of education and has supported and encouraged me. To my daughters whose constant support, love and encouragement made this journey possible.

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### **Definition of Terms**

The following represents definition of terms as used in this study.

<i>Colorectal surgery</i>	Refers to surgery that repairs damage to colon, rectum, and anus through a variety of procedures that may have little or great long-term consequence to the patient (Surgery Encyclopedia, 2018).
<i>ERAS</i>	Refers to Enhanced Recovery After Surgery Protocol, a surgical protocol based on evidence based. changes and differs from traditional surgical processes.
<i>Gender</i>	The socially constructed characteristics of women and men: norms, roles, and relationships of and between groups of women and men.
<i>Hegemony</i>	Refers to the social, cultural, ideological, or economic influence exerted by a dominant group (Meriam-Webster, 2018).
<i>Patient Education</i>	Refers interchangeably to educational resources, tools, and materials provided to and used to educate and engage patients in the improvement of their healthcare outcomes; they can come in various forms such as care booklets, videos, counselling sessions, pamphlets, etc.

*Sex*

Refers to the different biological and physiological characteristics of males and females, such as reproductive organs, chromosomes, hormones, etc.

## **CHAPTER ONE: INTRODUCTION**

### **Overview**

Shifts in the healthcare system over the last several decades have resulted in many changes, such as decreased time for patient and physician meetings, biomedical advances, technology advances, and more. Trends and campaigns such as patient-centered care over the last 10-15 years and more recently, precision medicine (the personalization of care), have become increasingly prevalent, and have resulted in medicine attempting to foreground the individual patient. These changes have resulted in patient education becoming an important pedagogical tool used to engage patients in the outcomes of their health.

Historically, the onto-epistemological underpinnings of medicine are from an evidence-based, positivist ideology. This ideology does not take into account the deep understandings and perspectives of the multiple realities that the diversity of the patient population may bring as a form of knowledge (Bloomberg & Volpe, 2012). Gender has historically also been ignored or skewed in many aspects of medicine from research, practice, and the production of the patient education tools; these are areas that require further investigation (Eichler, Reisman & Borins, 1992).

The purpose of this introductory chapter is to shape the research by outlining the background and context of the study, and how I locate myself in it. Then I state the problem, purpose, research questions, rational, theoretical framework, and methodology, followed by description of my biases and assumptions for this study.

### **Background and Context**

Patient education is defined as a process of providing information to patients with the goal of changing knowledge and behaviors aimed at maintaining or improving health (Holly,



Hale, Bennett, Treharne, Carroll, & Kitas, 2011). It is the most commonly used medical intervention in North America and Europe, and most “educational initiatives are typically designed and evaluated using samples of ‘white’ homogeneous males” (Fredericks & Guruge, 2015, p. E13). Although women make up approximately 50% of many patient populations within some diseases, patient education is oriented and produced from the male patient perspective. Common illnesses, such as colorectal disease and cardiovascular disease, show an almost equal prevalence in men and women; however, there is an emphasis that these diseases impact males more (Chacko, Macaron & Burke, 2015). In the case of colorectal disease, the lifetime risk for colorectal cancer is “men (1 in 20) and women (1 in 22)” (Chacko, Macaron & Burke, 2015, p. 699; Siegel, Ma, Zou, Jemal, 2014). Similarly, according to the American Heart Association, cardiovascular disease (CVD) prevalence for those over 20 years of age is 37.4% of men and 35.9% of women have some form of CVD.

Across the spectrum in medicine, patient education follows the male dominant perspective, and “have been designed, delivered and evaluated using samples of white men” (Fredericks & Guruge, 2015, p. E14). Adding to this is the power of stereotypes regarding disease, an important aspect when considering gender (Gramlich, Nelson, de Groot, Viceer, & Gilmore, 2017). These stereotypes are exhibited even among women; for example, following a first myocardial infarction (MI), “women experience greater distress than men and are more likely to experience the gender of the care environment as discordant with their own gender,” but women consider MI a man’s health issue even after media messages were altered to include women in MI presentations (Gramlich et al. 2016, p.3; Woodend & Devins, 2005).

Gender, as a concept, was introduced to the social sciences and humanistic sciences in the 1960s as a construct to determine how sex, male or female, was interpreted by different societies

and cultures (Gramlich, Nelson, de Groot, Viceer & Gilmore, 2016; Risberg, Johansson, & Hamerg, 2009). In the past 10 to 15 years in Europe and North America, there has been a push for patient-centered care and key social determinants of health including “social and economic conditions that positively and negatively affect the health of individuals, their families, their communities,” including gender (Fredericks & Guruge, 2015, p. E15). Until fairly recently, evidence-based medicine has largely ignored sex and gender and demonstrated a bias favoring one gender over another (Risberg et al., 2009). This may have also introduced serious errors into scientific research, the foundation upon which medical practice is based (Bastable, 2006; Eichler, et al., 1992). Examples of gender bias exist in all components of the medical research process in Canada and the U.S. and across subspecialties: in titles, the research design, methods, data collection, data interpretation, and treatment recommendations (Eichler et al, 1992).

Surgical literature reveals that clinical (Sawatzky & Naimark, 2009) and patient-reported outcomes (Xu, Choi, Kim, Park, & Lee, 2016) are influenced by gender (Gramlich et al., 2016). Furthermore, the current trend towards precision medicine studies the differences in people’s genes, environments, and lifestyles to develop targeted, more individualized treatments for a host of diseases and treatments (Gramlich et al., 2016; Johnson, Fitzgerald, Glynn, & Saiganicoff, 2016). Considering these shifts, it would be reasonable to assume education tools could follow some personalization as well.

I had originally embarked on this topic when I was asked to join a Canadian Institutes of Health Research (CIHR) grant application in December 2016. The grant application was for a proposed study regarding the Enhanced Recovery After Surgery (ERAS) protocol which would have spanned over three years, and would have produced (outlined at a high level) a literature review and recommendations for a sex and gender sensitive (SGS) ERAS protocol intervention,

then an implementation of the proposed intervention, and finally a comparison for both the pre- and post-intervention. The intent was that the potential SGS ERAS protocol would have the potential to improve both patient satisfaction and outcomes by offering a more personalized and gendered approach. Although our team was very close to receiving funding for this innovative study, we were not successful and plan to reapply at a later date. With the support of the ERAS team from the grant application above, I proposed a preliminary study to investigate perceptions of both patients and clinicians regarding sex and gender implications in the patient educational tools that may affect patient satisfaction and outcomes provided in the ERAS protocol process.

### **Enhanced Recovery After Surgery (ERAS) and Alberta Health Services (AHS)**

ERAS is a surgical protocol which challenges many of the commonly held traditional surgical beliefs and processes. ERAS consists of three parts: 1) ERAS international evidence-based guidelines which detail best surgical care in the pre-operative, peri-operative, and post-operative time periods, 2) ERAS Team which includes a patient focus and builds upon site-based inter-professional care teams using audit data iteratively to achieve compliance to the guideline for best care, and 3) ERAS Interactive Audit System (EIAS): a data entry and analysis system to monitor compliance on individual care elements and facilitate implementation by providing feedback to support tailored interventions (Gustaffson et al., 2013; 2011).

Alberta Health Services (AHS) implemented ERAS in 2013 in colorectal surgery at two sites through the Diabetes, Obesity & Nutrition and Surgery Strategic Clinical Networks (SCN), and it has subsequently been expanded to seven urban and two rural sites (Gramlich et al., 2016). ERAS resulted in an economic impact of lower cost per patient of \$920- \$2619/day, a return on investment of \$3.8 per \$1 invested (Nguyen et al., 2016), and an additional commitment of \$1.63 million annually through to 2019 by AHS to expand ERAS into eight more surgical types (ERAS

Charter, 2016; Gramlich et al., 2016). The ERAS literature is non-existent in terms of sex and gender approaches or impacts.

### **Gender in Medicine**

In medicine, a gender perspective can be applied when the biological sex of an individual impacts roles and expectations in society, and more explicitly what is feminine and masculine in relation to the professional situations and relationships along with what is theorized about males and females (Risberg, et al., 2009). The underpinnings of gender are associated with social construction and how hegemony and sociocultural norms for men and women are determined and set up in society.

### **Patient Education and the Value of Perspective**

The desired aims of patient education tools can be seen to have many associated perspectives encompassing, but not limited to, that of the patient, who is the user of these tools to improve his/her health outcomes; the healthcare providers (usually the producer of these tools and the ones who educate and engage patient in their health); the government who funds and creates policy around healthcare; society: societal trends and movements and how they have impacted the individual and the patient as a whole, and others. Understanding that there are varying perspectives and agendas associated with the creation and use of these resources that aim to educate the patient, it is often uncertain which of these many perspectives is valued and represented. Thus, there is not a generic or standard practice that is utilized in the creation of patient education tools.

Underpinning my research is the ontological belief that there are varying perspectives and uses for these patient educational resources—multiple realities that drive the existence of these educational materials. My belief system compelled me to question which of these perspectives is

most important, and whose perspective takes precedence? Underlying this question is the impression of power; whose knowledge is more valued and why? Denzin & Lincoln (2011) addressed the politics of evidence, defined as an exploration of the differences between the objective methods of positivist and “the world of lived experiences,” and the inclusion of lived experiences where “individual belief and action intersect with culture” (p. 2). The assessment of power and conflict interactions may not integrate the patient experience and collaborative care and are under-examined in medical education literature (Paradis & Whitehead, 2015). I was further compelled to question how power structures exist through the hierarchical aspects in medicine. How do these power structures then influence and play out in healthcare systems, between healthcare professionals, and then with interactions with patients?

### **Locating the Self in the Research Inquiry**

As I located myself within this research, I considered my influences personally, professionally, and academically, as a researcher.

#### **Personally**

On a personal level, this topic resonated with me as a patient and as a woman. I had been a healthy individual and was fortunate enough only to have visited the hospital on happy and joyous occurrences, such as the birth of my children. However, a few years ago, I underwent a surgical procedure; I remember going through a wide range of emotions, thoughts, and questions, and felt that I did not have adequate support from the healthcare system. I began to research and question what this meant for me, as my knowledge about my condition was nonexistent.

About a week before the surgery, I was given a package of information which included a care booklet. It was a generic care booklet, and it included descriptions of the types of possible surgical interventions for this type of surgery, provided some diagrams and some post-care

instructions, and included contact information for the surgeon, but I was unaware of others on the healthcare team. The diagrams of the incisions with depictions of what appeared to be of a male figure made me feel like I might not be part of the demographic that should have this condition; I felt like a bit of an outsider, although I was not sure how to articulate that at the time. In fact, I remember wondering if other women had this condition. The facts and care instructions were objective, which I found useful, but at times I wished they offered more. For example, I could not drive for six weeks after the procedure, an instruction that was omitted from the booklet and was only shared with me when I asked. I am unsure if this is an instruction given on a case by case basis or an omission.

Upon discharge, I had not been asked how I would manage everyday life when I returned home. In my case, I was very fortunate to have my family who offered support with my children, as I remained in the hospital for over one week and could not function normally for some time post-surgery. I remember wondering what a woman in my position would do if she did not have family to support her at a time like this. It is difficult for me to say if this was just my experience or a general experience that leaves one feeling disconnected and unengaged in the process of the surgical procedure, recovery and one's health overall. I hoped to shed light on these questions as I interviewed other patients who have undergone surgical procedures.

As a woman, I locate myself in this research from a socio-constructive viewpoint, and when I think about my ontological, epistemological, and axiological stances, I need to explore many factors in my life and how I came to know what I know. I came to Canada when I was a year and a half old and was educated through a predominantly Western positivist approach. I related to this approach for a long time, as I tried to fit into a defined mold. My upbringing, which had elements of both Western and Eastern societal expectations, led me to fit into the roles

and molds of what was culturally and societally required of a woman. For example, it was a very important Eastern expectation to become a wife and mother at an early age, as was the requirement to put family first, both one's natal family and marital family. The underpinnings of culture are often explained through social construction. I resonate with critical theorists such as Paulo Freire and social constructivists such as Lev Vygotsky. Vygotsky (1978) stated,

Every function in the child's cultural development appears twice: first, on the social level and, later on, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals. (Vygotsky, 1978, p.57).

We are constantly being shaped by these forces in life, and we continue to take from the cultures in which we exist. I see this very strongly manifested in my own life as I blindly accepted the roles and molds that were put before me as a girl and woman. I never questioned that I would be a wife or a mother; I did, however, struggle with the question of how I would work a career into these expectations.

As I began to grow in terms of age, motherhood, education, and experience, I saw a shift within myself—seeing life through multiple realities, multiple truths—and an increased tolerance. At first, I struggled with purely qualitative research due to the lack of definitive answers, but as I focused on the richness this approach offered in aspects that quantitative approaches lacked, I began to explore this arena more. I resonate with Denzin & Lincoln (2011) who stated, “We are all interpretive bricoleurs stuck in the present, working against the past, as we move into a politically charged and challenging future” (p.xiii).

**Professionally**

Professionally, since I am not a clinician, it is important for me to ask why I believe that this topic is important and why I value it. In terms of axiological viewpoints to this research, I have discussed how I connected to my research as a woman and as a former patient, but I also connected as an educator, researcher and as the former Diversity Lead in the Equity and Professionalism Office in a medical school environment and now as the Equity, Diversity and Inclusion Advisor with the Research Services Office. As an educator, I am fascinated with creating the most effective pedagogical/androgical approaches. Professionally, I am steeped in equity, diversity and inclusive practices across higher education; this study represents an organic extension of the work I pursue daily.

**Researcher**

I have realized that situating oneself is an important part of the research process. I bring my own experiences, mindset, ways of knowing, and biases to the research table. As a result, aspects that I found may be of consequence and significance include: As a female researcher, what biases did I bring to this study? Did the fact that I am not a clinician take away or add to this research? Did the fact that I am a former patient and a woman influence my interest in this topic from a specific standpoint? Did my own experiences as a patient interact with this topic? How did my cultural influences (both western and eastern) shape my ways of knowing and affect my research?

It is important to question, what is my epistemological and ontological stance as a researcher? Vasilachis de Gialdino (2009) stated that science “is like other ways of knowing, a social construction depending on both the scientist’s beliefs and values and their strict attachment to abstract methods and measures” (p.1). She goes on to say that science has its



limitations, as “it limits itself and restricts the possibility of gaining knowledge of what cannot yet be known because it is beyond the legitimated ways of knowing” (p. 1-2). I chose to undertake this study as a qualitative case study, employing interviews and informal observations as methods to collect data to gain insight into various perspectives and offering rich data that would inform how men and women approached PE. The interpretation of the data engaged a post structural feminist theoretical framework and a philosophical paradigm of social constructivism. Poststructuralist thought interests me as it treats “gender as a multidimensional structure operating in a complex network of institutions, [and] provide the most promising approach to gendered embodiment and its connection with health issues” (Connell, 2012, p. 1675). I felt that this study required a qualitative approach that offers rich exploration into how healthcare providers and patients engage with education resources and how this engagement might impact patient outcomes and/or satisfaction of the procedures they undergo (Pomey et al, 2005; Soklaridis et al, 2016).

I wanted to contribute to the area of PE as a graduate student and noticed that there is little literature around the topic of gender implications and PE, thus indicating a knowledge gap. This research not only presented a unique opportunity to contribute to a pedagogical tool, but it also greatly interested me to have the potential to be a voice that may positively affect future experiences for patients who undergo these procedures during times when they are faced with considerable uncertainty and anxiety.

Beyond these roles and influences I have used to locate myself in this research, I also value diversity in many respects. In this research, I saw the value of foregrounding the perspectives of the individual patient during a difficult life ordeal such as surgery and making illness more manageable. The inclusion of these perspectives can have rich impact and may lead

to positive outcomes as clinicians try to produce the best healthcare options for all patients. As 50% of the patient population is female and may require different aspects of care due to sex considerations (biological), gender considerations (roles and expectations in their lives), they should not be overlooked. My belief is that different perspectives of diversity bring elements that offer vantage and vision; in the case of patient education, both genders can aid and inform the development of patient education and this inclusion may result in better healthcare outcomes for all. I further elaborate as I outlay the problem statement, purpose, research questions, rationale for research, theoretical framework, research design, and research biases and assumptions.

### **Problem Statement**

In order to ensure the best possibility for recovery after surgery, medical practitioners often rely on educational resources and tools to educate patients. These pamphlets, videos, leaflets, care booklets, and so forth need to be clear, descriptive, accessible, and informative; however, these resources often do not represent the population they aim to serve. In particular, most of the resources are geared towards the male patient population, leaving females to work with materials that may inadequately address their needs.

### **Purpose of Research**

The purpose of this case study is to determine if and how the application of a sex and gender lens to educational tools in the ERAS protocol can result in improved patient outcomes, experiences or satisfaction. In developing an understanding of and valuing a sex and gender lens, I hope to be able to challenge the gender biases and inequities that perpetuate a skewed and hegemonic approach in medicine. Findings from my study may inform and incorporate a sex and gender sensitive approach to patient educational tools.

## Guiding Research Questions

This research study was guided by one primary question and four secondary research questions:

### Primary Research Question

How do men and women approach patient education and how does that impact patient satisfaction and/or outcomes within the ERAS protocol for colorectal surgery?

### Secondary Research Questions

1. What are the perceptions of patients regarding the PE?

Extended questions include:

- a) How was the patient education disseminated?
  - b) How effective or useful were the patient education resources?
  - c) Do you feel a sex and gender sensitive approach could have improved your outcomes?
2. What are the perceptions of clinicians regarding the patient education resources?

Extended questions include:

- a) How was the patient education disseminated?
  - b) How effective/useful were the patient education resources?
  - c) Do you feel a sex and gender sensitive approach could improve outcomes?
  - d) Were patients involved in the creation of these resources?
  - e) How are these resources produced and how do they assess them?
3. Does a positive outcome to surgery depend on compliance with these educational resources?

4. What would a sex and gender sensitive approach look like for patient educational resources? How could a sex and gender approach be used?

### **Rationale for the Research**

Surgical diagnosis and procedures often represent very difficult times in an individual's life and the lives of their loved ones. Offering the best possible overall care has the potential to help alleviate some of this difficulty and may in turn improve some of the health outcomes for patients, and also may improve the efficiency and effectiveness of the healthcare system. Part of this care includes engaging and educating patients with respect to their health by providing appropriate and comprehensive educational resources, which may encompass the inclusion of gender. Some aspects that necessitate the rationale for this study include: an existence of a gender gap in existing medical research, a gap in literature around patient perspective and gender inclusion, a call for action from existing research along with funding and granting agencies to do more in regard to gender inclusion in healthcare, and finally a push towards personalized care in medicine.

Until recently, evidence-based medicine has largely ignored sex and gender in its educational materials and practices and has operated with a bias favoring one gender over another; this exclusion has introduced serious errors into scientific research and caused female biology and experience to be misunderstood as well (Berry & Zucker, 2012; Eichler et al., 1992; Oveseiko et al., 2016). Beery & Zucker (2012) found that gender bias in biomedical research had occurred over the 20th century, and out of ten biomedical fields surveyed in 2009, eight were representative of this bias. Gender bias exists in all components of the research process in Canada and the U.S. and across subspecialties in areas such as titles, research design, methods,

data collection, data interpretation, and treatment recommendations (Berry & Zucker, 2012; Eichler et al., 1992; Oveseiko et al., 2016).

There is a lack of patient perspective in the development and the evaluation of care and ending this exclusion is integral to transformation of healthcare practice (Gramlich et al., 2017; Pomey, Ghadiri, Karazivan Fernandez, & Clavel, 2015; Soklaridis et al., 2017; Stonecypher, 2009). There has also been calls from existing research in surgery for an inclusion of the patient perspective and partnership to establish a broader understanding of how the clinical experience can be improved (Pomey et al., 2015; Soklaridis et al., 2017; Xu, Choi, Kim, Park, & Lee, 2016). Oveseiko et al. (2016) called on global action for the inclusion of gender in research as this would aid in policy interventions causing practice to promote gender equity in healthcare. There have also been considerable calls from research institutes and funders to consider sex and gender in their formal policies and encourage this inclusion in their research design and analysis where applicable (Oveseiko et al. (2016). Some of these institutes include the National Center for Biotechnical Information (NCBI), Athena Swan program in the UK, The United States National Institutes of Health (NIH), and the Canadian Institute of Health Research (CIHR) which, since 2009, requires all grant applications to consider research designs that include sex and gender (where applicable and appropriate) (Oveseiko et al., 2016). More recently, the Dimensions pilot project (2019) in Canada is Tri-Agency effort to increase measurably and concretely equity, diversity and inclusion implications.

With current trends towards increasingly personalized care such as *patient-centered care*, *patient first*, and *precision medicine*, the patient is at the forefront. Following these trends, it seems logical that patient diversity would also be considered, including the dynamic of sex and gender. The underpinnings of gender are associated with social construction and how power,

hegemony, and sociocultural norms of men and women, and are determined and enacted in society (Risberg et al., 2009). Power plays a role in the way structures shape health systems, health care professional education, medical research, and thus patient-clinician interaction.

These occurrences and calls for a sex and gender research-based analysis are reflective of the existence of a gap in literature. There may be valuable information which could be acquired by including the perceptions of patients and healthcare professionals on the effectiveness of PE tools to improve patient satisfaction and outcomes. The research findings of this study may be used to determine how a sex and gender approach to PE tools may be developed. The research process marks the first stage of a broader initiative to develop diverse and inclusive PE tools.

### **Theoretical Framework**

Qualitative research uses theory formatively and summatively (Creswell, 2009). Formatively, as a conceptual model to help explore through a lens with which research is conducted (variables and constructs) to guide the study through concepts (gender and power), as well as summatively, as an inductive outcome of a study (Creswell, 2009). I have used a feminist poststructuralism (FPS) theoretical framework to guide this research on a collection of inter-related concepts and issues (Creswell, 2009) of “diversity, difference and equality in healthcare” (Aranda, 2006, p. 136). It will offer a framework for this study as its key components include discourse, language, subjectivity, power, and will provide a solid foundation for the exploration of gender in PE resources. It has also been used in healthcare studies as it offers intersections of sex, gender, power, and inequality, allowing for the discourse and language in patient education tools to be explored (Aranda, 2006). Not only does this framework focus the inquiry on concepts and phenomena, but it informs the research questions, interpretation, discussion, and conclusion (Creswell, 2009). Use of this framework promotes rigorous, comprehensive, and innovative

exploration of patient education resources as they impact patient experience, satisfaction and/or outcomes.

This study is informed by a critical social constructivist paradigm (Mead, 1934; Berger & Luckman, 1966), which is discussed further in Chapter three.

### **Research Methodology**

With the approval of the University of Calgary's ethics board, I interviewed patients and healthcare providers from Calgary hospitals regarding their perspectives on the educational tools for ERAS colorectal surgeries with which they were provided or used from diagnosis to post surgery. The patients all underwent an ERAS colorectal surgery up to 18 months prior to the interview. The healthcare providers were those who supported ERAS patients who underwent colorectal surgical procedures pre, peri-, and post-surgery. In-depth, semi-structured interviews provided the primary method of data collection, along with informal observations of the educational classes provided to patients, and a high-level document review of the patient education.

### **Researcher Biases and Assumptions**

My continued reflections on my own experiences as both a patient and as an educator result in some assumptions:

1. Men and women have differing anticipated needs related to duties and societal expectations when they are faced with medical interventions. This assumption is based on the premise that women are often the caregivers in the home, and may have other responsibilities like child rearing, elder care, and other household duties associated with their roles from which they may find it difficult to disassociate even when they are ill.

2. Men and women may react differently to the same medical intervention. This assumption is based on the premise that certain drugs and interventions have shown alternative responses and are metabolized differently by men and women. This also can be attributed to the fact that research on some drugs was initially conducted only with men and was only discovered after women began to react differently. These differences may be indicative of how PE is experienced as well.
3. Patients do not always receive the direction and support they need from clinicians and may attempt to use informal ways to aid in their recovery outcomes. This assumption is based on my own experiences as a patient within the healthcare system.
4. Patients who undergo these procedures want to engage in their own health (Pomey et al., 2015). This is based on the literature in patient engagement and involvement, and on my own experience as a patient (and with discussions with other patients); there is a desire to get better and engage in the process of one's own health; including following the clinician's directions.
5. Patient education can result in better outcomes if it is more personalized, like other aspects that healthcare systems are attempting to personalize, such as biological implications. Due to such trends as *patient centered care* and *patient first*, the diversity of patients is being considered and valued; this will also be valuable with patient education.

### **Summary**

This qualitative case study was designed to explore if and how a sex and gender approach to patient education may improve patient outcomes or their experience. The purpose of the study was to explore patients' perceptions of how PE may or may not have impacted their outcomes and experience. Clinicians were also included in the research and were asked to



provide their perceptions of the production, dissemination, compliance, and effectiveness of PE tools. The knowledge generated from this inquiry offers new insights that inform increased understanding of key elements that may support a sex and gender approach to the practice of producing and disseminating PE tools to improve patient outcomes and satisfaction. Participants in this study included five male, four female patients (and one caregiver) who had undergone ERAS colorectal surgical procedure, and nine healthcare providers of which three produce various educational tools available to patients who undergo this procedure. Data saturation occurred when there were no new themes and no new codes, thus resulting in data saturation (Fusch & Lawrence, 2015).

The ERAS surgical protocol has its own educational tools to engage the patient in self-education so they can be active participants in their recovery and health; these are the tools that have been investigated in this study.

In Chapter one, I introduced the background of the study, research problem, purpose of study, primary and secondary research questions, and the theoretical framework that guided the study. In Chapter two, I review the literature surrounding the streams of PE that inform gender in patient education and ERAS. Secondly, I synthesize the discussion around the streams of gender and medicine, PE, and ERAS by pointing to a gap regarding implications of ignoring, skewing, or omitting gender from educational tools meant to aid the whole patient population. Finally, I discuss the theoretical framework and synthesize the case that I have used in this study.

## **CHAPTER TWO: LITERATURE REVIEW**

### **Overview**

The topic of inquiry for this research was to investigate if a sex and gender sensitive (SGS) approach to Patient Education (PE) will affect patient experiences and/or outcomes. I was interested in determining whether an SGS approach to PE, specifically in colorectal surgery within the ERAS protocol, affects patient satisfaction and outcomes.

Gender remains dynamic and fluid; it is important to acknowledge that it is further complicated with the variations on the spectrum between masculinity and femininity and with the inclusion of various intersections such as, but not limited to race, age, sexual orientation, and socioeconomic status, which I hope to expand on in future work. However, for the purpose of bounding this study, I began this inquiry with a focus on the binary of male and female within the broader landscape and construct of gender. The male and female binary is used as a clear self-reported demographic that is entered into the ERAS system.

In order to determine if the application of a sex and gender sensitive lens to educational tools will improve patient satisfaction and outcomes, it was imperative to investigate the broader context of how gender is taken up in medicine and in these educational interventions. There are several areas or streams of literature that I considered for this topic in order to locate it within a broader context and to narrow its scope. First, I discuss the broader context of patient education by contemplating the theories that can be used in its production and the history of how it came to be, the factors that affected this evolution, how it evolved, and how it is disseminated. Secondly, I explain the ERAS protocol and its various features and why it was established. Thirdly, I delve into the rationale for focusing on colorectal surgery for this study. Finally, I look at the concept

of gender in patient educational tools. These streams may converge and diverge through the literary exploration process; however, for the purpose of bounding this paper they are explored to determine how gender interacts and affects patient education tools and thus patient outcomes and satisfaction. This is followed by a synthesis of this literature along with the theoretical framework for the study.

### **Patient Education**

Medical Dictionary for the Health Professions and Nursing (2012) defines PE as “teaching of the patient; process of assisting the patient to gain knowledge, skill and a value or attitude related to a health problem or for health promotion.” PE evolved from the broader concept of health promotion and the emphasis was largely on knowledge transfer; overtime it changed to be an increasingly systematic approach (Hoving, Visser, Mullen, & van de Borne, 2010). There are some insights into theories and models that have evolved in the creation of PE tools and some are discussed in the following chapter.

### **Patient Education Theory**

Considerations such as literacy levels, adult learning theory and behavioral models are aspects which need to be considered when creating a PE tool (Bastable 2003; 2008; Stonecypher, 2009). Literacy levels are important when considering PE tools; according to the U.S. Centers of Disease Control and Prevention (2016), “health literacy is the extent to which individuals have the ability to obtain, process and understand the most basic health information related to their capacity to make informed decisions regarding their health” (p. 1). Further to the definition, the center states that health literacy capacity and skills are needed to communicate needs and preferences, understand the choices, consequences and context to decide which information or services to match patient needs so patients can act.

Stonecypher (2009) suggests that the foundation of PE is based on an integration of theories: The Health Belief Model, Social Cognitive Theory, Self-efficacy Theory, and Adult Learning Theory. The Health Belief Model is used in the Stonecypher Model as the central theory, as it “supports the perception of change” and the “major element in terms of patients’ belief that the benefits outweigh the barriers, resulting in success” (Stonecypher, 2009, p.463). Social Cognitive Theory essentially “provides understanding and insight that support or guide changes in behavior,” if a patient observes the success of another patient through a difficult task, she may change her behavior to succeed as well (Stonecypher, 2009, p.463). Self-efficacy Theory states “empowerment through self-efficacy encourages individuals to achieve a goal,” so the belief that a patient can succeed may cause a change in his or her behavior. Finally, in adult learning theory, Knowles’ Adult Learning theory specifically, “maintains that problem solving with active participation, applying past success to current situations and immediate use of new knowledge by adult learners enhance knowledge retention” (Stonecypher, 2009, p. 463).

According to Stonecypher (2009), the integration of these theories in the Stonecypher Model establishes the foundation for PE and suggests some key points for the creation of PE tools: 1) do not assume that a particular patient population has a high literacy level, 2) pictures and role models give meaning to PE materials, and 3) population-specific education materials are improved by input from patients and members of the healthcare team (p.466).

Incorporating adult learning theory further, Knowles ‘adult learning theory has a fundamental principle which states that adults must be engaged and ready to participate in the learning process for education to be effective (Knowles, Holton & Swanson, 2005). Pedagogy differs from andragogy, in that the first has a learning agenda that is established by the educator (education for children) and the latter is the agenda is established by the learner (education for

adults) (Knowles, Holton & Swanson, 2005). This fundamental difference between pedagogy and andragogy can produce some tension. Adults usually choose to learn based on some relevance or incentive such as professional skills development, career development, or for recreational activities; however in the case of PE and in the context of healthcare, the relevance or incentive can be different (Papadakos, Papadakos, Catton, Houston, McKernan, & Friedman; 2014; Knowles, Holton & Swanson; 2011). Papadakos et al. (2014) state

However, in the healthcare context, the learning agenda is established by healthcare providers, who often do not have time or know how to communicate the most salient aspects of the learning agenda to motivate the adult learner. This poses a significant challenge to learning because it is contrary to a fundamental principle of how adults learn (p.305).

The acknowledgement that patients find themselves in situations where they have to learn and may not be “prepared or incented to receive the information that they are taught or told by their healthcare providers” presents its own implications to adults as in this study (Papadakos, 2014, p.305). Attempting to apply andragogy principles and other adult learning theories to PE and the healthcare setting can be challenging as there are obvious contradictions such as in how the learning agendas are set for the learners and “healthcare providers, often do not have the knowledge and training to do so or the time to acquire it” (Papadakos, et al., 2014, p. 305).

There are additional barriers to patient learning and the development of PD such as “low health literacy and distress,” and “targeted education resources that are based on known principles that stimulate and support learning can help” (Papadakos, et al., 2014, p. 305). This study examined the effectiveness of PE tools. It considered what they are, when patients receive them, how patients use them, how their effectiveness is perceived, and how they affect patient

outcomes or satisfaction. Considering learning theory “can be beneficial to policy-level leaders learning specialists and consultants by providing information that will allow better decisions and ultimately more desirable learning experiences” and also to healthcare providers and educators and healthcare organizations (Knowles, Holton & Swanson, 2005, p. 16) in developing PE. In this section I consider factors that have affected the evolution, production, forms, and dissemination of PE. Today’s PE has evolved primarily from the 1960s through the 21<sup>st</sup> century; it has seen sizable changes from how it was introduced. For the purposes of describing this evolution in a chronological way, I approach the history of PE in terms of the respective decades to illuminate the influential factors.

### **Patient Education and its Evolution**

#### **The 1960s and 1970s**

Healthcare providers have been informing patients with regard to their healthcare through PE in many forms since medical interventions began around the 1800s. I begin examining its evolution in the 1960s, as this is the period that has seen modern day PE change the most. During the decades of the 1960s and 1970s, physicians were viewed as the authorities and the knowledge holders with the sole responsibility to diagnose and treat the patient. If physicians or health care providers such as nurses provided education, it was not in any formal manner (Hoving, Visser, Mullen & van de Borne, 2010; Bensing, Rimondini, & Visser, 2013). At the time, the patient on the flip side was seen as being passive in this interaction and was not expected to participate in diagnosis or treatment. These decades saw debates such as whether to involve dying patients in their own prognosis, reflecting the lack of patient engagement in their health (Hoving, Visser, Mullen, & van de Borne, 2010; Bensing, Rimondini, & Visser, 2013). This period saw societal shifts; the women’s movement and the civil rights movement began to

empower the individual, including the patient and communities (Visser, Deccache, & Bensing, 2001).

Gradually, PE began to be emphasized in European countries, and the role of PE was introduced into primary care in the United States' nursing organizations and patient organizations. These organizations began to introduce and suggest "educating patients during their treatment," leading to projects emerging within this context (Hoving, Visser, Mullen & van de Borne, 2010, p. 276). Although projects to educate patients began to emerge, they were not done in any systematic way; instead, they were based on what the individual healthcare professional deemed important (Hoving et al., 2010; Visser et al., 2001). Patients were still not seen as active players, and in fact if they did not comply with their healthcare providers' directions, they were seen as "deviant and behaving irrationally (Hoving et al., 2010, p. 276).

### **The 1980s**

By the 1980s, interest in PE continued to develop along with the concept of patient rights and patient advocates, leading several countries to produce legislation regarding the rights of patients (Hoving et al., 2010). This led to patients participating in their own health by changing their behaviors based on the information they received from healthcare providers in the form of PE (Hoving et al., 2010). It was in this era that physicians began to enlist the use of new technologies for PE such as videos and slide presentations, which changed how patients received information, making it more accessible (Hoving et al., 2010). This began the era of the patient being considered an active partner in their health.

### **The 1990s**

The 1990s represent an era wherein patients were not only engaged but began to be held responsible for their own health as the formal PE program emerged (Hoving et al., 2010). The

patient was seen as an equal partner in the process of their health, and the paternalistic model began to be left behind (Emanuel & Emanuel, 1992; Hoving et al., 2010; Roter & Hall, 2004). The technology of internet further contributed to the fact that patients could now collect health information from their computers, in their homes, and bring this information to the patient-provider meeting, further changing the dynamic of these interactions (Hoving et al., 2010).

### **The 21st century**

To date this century has seen the most progressive and diverse forms of PE, both informal and formal. The changes manifest as specialized programs conducted in many forms, such as podcasts, videos, blogs, etc. Patients have increasingly become interested in taking an active role in their own health and are more knowledgeable than in any other time in history due to their access to information via technology (Pomey et al., 2015). Patients describe themselves as engaging in their health as partners in three areas: continuous learning (to acquire scientific knowledge), assessment of healthcare (determine if their needs are met), and the adaptation (to close the perceived gap of non-optimal healthcare); independently of the healthcare professional's involvement (Pomey et al., 2015). This shift has been beneficial and is necessary for both patients and healthcare providers, as the preceding decades saw a considerable decline in the time spent with healthcare providers, primarily with the physician potentially resulting in a negative impact on the quality of healthcare (Hoving et al., 2010; Irving et al., 2017; Pomey et al., 2015; Visser et al., 2001). The healthcare provider has also been included in the process of change in PE, in particular their medical education; curriculum now included other interventions such as health literacy, adult learning theory, and knowledge translation (Bastable, 2006). This focus has also been included in research, communication, and policy platforms in medicine (Hoving et al., 2010).



### **Factors Affecting Patient Education**

These shifts in PE over the decades, from knowledge being solely in the control of physicians to patients now taking an active role in their health, have resulted due to several factors influencing the environment in which healthcare has resided in the past few decades. Despite the relatively short existence of the PE intervention, Visser et al. (2001) identify five important factors in the development of PE: (1) research and evidence-based standards; (2) the organization of care; (3) training and methodological support; (4) professional values; and (5) acknowledgment, funding, and place of PE in health policy. These factors may be important considerations when determining the landscape of PE development and how it is disseminated.

Beyond the potential significance of PE and these influences, many social, economic, and political factors have also had an influence on healthcare. Some of the more obvious main drivers have been biomedical advances, the aging population, social movements, and cultural diversity (Hoving et al., 2010; Visser et al., 2001). This includes an increased commitment to the allocation of government funding and resources attributed to healthcare initiatives for public access to services and resources for preventative health, community outreach programs (which teach disease prevention and health promotion) and consumers demanding involvement in their healthcare (Bastable, 2006). Some other factors to consider are changes to medical practices such as the inclusion of nurse practitioners who have been educated with a greater focus on how to educate or counsel a patient (Hoving et al., 2010).

Education for health professionals incorporates more access to training in PE techniques—such things as counseling and motivational interviews—and for patients, self-monitoring tools (Hoving et al., 2010). A systematic review of literature from 1946 to 2016 spanning 67 countries and covering 28 570 712 patient-doctor consultations with their primary care physicians, showed

the average consultation times ranged from 48 seconds to 22.5 minutes, concluding that due to short consultation times adverse effects on patient healthcare may result (Irving et al., 2017). Since time with healthcare providers is often limited, these tools allow for longitudinal snapshots of patients' health for the healthcare provider to access and offer increased ways to monitor a patient's health (Hoving et al., 2010). Physician challenges such as time restrictions tend to involve delegating the dissemination of information to other professions such as nurses, nurse practitioners, and even self-monitoring tools (Hoving et al., 2010). PE now encompasses teaching health professionals and patients, and includes e-Health (such as apps, online training, etc.) which aids in dissemination to both groups (Hoving et al., 2010).

### **The Production of Patient Education: The Role of Nurses**

PE has shown to have significance on the reduction of anxiety and the improvement of patient's satisfaction in the healthcare setting (Visser et al, 2001). It has also been shown to improve "patient empowerment and self-care" (Johansson et al., 2003) and "quality of life" (Gallefoss et al, 1999; Grey et al as cited in Ghorbani, Soleimani, Zeinali, & Davaji, 2014, p. 551). These are some reasons PE has value for the patient and is considered a part of care "high quality nursing care" (Nasir & Nasir, 2006 as cited in Ghorbani et al., 2014, p. 551).

Patient education has been the responsibility of nurses (Stonecypher, 2009); however, today we see many healthcare providers, from pharmacists, physicians, physiotherapists, psychologists, and others, being involved in the education of patients, but one profession has been seen to be the pioneer of PE: nurses (Bastable, 2003). Nurses have been fundamental from the beginning and throughout the evolution of PE. Since the 1800s when nursing was first seen as a profession, nurses have been teaching and engaging in PE in some form or another, not only with patients but also their families and healthcare providers (Bastable, 2003, 2008). Florence

Nightingale widely considered “the founder of modern nursing” taught nurses, physicians, hospitals and homes to improve conditions and healthcare (Bastable, 2008, p. 5). Bastable (2003; 2008) describes that for decades, patient teaching has been a nursing function and that nurses have educated healthcare providers, patients, and their families around illness prevention, disease, and health. In 1918 the National League of Nursing Education in the United States placed health teaching within the scope of the nursing practice. The 1950s saw modern nursing curricula forming, with an emphasis on teaching and counselling both ill and well patients to reach optimal health, and this continues today (Bastable, 2003, 2008). This teaching eventually became mandates that turned into accreditation requirements for the profession (Bastable, 2008). Nurses have been seen as the first health educators; this may be because they have historically had more access to patients, their families, and their homes than other healthcare providers. Nurses are “responsible for developing and evaluating patient education materials” and evaluation of them (Stonecypher, 2009, p. 462).

Although nurses have been recognized for introducing the processes for educating patients, they also have produced some of the materials associated with PE. Nurses first produced these materials as they saw the need in their local areas with regard to diseases and illnesses in patients they served, and this became part of medical intervention; for example, a high outbreak of a particular illness in a specific area often resulted in medical care and/or instruction by local nurses (Bastable, 2008). Today, nurses conduct needs assessments, which can come in the form of focus groups, interviews, and matrix assessments. Bastable (2008), citing Kaplan (1997), states that nurses also canvas for funding for programs, produce education materials and programs, and disseminate this knowledge at all levels of wellness and illness. Kaplan goes on to state a need for PE at primary, secondary, and tertiary prevention levels

(Bastable, 2008). Primary levels are the “optimal point” in the education, as it can be used “to prevent the development of a specific chronic illness,” or if the illness has already developed, to reduce the impact (Bastable, 2008, p. 24). Secondary prevention levels include programs which “slow down the disease progression to prevent the onset of disability” (Bastable, 2008, p. 24). Tertiary prevention occurs if the disease “seriously affects the patients’ quality of life, leading to limitations in mobility, changes in role functioning, and reduced social interactions” (Bastable, 2008, p. 25). Thus, it is important that these levels incorporate some form of PE, to aid the patient in improving and promoting prevention in health, slow down disease with medical intervention, and support the aim of “extending life expectancy” (Bastable, 2008, p. 25).

When considering the evolution of PE, the professional use and development of educational tools is a fairly new intervention. To help shed some light on the relative newness, the scientific journal *Patient Education and Counseling* was founded in just 1976, which was also when the first international conference for patient counselling was held; PE has been through many changes in the last five decades (Hoving et al., 2010).

### **Patient Education Tools in Many Forms and Their Dissemination**

Today, some of these PE tools include the use of the internet, game consoles, applications on mobile phones, and more. Ultimately, as stated before, this represents an outcome of the decreased interactions between patients and health care providers, as they no longer remain the only form of health information that patients have at their disposable (Hoving et al., 2010). Family involvement is critical in the difference between readmission and recovery and one aim of data collection in this study will be to explore aspects of roles and responsibilities as they relate to gender (Hoving et al., 2010).

Healthcare providers have been disseminating PE in many ways. PE can also be disseminated in various forms such as interpersonal communication, pamphlets, leaflets, booklets, and even via technology (websites and apps). Since families are such an important part of a patients' recovery, there are educational resources targeted for families such as care books, care-giver training manuals, financial planning resources, family support centers/groups, and so forth (Hoving et al., 2010). However, it is important to point out that there are also challenges to these new forms, as many patients show low literacy to health information or may not have access to technology and therefore maybe left behind as changes continue (Manning & Dickens, 2006). Both patients and healthcare providers need information to help them manage and make PE work in terms of optimizing outcomes. Nurses are some of the most involved of the healthcare providers in the production and dissemination of PE (Bastable, 2006), however, it can be a "complex process" which is "difficult, exacting and enormously challenging part of clinical nurses' tasks" (Ghourbani et al, 2014, p. 551).

### **ERAS**

ERAS is a surgical protocol developed in the 1990s by Henrik Kehlet, a colorectal surgeon from Denmark. Dr. Kehlet began to question why patients undergoing bowel surgery were not recovering and going home sooner; the average hospital stay was 10-15 days (Melnyk, Casey, Black, & Koupparis, 2011; Francis, Kennedy, Ljungqvist & Mythen, 2013). Kehlet determined factors associated with slower recovery and went on to describe an evidence-based clinical pathway to fast-track recovery after colon surgery (Francis, Kennedy, Ljungqvist & Mythen, 2013). The implementation of this protocol led to a decrease in the average hospital stay by 2.5 days, complication rates and readmission rates significantly declined, and overall health

care costs were reduced (average savings of \$2245 USD per patient) without putting patient safety at risk (Francis et al., 2013; Nelson et al., 2016).

The success of the protocol across Europe led to the creation of the ERAS Society. The ERAS Society is an international nonprofit professional society that generates guidelines for ERAS protocol surgeries and promotes, develops, and implements ERAS programs (Ljungqvist, Scott & Fearon, 2017). The ERAS Society's implementation programs are currently in more than 20 countries, and local ERAS teams from hospitals are trained to implement ERAS processes; this protocol started with colorectal surgery, and it has improved outcomes in almost all surgical specialties in which it has been implemented (Ljungqvist et al., 2017). ERAS utilizes a multimodal, multidisciplinary approach based on evidence-based strategies and guidelines (Francis et al., 2013; Ljungqvist et al., 2017); however, this protocol has been implemented at single sites only and not across any healthcare system worldwide (Nelson et al., 2016).

The ERAS protocol can be broken down into three parts: evidence-based guidelines, a team approach, and an audit system. This study focuses on the educational tools provided to patients in the ERAS process, and they are disseminated in the first two parts of the protocol. The three parts are listed below (Gustaffson et al., 2013; 2011):

- 1) ERAS international evidence-based guidelines, which detail best surgical care in the pre-operative, intra-operative and post-operative time periods
- 2) ERAS Team: Implementation Program for change management includes a patient focus and builds upon site-based interprofessional/multidisciplinary care (IPC) teams
- 3) ERAS Interactive Audit System (EIAS): a data entry and analysis system to monitor compliance on multiple care elements and facilitates implementation by providing

feedback to support tailored interventions audit data iteratively to achieve compliance to the guideline for best care.

### **ERAS Evidence Based Guidelines**

ERAS guidelines are evidence-based modern care changes that shifted the way surgery has been performed. They call for changes from the traditional surgical protocol that formerly required such practices as overnight fasting, large incisions, and large volumes of intravenous fluids; the ERAS protocol calls for carbohydrate drinks two hours before surgery, minimally invasive approaches, and management of fluids while seeking balance respectively (Ljungqvist et al., 2016). Changes such as these to the traditional surgical protocol have resulted in evidence-based improved outcomes for patients.

The twenty guidelines for perioperative care in elective colonic surgery which the ERAS Society recommends are outlined in Table 1, adopted from Gustafsson, et al., 2013 (p. 277):

Table 1

#### ERAS Evidence Based Guidelines for Colorectal

<b>Guideline</b>	<b>Recommendation</b>
Preoperative information, education and counseling	Patients should routinely receive dedicated preoperative counselling.
Preoperative optimization	Preoperative general medical optimization is necessary before surgery; Smoking and alcohol consumption (alcohol abusers) should stop four weeks before surgery
Preoperative bowel preparation	Mechanical bowel preparation should not be used routinely in colonic surgery
Preoperative fasting and carbohydrate treatment	Clear fluids should be allowed up to 2 h and solids up to 6 h prior to induction of anesthesia; Preoperative oral carbohydrate treatment should be used routinely. In diabetic patients, carbohydrate treatment can be given along with the diabetic medication
Preanaesthetic medication	Patients should not routinely receive long- or short-acting sedative medication before surgery because it delays immediate postoperative recovery
Prophylaxis against thromboembolism	Patients should wear well-fitting compression stockings, have intermittent pneumatic compression, and receive pharmacological prophylaxis with Low

Guideline	Recommendation
	molecular weight heparin (LMWH). Extended prophylaxis for 28 days should be given to patients with colorectal cancer
Antimicrobial prophylaxis and skin preparation	Routine prophylaxis using intravenous antibiotics should be given 30–60 min. before initiating surgery
Standard anesthetic protocol	A standard anesthetic protocol allowing rapid awakening should be given; The anesthetist should control fluid therapy, analgesia, and hemodynamic changes to reduce the metabolic stress response; Open surgery: mid-thoracic epidural blocks using local anesthetics and low dose opioids; Laparoscopic surgery: spinal analgesia or morphine PCA is an alternative to epidural anesthesia
PONV	A multimodal approach to PONV prophylaxis should be adopted in all patients with C2 risk factors undergoing major colorectal surgery; If PONV is present, treatment should be given using a multimodal approach
Laparoscopy and modifications of surgical access	Laparoscopic surgery for colonic resections is recommended if the expertise is available
Nasogastric intubation	Postoperative nasogastric tubes should not be used routinely.
Preventing intraoperative hypothermia	Nasogastric tubes inserted during surgery should be removed before reversal of anesthesia ; Intraoperative maintenance of normothermia with a suitable warming device and warmed intravenous fluids should be used routinely to keep body temperature (36 °C)
Perioperative fluid management	Patients should receive intraoperative fluids (colloids and crystalloids) guided by flow measurements to optimize cardiac output; Vasopressors should be considered for intra- and postoperative management of epidural-induced hypotension provided the patient is normovolaemic; The enteral route for fluid postoperatively should be used as early as possible, and intravenous fluids should be discontinued as soon as is practicable
Drainage of peritoneal cavity after colonic anastomosis	Routine drainage is discouraged because it is an unsupported intervention that is likely to impair mobilization.
Urinary drainage	Routine transurethral bladder drainage for 1–2 days is recommended; The bladder catheter can be removed regardless of the usage or duration of thoracic epidural analgesia
Prevention of postoperative ileus	Mid-thoracic epidural analgesia and laparoscopic surgery should be utilized in colonic surgery if possible; Fluid overload and nasogastric decompression should be avoided; Chewing gum can be recommended, whereas oral magnesium and alvimopan may be included.
Postoperative analgesia	Open surgery: Thoracic epidural analgesia (TEA ) using low-dose local anesthetic and opioids.



Guideline	Recommendation
	Laparoscopic surgery: an alternative to TEA is a carefully administered spinal analgesia with a low-dose, long-acting opioid
Perioperative nutritional care	Patients should be screened for nutritional status and if at risk of under nutrition, given active nutritional support; Perioperative fasting should be minimized. Postoperatively patients should be encouraged to take normal food as soon as lucid after surgery; Oral Nutritional Supplements (ONS) may be used to supplement total intake.
Postoperative glucose control	Hyperglycemia is a risk factor for complications and should therefore be avoided; Several interventions in the ERAS protocol affect insulin action/resistance, thereby improving glycemic control with no risk of causing hypoglycemia; Forward-based patients, insulin should be used judiciously to maintain blood glucose as low as feasible with the available resources
Early mobilization	Prolonged immobilization increases the risk of pneumonia, insulin resistance, and muscle weakness; Patients should therefore be mobilized

Completion of these guidelines leads health professionals to be able to discharge the patient sooner and with fewer complications and readmissions than with traditional surgical methods and guidelines. Optimal discharge planning begins with the preadmission counselling session, to ensure special needs for the patient are addressed; for example, transportation, social support, and so forth for care post-surgery and post-discharge. Discharge has its own criteria, such as good pain control, the ability to take solid food, discontinued use of intravenous fluids, independently mobile (or same level as prior to admission), and willing to go home; a patient may be discharged after meeting requirements (Fearon, 2012). These guidelines were put in place with a combination of factors taken into account such as research, education, and the implementation of the ERAS protocol (Gustafsson, et al., 2013).

### **ERAS Team Based Approach**

The ERAS team is an Inter-Professional Care (IPC) team vital for the process to realize optimal benefits being led by a surgeon supported by an anesthetist (Ljungqvist, Scott & Fearon,

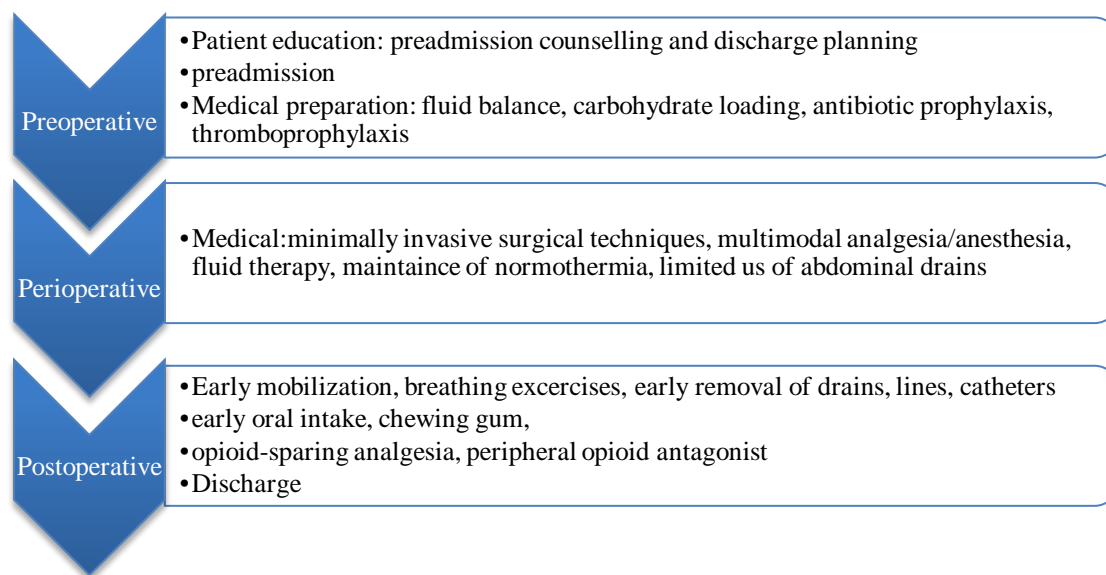
2017). A nurse is usually conducting project management duties and facilitating the resources and management (Ljungqvist et al., 2017). Members of the ERAS team are multi-disciplinary and include surgeons, nurses, dietitians, physiotherapists, occupational therapists, pain team, theater staff, anesthetists, hospital management and the audit team (Francis, Kennedy, Ljungqvist & Mythen, 2013). This is a coordinated approach and starts at the first encounter at the outpatient clinic and continues until the patient is discharged to go home and each and every member of the IPC team is striving to optimize the outcome for the patient (Francis et al., 2013).

### **The ERAS Audit System**

The audit system in the ERAS protocol is a key driver for ensuring that the protocol improves patient outcomes (Ljungqvist et al., 2017; Gustafsson et al., 2011, 2013). It aims to measure standards and audits the quality of healthcare to improve practice under three domains: 1) measuring clinical outcomes such as length of stay in hospital (LOSH), readmission rates and complications, 2) measuring functional recovery and patient experience and 3) measuring compliance with the protocol (Gustafsson et al., 2013, p. 272). These audit areas are fundamental elements of ERAS and are measured by the audit tools in the ERAS. The ERAS Interactive Audit System and data collection system has a built-in audit tool within the ERAS Society; it collects information on patient demographics, treatment, outcomes, and compliance (Gustafsson et al., 2013; Ljungqvist et al., 2017). Measures are also built in that allow aspects of postoperative recovery to be incorporated into the data, to allow for “interrogation of the care process” (Gustafsson et al., 2013, p. 273) and provide feedback on outcomes. Audit information also allows for improvements in the practice and process at both the practice and system levels (Nelson et al. (2016). A 70 to 80% compliance to the ERAS protocol leads to improvements in patient outcomes (Ljungqvist et al., 2017). The stages of care are shown in Figure 1.

Figure 1

## The Enhanced Recovery After Surgery process

**ERAS in Alberta**

AHS implemented ERAS in 2013 at two colorectal surgery sites through the Diabetes, Obesity & Nutrition and Surgery Strategic Clinical Networks (SCN) and has subsequently been expanded to seven urban and two rural sites (Gramlich et al., 2017). The ERAS Alberta team was integrated with the provincial and site-based AHS implementation teams to determine the impact of the intervention on outcomes such as length of stay (LOS), complications, readmissions, cost, patient perspectives, and patient-oriented approach (Gramlich et al., 2017). ERAS resulted in an economic impact of lower cost per patient of \$920- \$2619/day, and a return on investment of \$3.8 per \$1 invested (Nguyen et al., 2016). Alberta Health Services (AHS) committed an additional \$1.63 million annually through to 2019 to expand ERAS into eight

more surgical types (ERAS Charter; Gramlich et al.,2017). The ERAS literature does not currently address sex and gender approaches or impacts.

### **ERAS Educational Resources and Tools**

ERAS educational tools include preoperative counselling, pamphlets, care booklets, and take-home care instructions. These educational tools are disseminated throughout the timeline of the patient coming into the clinic and discharge from the hospital.

### **ERAS Outcomes**

ERAS protocols have resulted in hospital stays decreasing by 30% to 50%, along with decreasing complications and readmissions by reducing the stress of the operation and putting in place evidence-based care elements and processes for surgical patients (Jurt et al., (2017); Ljungqvist et al., 2017). Due to these and other major improvements in clinical outcomes and cost, ERAS represents important value-based care applied to surgery (Ljungqvist et al., 2017). Taurchinin, Naja & Tancredi (2018) refer to future challenges and suggest the “establishing and elaboration” of the ERAS protocol is “not enough and much more efforts and changes are needed to achieve the aim to offer a sustainable improvement in the overall quality of patient care” (p. 40). There is, however, a gap in the literature with regards to sex and gender implications for ERAS surgeries.

### **Why Colorectal Surgery**

This study has been conducted on the ERAS colorectal surgery, as this surgical type includes both males and females in relatively equal numbers, and because of the implementation of the ERAS protocol for this surgery. Nelson et al. (2016) conducted a study which examined the effect of the ERAS guideline on patient outcomes for colorectal surgery which looked at factors such as length of stay (LOS), complications, and 30-day post-discharge readmissions

across a healthcare system. This study included 1333 patients in Alberta, of which 55% were male and 45% were female. Other studies also found that the lifetime risk for colorectal cancer in “men was 1 in 20 and in women was 1 in 22” (Chacko et al., 2015, p.699; Siegel et al., 2014). Gustaffson et al. (2011) conducted a study of colorectal patients undergoing an ERAS surgery with two groups: the 2002 to 2004 group had a total of 464 patients, of which 231 were males and 233 were female; in the 2005-2007 group, 498 patients were included, of which 237 were male and 252 were female.

Thus, this representation of males and females does not offer a preference for educational materials to be representative of one gender over another; however, despite males and females sharing a similar risk factor for colorectal cancer (CRC), there does exist a “substantial difference in risk factors, tumor biology, and effectiveness of cancer prevention that have been observed between them” (Chacko et al., p. 698). A better “understanding of these gender idiosyncrasies will facilitate a personalized approach to CRC prevention” (p. 698) and can lead to better outcomes for patients. This could lead to opportunities to utilize specialized PE for each gender in the primary, secondary, or tertiary levels and provide more personalized instructions, which may lead to better patient outcomes.

### **Gender in Patient Education**

Gender as a concept was introduced to the social sciences and humanistic sciences in the 1960s as construct to determine how sex, male or female, was interpreted by different societies and cultures (Kuhlmann & Annandale, 2010; Risberg et al., 2009). For the most part, research, practice, and policy in global healthcare have ignored the concept of sex and gender, that is until recently, when the dynamic and fluid nature of gender has been at the forefront of society (Eichler et al., 1992; Kuhlmann & Annandale, 2010). Sex and gender are defined in many ways

and at times they are used interchangeably and can cause confusion The World Health

Organization (2017) defines sex and gender as follows:

Sex: the different biological and physiological characteristics of males and females, such as reproductive organs, chromosomes, hormones, etc. (The World Health Organization, 2018).

Gender: The socially constructed characteristics of women and men – such as norms, roles, and relationships of and between groups of women and men. It varies from society to society and can be changed.

The concept of gender includes five important elements: relational, hierarchical, historical, contextual and institutional. While most people are born either male or female, they are taught appropriate norms and behaviors – including how they should interact with others of the same or opposite sex within households, communities and workplaces. When individuals or groups do not “fit” established gender norms they often face stigma, discriminatory practices or social exclusion – all of which can adversely affect health (The World Health Organization, 2018).

West & Zimmerman (1987) define gender as "an emergent feature of social situations: both as an outcome of and a rationale for various social arrangements, and as a means of legitimating one of the most fundamental divisions of society" (p. 126). Butler (1990) criticizes what she sees as an older version of the perception of gender as bounding, adhering to a binary label of gender that represents a hegemonic constraint; instead, she proposes the concepts of performativity and gender.

These review offers just a few insights into gender. It is important to recognize that gender remains dynamic and fluid and is difficult to set boundaries around what it means and to whom. An important point in regard to medicine is that gender health activists and feminist

researchers from the 1960s have argued that women's ill health was a result of "their inferior position in society rather than from their reputed inferior biology" (Kuhlmann & Annandale, 2010, p. 456), thus it is important to consider how social gender rather than biological sex plays a significant role in women's health.

### **Gender in Research**

Evidence-based medicine is informed by research, which in turn informs practice and ultimately policy in medicine. Medical research has historically favored one gender over another, introducing serious errors into scientific research (Eichler et al., 1992; Klinge, 2010; Kuhlmann & Annandale, 2010). Examples of this gender bias exist in all components of the medical research process in Canada and the U.S. and across subspecialties (Eichler et al., 1992). Eichler et al. (1992) identify four problems with medical research as it relates to gender: 1) androcentricity or a male perspective of the world; 2) overgeneralization, in which a study presents itself as suitable for both males and females but deals with only one gender; 3) gender sensitivity, wherein one gender is ignored as viable (socially or medically); and 4) double standards, the use of different means to evaluate or measure identical behaviors, traits, or situations (p. 63). The authors give instances that are well recognized in medical research to make the point that the importance of gender, particularly for females, is not taken into account in the structuring of healthcare; this omission can "lead to the most serious distortions and misinterpretations of findings" and "serious flaws in medical research may result in serious treatment problems" (p. 68).

Historically, research was performed on young white males and was the "one-size," "male norm;" thus "biomedical and health research was not adequately meeting the needs" of women, the elderly, children, and ethnic minorities (Klinge, 2010, p. 91). This gap resulted in

researchers' acceptance that sex and gender aspects were imperative to consider and has resulted in research institutes such as the Canadian Institute of Health Research (CIHR), the US National Institute of Health (NIH), and the European Commission (EC) to implement initiatives that set and promote research on sex and gender differences (Kuhlmann & Annandale, 2010). Klinge (2010) states that one result of these initiatives includes having enough men and women in a study to determine "clinically significant sex differences in drug efficacy and safety" and to ensure that these differences in regard to sex were reported.

Allotey, Allotey-Reidpath & Reidpath (2017) conducted an analysis of the "big five" medical journals in general and internal medicine: *Annals of Internal Medicine*, *British Medical Journal*, the *Journal of the American Medical Association*, *The Lancet*, and *New England Journal of Medicine*. They concluded that gender bias in clinical research extends to the clinical practice as the research presented in journals affects practice and supports an overall male bias in clinical medicine and suggest that bias in medical research and decision making "reinforced with continuous exposure towards an over representation of case reports involving male patients, [thus] supporting historical biases in clinical medicine and clinical research" (p. 6). They further suggest that "medicine in males may be regarded as more mainstream, more interesting, more indicative of what is a normal disease process" (p. 6). With case reports being so important to medical education, this attitude potentially compounds the risk of gender bias, "particularly in junior clinicians who are still laying down the matrix of expertise" and may potentially influence decision making; however, this may be "subtle, hard to recognize in one's own decision making, and even when one is alert to the bias, formidable to overcome" (p. 6).



## Gender and Medicine

Hamburg (2008) identified research gender biases due to different biology, risk factors, and daily life conditions that vary for men and women in their diseases and health; there also appears to be evidence to support that men and women are not treated equally by the healthcare system when they require medical intervention. For example, studies show that women are “less likely to receive more advanced diagnostic and therapeutic interventions” (Hamburg, 2008, p. 237).

Biology also continues to play a part in how drugs are metabolized by men and women. According to the U. S. General Accounting Office (2001), eight out of ten drugs removed from the market by the Federal Drug Administration (FDA) in the United States were due to a profound sex difference and that these treatments were found to be harmful to women. The U.S. Food and Drug Administration’s (2017) *Regulations, Guidance and Reports related to Women*, outlines regulations and their reversals over the decades from the 1960s to now as evidence regarding sex, drugs, and research surfaced, and how this impacted regulations and policies. For example, the evidence of fetal malformation in the 1960s due to thalidomide in Europe prevented its approval in the United States, but it also contributed to the fear and the exclusion of women of childbearing age in clinical trials, even if the drugs were to eventually be prescribed to women. Rabin (2013) explored the gender-dose drug gap in the popular sleeping pill Ambien which has an ingredient called zolpidem that is metabolized faster by men than women. After adverse effects were reported by women, the FDA eventually reduced the recommended dose to a significantly lower dose for women (3.75 milligrams for men vs 1.75 milligrams for women). Rabin (2013) further states that this is just one of many drugs that are metabolized differently by men and women due to their biology.

West and Zimmerman (1987) unpacked the fact that we are all “doing gender” as we represent ourselves in our daily interactions and that these interactions create our positions in society and determine our order in society. Hamburg (2008) suggested the social structural approach, in that this order defines how power is structured in society and extends to how education, wealth, and power are distributed in the genders, and influencing the constant social construction of what we consider feminine and masculine and how we associate those cultural “norms to men and women” (Hamburg, 2008, p. 237).

In medicine, aspects of communication can be affected by gender, for example, at the clinical encounter level. How a patient and physician present themselves, depending on their respective genders, and how and what symptoms show up in terms of their interpretation as male or female can influence the interaction and the outcome (Hamburg, 2008) in the healthcare system level where “organization, routines or distorted content are established medical knowledge” (p. 238). This is evident in the gender order of society which implies that men are more important and valuable when compared to women, and thus social determinants are set up that way (wealth, power, education, age and so forth) (Connell, 2002). The social construction of society, gender order of society, and how we as a society establish cultural norms, structures, and systems are imperative considerations for understanding gender biases created in medicine.

### **Gender Representation in Educational and Teaching Tools**

This study undertook an evaluation of PE tools such as pamphlets and care booklets, and may in respect to gender, contain not only text but images, which can have a powerful effect on the patient and healthcare provider. Images have long been used to convey messages to audiences, and these images can lead to the establishment of norms or forms of social practice once we have been exposed to them over time (Banks, 2001). Like the other sensory experiences,

sight “interpretations are culturally and historically specific” (Banks & Zeitlyn, 2015, p. 7). Medicine has used images in textbooks to teach and “disseminate medical knowledge as far back as the 16th century,” while social roles and expectations are “transferred through language, images and practices,” providing insight into accepted values (Coles, Phillips, Clearihan & Feldman, 2011, p. 725). Images can be presented in subtle ways to create hegemonic statements which are perpetuated in medical textbooks, pamphlets, research, and have roots in the social construction of society; for example, using male or female characteristics in PE tools, depicting white male doctors disseminating information to seated students who are women or minorities, images portraying one sex over the other to show certain diseases or interventions that are apparent in both sexes, and so forth. The use of these hegemonic images in medical education is another aspect that perpetuates the gender bias in the construction of society. Healthcare providers may “feel subconsciously supported if they default to behaving in ways represented by this hidden curriculum” (Coles et al., 2011, p. 728). Taking text and images used in medical and PE into consideration, it is important to explore the impact of both on the patient and the healthcare provider.

### **Theoretical Framework**

The recognition of gender forms the foundation of the broader issue of a sex and gender lens with regard to PE. The engagement of gender is evident in all aspects of societal life and roles, and these are determined and acted upon based on hegemonic aspects associated with the dominant gender. This can also be seen in how we unpack gender in terms of systemic structures in society that trouble equality between men and women. The underlying causes of gender oppression are social hierarchies that exist due to “perceptual, cognitive, and behavioral process about which participants are oftentimes quite unaware” (Browne and Misra, 2003, p. 491). This

is a poignant statement regarding gender in society and how individuals encounter societal structures and systems. The statement scaffolds upon and engages gender hierarchies that are set and operate around a hegemonic structure, often without awareness. In medicine, research is male dominated in terms of research subjects, authors, grant funding, and so on (Eicheler et al., 1992). Research determines practice in medicine, and thus clinical practice follows suit in all aspects including PE and further informs policy.

I used a postmodern feminist theoretical lens as outlined by Kay Aranda (2006). Aranda's work focuses predominantly on community healthcare and intersections with gender, sex, and inequalities in nursing. Postmodern and post structural theories include a wide range of viewpoints and perspectives and have been used in healthcare and nursing research (Aranda, 2006). Letherby, Ramazanoglu & Holland (2002) as cited in Aranda (2006) state that postmodern and poststructural theories challenge the basis of feminism, which produces its understanding from the experiences of women as they take on the humanist basis of the combined "subject and assumptions of agency, power and emancipatory knowledge" (p. 136). According to Bleier (1986) feminist analyses of science are a "socially produced body of knowledge and a cultural institution," and culture "is deeply and fundamentally structured socially, politically, ideologically and conceptually by gender as well as race, class and sexuality" with the "dominant categories being white, male, middle/upper class and heterosexual" (p. 2).

Postmodern theories replace one truth with plural truths, and in doing so the metanarratives are "offering overarching explanations of oppression and the enlightenment promise of emancipations are no longer seen as tenable" (Aranda, 2006, p. 136). Weedon (1997) as cited in Aranda (2006) state that poststructuralism focuses on plurality and multivocality, and

focuses the use of language to suggest it mirrors reality and hegemonic meanings to reflect our social organizations and our partialities. This is important when focusing on the structure of healthcare and the implementation of its processes, and in particular for this study, the language and discourse in PE tools, and by suggesting that we need to examine how the use of terms and even illustrations affects male and female patient experiences and outcomes. Both poststructuralism and postmodernism take up power by suggesting it is diverse and that is inherent in all interactions and discourse (Aranda, 2006; Foucault, 1980).

Healthcare has many structural hierarchies of power and knowledge before the patient is involved; it is important to understand how these realities affect the experiences of healthcare workers and how they manifest into interactions with the patients and the educational resources. Language also has relational hierarchies, has values, and is placed within these structures. Thus, the binaries of terms such as objective/subjective or rational/emotional are seen to favor one gender over another, giving the male objective and rational in the hierarchy (Aranda, 2006). These aspects again are paramount in how PE tools are produced, taken up, and used by healthcare providers and patients. Poststructuralism theories, however, allow these binaries to be challenged and to take on new meanings. This approach has pragmatically challenged the modernistic views of feminism; however, we can recognize the “potentially mutual interests” (Aranda, 2006, p.136; see also Butler, 2004; Butler & Scott, 1992). To further feminist epistemological and political ends, feminist scholars argue that knowledge is produced through political, historical, and gendered processes, and thus in itself is a political positioning that involves making social and material changes to positively affect individuals and the collective (Aranda, 2006). Postmodern feminists take and build upon the foundations of feminism and move beyond modernist aspects to involve multiple and different perspectives when dealing with

gender, politics and power (Aranda, 2006; Butler, 2004; Nicholson, 1999; Weedon, 1999; Yeatman, 1994).

These aspects further suggest how research is conducted in medicine and how male focused the research process has been. As a result, practice is similarly informed; PE tools are a part of practice (Eichler, 1992). Thus, this theoretical framework was useful for my study, as I agree with Aranda (2006) when she justifies it's use in researching issues of "diversity, difference and equality in healthcare" (p. 136). I examine and offer improvements to PE tools, which may result in social and material changes for individuals that add the key values of equality, equity, and justice to healthcare.

### **Synthesis: The Case**

After reviewing the literature regarding PE and gender, it becomes clear that it is important to engage in the discourse and explanation of the diversification of educational tools to provide better patient outcomes for all patients. The underpinnings of gender are associated with social construction and how power, hegemony, and sociocultural norms of men and women are determined and taken up in society. In medicine, a gender perspective can be taken when the biology of men and women is combined with everyday life, the roles and expectations in society, and more explicitly, what is seen as feminine and masculine in relation to professional situations and relationships as well as what is theorized about males and females (Risberg, 2009).

Kuhlmann & Annadale (2010) argue that gender sensitive healthcare for both men and women is moving into the mainstream of health policy, but differences are still mainly seen in terms of "illness" and not in terms of "health or well-being" (p. 2). In order to discuss PE, we need to understand how it is influenced and the implications of research on practice, specifically how it influences clinical practice and ultimately PE tools. There remain challenges and opportunities

for gender to be further included into research, practice, and policy to advocate for patient agency and to foster the best healthcare outcomes for all. There is a gap in literature surrounding PE and gender implications.

### **Summary**

In Chapter 2, I reviewed relevant and related literature that addressed the streams of PE, ERAS, colorectal surgery, and gender in PE. I then synthesized the discussion around the four streams by pointing to a gap in literature regarding PE tools and gender. In Chapter 3, I detail the elements of the research design and methodology that guided how I undertook this case study.

## **CHAPTER THREE: RESEARCH DESIGN**

### **Overview**

In this chapter, I address the research design elements that informed this study. Design elements include: a) research topic and purpose, b) research questions, c) ontology and epistemology, d) theoretical framework, e) methodological approach, f) case study setting, g) research population and sample, h) data collection methods, i) data analysis, j) timeline, k) ethical considerations, l) reliability and trustworthiness, and m) limitations and delimitations.

### **Research Purpose**

The purpose of this case study was to determine if and how the application of a sex and gender lens to educational tools in the ERAS protocol may result in improved patient outcomes and/or satisfaction. In developing an understanding of and valuing PE through a sex and gender lens, I have challenged the gender biases and inequities that perpetuate a skewed and hegemonic approach in medicine. Findings from my study may inform the need to incorporate a sex and gender sensitive approach to PE tools. I believe a better understanding of PE tools and gender would allow for practitioners to produce, educate, disseminate from a more informed perspective in terms of design and facilitation of these resources, with the intent to improve patient engagement, satisfaction, and outcomes for all.

### **Guiding Research Questions**

This research study was guided by one primary question and four secondary research questions:

#### **Primary Research Question**

How do men and women approach patient education and how does that impact patient satisfaction and/or outcomes within the ERAS protocol for colorectal surgery?



## Secondary Research Questions

1. What are the perceptions of patients regarding the PE resources?

Extended questions include:

- a) How was the PE disseminated?
- b) How effective/useful were the PE resources?
- c) Do you feel a sex and gender sensitive approach could have improved your outcomes?

2. What are the perceptions of clinicians in regard to the PE resources?

Extended questions include:

- a. How was the PE disseminated?
  - b. How effective/useful were the PE resources?
  - c. Do you feel a sex and gender sensitive approach could improve outcomes?
  - d. Were patients involved in the creation of these resources?
  - e. How are these tools produced and how do they assess them?
3. Does a positive outcome to surgery depend on compliance with these educational resources?
  4. What would a sex and gender sensitive approach look like for PE resources? How could a sex and gender approach be used?

## Ontology and Epistemology

My approach as a researcher is guided by ontological and epistemological underpinnings which informed this case study. My belief in multiple realities resonates with socio-constructivism and causes me to question the positivist approach upon which medicine is based. This hegemonic approach carries over from the way that research is conducted in medicine to the

patient/caregiver interaction and causes power in this interaction to remain with the clinician.

This power imbalance has resulted in the multiple perspectives and viewpoints of the patients to be largely ignored.

I concur with Berger & Luckman (1966) who state that over time, interactions between people in a social system create representations in the reciprocal roles members play in relation to each other, and in this meaning, is created; thus, the reality of society is said to be socially constructed. When we apply this to medicine, multiple truths allow for more complex views than those formed from simple views or only a few realities (Creswell, 2003; 2014). We need to include the multiple and diverse aspects of patients and their experiences to improve satisfaction and outcome. By allowing patient voice and perspective to be included in the interaction, we can engage individuals as partners in their health and produce better outcomes.

### **Theoretical Framework**

I used a feminist poststructuralism (FPS) theoretical lens to research issues of “diversity, difference and equality in healthcare” (Aranda, 2006, p. 136; Arslanian-Egoren, 2002). This theory has been used in healthcare studies and “seeks to identify and expose biases that marginalize the healthcare needs of women” and “seeks to develop new knowledge for understanding gender differences” (Arslanian-Egoren, 2002, p. 512). FPS aligned for this study in respect to aspects of discourse, subjectivity, power, knowledge and language as I explored factors associated with PE.

Feminism and poststructuralism at their foundations are inherently different philosophical positions (Aranda, 2006; Pierre, 2000). With feminism considering a universal female centric truth, that gender is at the center of shaping our “consciousness, skills and institutions as well as in the distribution of power and privilege” (Lather, 1992, p.91), and poststructuralism rejecting

the notion of emancipation and challenging constructs of meaning, unified subjectivity and power relations (Weedon, 1997). FPS incorporates gender issues into the poststructural framework that reflect historical, social, political contexts in healthcare and has been used as a perspective to explore healthcare (Arslanian-Engroen, 2002; Davies, Browne, Gannon Hopkins, Mcann & Willber, 2006; Wall, 2007; Weedon, 1997).

In alignment with these issues and my ontological and epistemological stances; FPS includes a wide range of viewpoints and perspectives that were needed to explore this study. It offered a framework for this study as its key components include: discourse: includes the phenomena such as language, stories, scientific narrative, and cultural practices organized by institutions and practices of the time they occur (Foucault 1972) and each person can have a different meaning of how they interpret the world (Weedon,1997); language: by which a society defines and characterizes its structures and processes (Arslanian-Engoren, 2002; St. Pierre, 2000) and how language is used to create reality rather to reflect it creating certain fixed meanings and legitimizes knowledge (Weedon,1997); subjectivity: “conscious and unconscious thoughts and emotions of the individual, her sense of herself and her ways of upstanding her relation to the world” (Weedon, 1997, p. 23) and these have been acquired through social, historical and political forces (Arslanian-Engoren, 2002); and power: how does power and discourse reinforced and normalized knowledge and truths about women (St. Pierre, 2000). These components, discourse, language, subjectivity, and power

provided a solid foundation for the exploration of gender in PE resources in this study.

The underpinnings of this study were informed by a critical social constructivist paradigm/framework (Berger and Luckman, 1966; Mead, 1934). In clinical environments, there may be gendered relationship dynamics surrounding “health behavior work,” in interactions or communication regarding improvement of the health of others (Reczek & Umberson, 2012). DeLamater and Shibley (1998) suggest that constructionist paradigm discourse is comprised of the following five statements; these informed the interview questions and analyses for patients and clinicians:

- 1) We experience the world as orderly, with an objective reality that can be perceived and be independent of us.
- 2) Language categorizes and classifies people, events, and objects.
- 3) Our reality is shaped by everyday life that is shared and relational, one on one or in groups and these interactions, with couples, families, and organizations develop shared values or shared ways of being.
- 4) There is a predictability to our shared and individual behaviours and expectations.
- 5) Societal expectations, or subgroups, develop expectations that may lead to disagreement between groups as their expectations differ.

Questions for patient and clinician interviews came from the social constructivist paradigm to further explore gendered expectations and communications. See Appendix A for the patient and clinician questions. My goal was to open a space wherein all participants can be sufficiently self-reflexive about their experiences and open to discussing the unknown in that regard, as outlined by Einstein and Shildrick (2009).

## **Methodological Approach**

### **Rationale for a Qualitative Approach**

Some researchers believe that the underpinnings of quantitative and qualitative research have fundamentally different set of beliefs/paradigms (Teherani, Martimianakis, Stenfors-Hayes, Wadhwa, & Varpio, 2015) but both have their misconceptions (Onwuegbuzie & Leech, 2005). Quantitative research which is “applied to describe current conditions, investigate relationships and study cause-effect” (Bloomberg & Volpe, 2012, p. 27) tends to be based on positivist underpinnings and claims that “the essence of science is objective verification” and that their “methods are objective” without taking into consideration the subjective decisions which are incorporated before the “objective verification decisions” (Onwuegbuzie & Leech, 2005, p. 377). Qualitative research helps to “deepen the understanding of a social setting or activity as viewed from the perspective of the research participants” (Bloomberg & Volpe, 2012, p. 27) and studies “things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them” (Denzin & Lincoln, 2011, p. 3), has its own criticism as it is based on the belief that there is no single reality; thus there may be “an ‘anything goes’ relativist attitude, thereby not paying due attention to providing an adequate rationale for interpretations of their data” (Onwuegbuzie & Leech, 2005, p. 378).

The rationale for using either a quantitative or qualitative approach for this study was defined by the research question and its exploratory nature and intent. Through the process of actively reflecting on the research problem, purpose, and questions and aligning them with “methodological congruence” (Bloomberg & Volpe, 2012, p. 27), I considered the best approach to addressing my research questions would be through the adoption of a qualitative strategy.

This approach aligns with my ontological and epistemological worldview that there are multiple realities and perspectives versus a single truth, reality or a “measureable phenomenon that it is assumed to be in positivist, quantitative research” (Merriam, 2002, p.3). Furthermore, aligning with my ontological world view, qualitative research is grounded in the paradigm of social construction in that “reality is socially, culturally and historically constructed,” and its meaning comes from the individual’s experience; this provides multiple realities and meanings (Bloomberg & Volpe, 2012, p. 28-29). Qualitative researchers are the “main data collection instrument” and “examine why events occur, what happens, and what those events mean to the participants studied,” forming a “systematic inquiry into social phenomena in natural settings” (Teherani, et al., 2015).

Since qualitative research has underpinnings of the constructivist paradigm which suggests that one’s social and historical context influences their meaning making and impacts both how they understand and act on their experiences and how they relate to others, it aligns well with experiences in the healthcare environment (DeLamater & Hyde, 1998; Teherani et al. 2015). It is also broadly recognized that healthcare contexts, including culture, structure, and patient relationships impact how innovations are taken up (Leslie, Paradis, Gropper, Reeves, & Kitto, 2014; Stevens & Shojana, 2011). In clinical environments, there may be gendered relationship dynamics surrounding “health behaviour work” involving interactions or communication in regard to the health of others (Reczek & Umberson, 2012). I believe that consideration of multiple perspectives that patients and clinicians experience may provide insight into how patient satisfaction and/or outcomes could be impacted by PE materials. Creswell (2015) suggest that qualitative research is appropriate for research questions that do not have or know the variables associated with the problem and need to explore to determine them.

Scaffolding onto these concepts, I believe that a qualitative approach was appropriate for this exploratory case study.

### **Rationale for a Case Study**

While it was exploratory, I used an instrumental case study, as it serves to frame the “purpose of illuminating a particular issue” and a form of inquiry (Creswell, 2014 p. 465; Merriam, 1998). In this study, I used Merriam’s case study (2009) approach, defined as “an in-depth description and analysis of a bounded system” (p. 40). Case study is bounded or “fenced in” system (or case) and is explored through in-depth data collection from “multiple sources of information” such as observations, interview, documents, and so forth (Creswell, 2012; Merriam, 2009). Merriam (2009) attributes features such as particularistic (the “focus of the study is on a particular situation, event, program, or phenomenon”), descriptive (“end product of the study is a rich ‘thick description of the incident or entity being investigated’”) and heuristic (the study “illuminates the reader’s understanding of the phenomenon under study”) (p.44). In the case of this study, all features are present within my focus on a particular surgical protocol and educational tools (ERAS and its educational resource tools); I looked for a rich, descriptive understanding of this program and its tools to illuminate understanding around this area of study.

Knowledge from case study is different in four ways from other research methodologies, as it is *more* concrete, *more* contextual, *more* developed by reader interpretation, and based *more* on reference populations determined by the reader (Stake 1981 cited in Merriam, 2009). Yin (2014) outlines three conditions for the use of a case study methodology a) the research question b) control of research over the actual behavioral events and c) the degree of focus on the contemporary vs entirely historical events (p.9). For this study these three conditions existed as

my research question asked a “how” question, required an “an extensive and ‘in depth’ description” and was exploratory more than explanatory (Yin, 2014, p. 4,10-11).

It is also necessary to ensure that misunderstanding or perceived shortcoming of the case study methodology are addressed. Based on the insight that only large numbers of thoroughly executed case studies is an effective exemplar and this exemplar can be the one used for scientific contribution (Kuhnian insight), Flyvbjerg (2006) addressed five misunderstandings of case study: 1) Theoretical knowledge is more valuable than practical knowledge; 2) One cannot generalize from a single case, therefore the single case cannot contribute to scientific development; 3) The case study is most useful for generating hypotheses, while other methods are more suitable for hypotheses and theory building; 4) the case study contains a bias toward verification; and 5) It is often difficult to summarize specific case studies. Flyvbjerg suggests that the advantage with large samples as it provides “breadth” and the issue we are often tackling is one of “depth and thus a good case study can provide this when it is ‘problem-driven’ vs ‘methodology-driven’” (p. 26-27). In this study, I explored how patient and clinician perspectives related to PE tools in the ERAS protocol may have impacted patient satisfaction and /or outcomes in this population. The findings may be applicable to other areas of healthcare, but my goal was to determine what it means to this population. Thus, I chose exploratory case study as the approach for the study.

### **Research Setting or Context**

With the approval of the University of Calgary’s ethics board, I interviewed patients and healthcare providers from two Calgary hospitals regarding their perspectives on PE resources that were provided and/or used for ERAS colorectal surgeries, from diagnosis to post surgery. The participants all underwent an ERAS colorectal surgery 12 to 18 months prior to the



interview. The HCPs interviewed were those who were supporting ERAS patients undergoing colorectal surgical procedures pre-, peri- and post-surgery, and who may have provided these educational tools. Although ERAS has been implemented across seven sites in Alberta, two sites were included in this study, as these facilities were where patients saw the surgeons and other clinical practitioners on the ERAS team and received educational (PE) resources and surgery. In-depth, semi-structured interviews and document review of the PE provided to patients were the primary methods of data collection, and informal observation (to help further inform the data) was also used to collect this information

### **Research Population**

Approximately 1600 patients are expected to experience ERAS care in Alberta annually across all ERAS surgical procedures including at Site A and Site B. The group of patients in this study underwent an ERAS colorectal surgery at least 12-18 months prior to the study. The patients were recruited through surgeons' offices, posters, and family doctors. Participants in this study included five male and four female patients (and one caregiver) who have undergone the ERAS colorectal surgical procedure, and nine healthcare providers who provide various educational tools to patients who undergo this procedure. These two groups also underwent interviews. The ERAS surgical protocol has its own PE such as pamphlets and other sources of educational information given and offered to patients as part of the pre, peri- and post-operative process, and were also considered as part of the study.

### **Data Collection Methods**

#### **Method/Approach for Collecting Data**

Phase I: Document Review. A high-level review of gender and PE literature was conducted.

The aim was to collect all PE tools and determine what sources this might involve; for example, does education come in the form of documents, counselling, and-or support groups? What types of educational tools are offered? I was interested in determining how and what sources the clinician used to educate the patient for this upcoming surgical procedure and how the patient uses them. This provided insight into the culture of the patient/clinician interaction, helped to investigate the sex and gender implications in the sources, and may determine if and how patient satisfaction and outcomes are affected by PE.

#### Phase II: Semi-structured interviews.

The second phase of data collection consisted of semi-structured interviews and was the primary source of data collection for this study. I chose semi-structured interviews as opposed to structured interviews, as they allow for conversational opportunities to be more open, to expand on further explanations, and provide some emotional space for participants to raise issues and concerns as needed; this will aid in identifying themes. Interviews are a valid and important means of gathering data from patients actively involved in the process, and I make “the assumption that the perspective of others is meaningful, knowable and able to be made explicit” (Patton, 1990, p. 278). Kvale & Brinkmann (2009) add that “interviewing is an active process where interviewer and interviewee through their relationship produce knowledge” (p. 17). Talking and listening to the participant to determine the “meaning of their experiences in their own words” is deemed as a logical data collection method (Bloomberg & Volpe, 2012, p. 121). I conducted in depth, semi-structured interviews of patients; four women and five men as well as nine healthcare providers (HCPs). Interviews were approximately 30 minutes to an hour in length; face to face and primarily over the telephone and were recorded. I transcribed the interviews in a timely fashion (approximately one to three weeks) for both patients and clinicians

to ensure that member-checking occurred. Participants were also be encouraged to comment and interpret the interviews from their perspective.

I conducted HCP interviews at both Site A and Site B and HCPs were recruited through the ERAS implementation lead, through surgeons, posters and nurse administrators. I conducted semi-structured interviews to evaluate how gendered perceptions and power within interactions may inform patient and health provider interactions. As indicated in the introduction, the aim was to understand the gendered aspects that may influence understandings of the other and self in interaction.

***Interview timeline.*** The interview process included sending emails to prospective participants that described the purpose of the study, inviting them to participate, and requesting a convenient location, time, and date for an interview. Each participant signed a consent form allowing me to conduct and record the interview. This process took approximately 15 months.

Phase III: Informal observation. Observation is defined as “the systemic description of events, behaviors and artifacts in the social setting chosen for study” (Marshall and Rossman, 1989, p. 79). Merriam (1988) refers to the observer as participant, and DeWalt & DeWalt (1998) characterize participant observation as having a nonjudgmental and open attitude, having interest in learning about others, developing an awareness of the culture and the tendency for feeling culture shock, being a good listener and observer, and being open to the unexpected. Fieldwork as observation took place at Site A where the colorectal patients commence their ERAS journey, and it involved me in "active looking, improving memory, informal interviewing, writing detailed field notes" (DeWalt & Dewalt, 2002, p.vii). Merriam (1998) adds that seeing the observer as a participant is a "schizophrenic activity," as the observer/researcher participates in the setting as a participant/observer, but to the extent that he or she does not become overly

absorbed to observe and analyze what is happening (p.103). In this experience, I had the opportunity to informally observe both patient and clinician interactions; for example, when the educational tools are administered, this provides a useful opportunity to obtain a sense of what that process is like for the participants. I am aware that I was not able to take part in all aspects of the patient/clinician interaction due to patient confidentiality, so I kept in mind the purpose of my study to ensure adequate and appropriate data collection.

### **Data Analysis Methods**

Data analysis “is the process of making sense out of the data,” and it involves “consolidating, reducing and interpreting what people have said and what the researcher has seen and read—it is the process of making meaning” providing answers to the research question(s) (Merriam, 2009, p. 176). The data analysis included evaluation of the following data: observations of meaningful inter-professional care (IPC) team interactions, such as at intake, discharge, the peri-operative hospital context in which these occur, and interviews with patients and clinical providers, and interviews with patients and health care providers. Data analyses of language and perceptions of interactions and experiences were based on FPS theory and underpinned with the social constructivist paradigm highlighting power and structures in interactions between men and women (Connell, 1987). Merriam (1998; 2009) suggests that data analysis and collection occur simultaneously to mitigate repetition, lack of focus, and too much data. I engaged in review and preliminary analysis of interviews via transcription simultaneously with ongoing data collection.

I employed the single instrumental case study as outlined in Creswell (2007), which focuses on an issue within one bounded case. I coded and use thematic analysis within this case

study, as it “is not for purposes of generalizing beyond the case but rather for rich description of the case in order to understand the complexity thereof (Bloomberg & Volpe, 2012, p. 31).

In working with my observational and interview data, I followed the process outlined in Merriam (2009) which includes aspects such as: i) category construction, ii) sorting categories and data, iii) naming the categories, iv) how many categories to the specific analysis of data for the case study. Intensive analysis was conducted to determine patterns, interpretations, categories, and themes (Merriam, 2009). Merriam suggests that the researcher transcribe interviews herself in order to become familiar with the data and start to take memo notes to determine and identify patterns. After participant consent was obtained, the proceedings were audio taped, transcribed, and thematic analysis was conducted by manually coding and then a second analysis was conducted using NVivo software using topic coding (Krueger & Casey, 2000; Merriam, 2009; Richards & Morse, 2002) in order to derive themes.

It was important at this stage to determine how gender may or may not impact outcomes of ERAS care cultures. This data analysis helped to inform a sex and gender ERAS approach. Finally, patients and clinical providers reviewed transcripts as a method of conducting member checking to ensure that what they intended in their responses to interview questions was indeed what was relayed.

### **Timeline**

Upon receiving ethics approval, I made arrangements with ERAS clinicians to put posters in offices where they met patients, and to have my contact information given to patients so they could contact me if they were interested in participating in the study. I then emailed a formal invitation with more information on the study to interested patients and asked them about their availability for an interview. As I was awaiting ethics approval, I delved into post structural

feminist theory and the social constructivist paradigm further, as these would guide my data collection and analysis. I obtained ethics approval in September, and in Winter 2018-19, I began data collection, document gathering, and carried out interviews until January 2020. I conducted data analysis as I collected the data, which I continued to do as I began my dissertation writing in late 2019.

### **Ethical Considerations**

Data gathering and analysis for this study was done with the objective of determining how or if gender in PE impacts patient satisfaction and outcomes and may contribute to the development of a sex and gender ERAS care proposal. The research required ethics approval for patient and clinician input and unit observations and was sought from the Health Research Ethics Board of Alberta through the University of Calgary. Aspects such as patient confidentiality and patient information were considered and ensured.

### **Reliability and Trustworthiness**

Multiple methods and triangulation were critical in attempting to obtain an in-depth understanding of PE materials provided with respect to sex and gender and whether there is an impact on patient experience and outcomes. Document analysis, interviews, and informal observation supported varied forms of data collection. These have added rigor as well as depth and breadth to the study and offer corroborative evidence of the data collected (Bloomberg & Volpe, 2012; Creswell, 2012; Denzin & Lincoln, 2011).

Trustworthiness and rigor in this study was achieved through attention to credibility, triangulation, transferability, and confirmability. Credibility was achieved through member checking by emailing the transcriptions and findings of the interviews to participants, to ensure that the findings captured participant sentiment (Billups, 2014; Merriam, 2009), as well as

discussing my analysis with my supervisor and supervisory committee. Triangulation was achieved through different data sources: different patients and clinicians, document analysis and observations, offering data collection within one study in subsets of people, time, and space (Cohen & Crabtree, 2006; Merriam, 2009). Transferability occurred through thick description derived from well-detailed notes taken during interviews and the observations data collection process (Lincoln & Guba, 1985). Confirmability is used to produce confidence and truthfulness of data and participants' perspectives making use of audit trail and reflexivity. An audit trail had been presented initially in the form of detailed notes, memos, and observations of how the process of data collection and analysis occurred. Reflexivity was implemented by the field notes I took during the interviews, and ongoing reflection and discussion, so bias could be minimized.

### **Limitations and Delimitations**

Bloomberg & Volpe (2012) describe limitations as the aspects which may “weaken the study” (p. 114). Below are some of the conditions that serve as limitations and delimitations to the study:

#### **Limitations**

**Restricted sample size.** The small number of patients and clinicians interviewed may not be representative of the patient population group, and Calgary may or may not be representative of other centers in terms of investigating a SGS ERAS.

**Restricted sample selection.** For this study, I focused on only one surgical type; this may not be representative of the whole ERAS surgical groups (with the various surgeries offered in this protocol) or patient populations for other disease and illness.

**Researcher bias.** Having been a patient who received various types of PE, I am aware that I had to put my own experiences in the background and foreground those of the patient

participants. In order to mitigate potential bias, I conducted member checking and continuously deliberated and collaborated with my committee as I analyzed and interpreted my data.

**Participant reactivity.** I had to be mindful of the fact that the individual outcomes for the patients in the study may reflect how they answer some of the questions.

### **Delimitations**

Delimitations clarify the “boundaries of your study” and show how you have “narrowed your scope” (Bloomberg & Volpe, 2012, p. 114). The following delimitations apply to this study:

Location of study: There is a focus in this study on two hospitals in one urban care center which may not be representative of suburban and rural perspectives.

### **Summary**

In this chapter, I outlined the research design for the research. A case study was used to explore whether a SGS approach to PE tools impacts patient satisfaction or outcomes, specifically with the ERAS protocol. To this end, two hospitals in Calgary, Alberta, Canada served as the geographical sites for this case study. The primary data collection methods were individual interviews with patients and clinical providers, document analysis, and observation, which served to add richness to the descriptions and interpretations. Data analysis occurred throughout the collection of data, and by the researcher looking for emergent dominant patterns, themes, and sub-themes.

With recent healthcare implementation trends such as patient-centered care, patient first, and precision medicine, it may aid in patient experience and outcomes by personalizing, involving, and engaging the patients in their own care when a more inclusive SGS approach is taken, and thus strive for even better surgical outcomes for patients.



## CHAPTER FOUR: DESCRIPTIVE ANALYSIS

### Overview

The purpose of this case study was to explore how men and women approach patient education (PE) resources and how this impacts patient experience. Specifically, the PE which is received by the patient before (pre), during (peri), and after (post) surgery, and how this impacts patient experience in the ERAS protocol in colorectal surgery. By using Merriam's case study approach (Merriam, 2009; Merriam & Tisdale, 2014), this study provides insights into how men and women approached and engaged PE resource's; if it had an impact on their experiences, if they complied with the instructions, and whether a personalized sex and gender approach would have resulted in an improved patient experience. I resonate with Merriam and Tisdale (2015) in the "ability to improve on research focused on discovery, insight, and understanding from the perspective of those being studied [which] offers the greatest promise of making a difference in people's lives" (p.1). I collected data using semi-structured interviews, engaged in observations at an ERAS face to face education class, conducted a descriptive document analysis and then organized and synthesized my data into descriptions, codes, and themes (Merriam, 2009; 2014; Merriam & Tisdale, 2015).

My research was aimed specifically at the patient experience regarding PE materials; however, in order to gain a deeper and broader perspective, I felt it was imperative to explore the perspectives of healthcare providers (HCPs) who are part of the ERAS interdisciplinary team. Not all HCPs in this study were involved in creating, producing or disseminating the PE resources to the end user; the patient.

In this chapter, I organize the description and analysis of data in the context of the secondary research questions. First, I provide a description of each site, each participant (from

both patient and HCP groups) and their context from which the data emerged. Second, I outlay my process of analysis through descriptive coding which “assigns labels to data” correlated with the sub-research questions (Merriam & Tisdale, 2014; Miles, Huberman, Saldana, 2014, p. 74). Third, I categorized data through interpretive coding using NVivo which “uses words ...from the participant’s own language in the data record as codes” (Miles, Huberman, Saldana, 2014, p. 74). In chapter five, through another cycle of analysis, I compare the two participant groups based on the data that emerged and summarize the study themes. I then discuss how the themes align with my theoretical framework and refer to the themes that emerged from my initial literature review, and then add literature to address the unanticipated findings; considering the second literature review, a final validation effort in the context of the main research question.

### **Site profiles**

#### **Site A**

Site A is one of the largest hospitals, both provincially and nationally. Over two million people access this hospital’s advanced healthcare services annually. It encompasses such specializations such as a teaching hospital, a cancer center, a women's health center, cardiovascular center, trauma center, stroke rehabilitation center, medical school, and a brain center. There is also a large teaching center, research center, and community health sciences faculty. This site does not offer the ERAS face to face educational classes. The physical sprawl of Site A is in the NW quadrant of a large urban city (Alberta Health Services, 2019).

#### **Site B**

Site B is a full-service hospital servicing a large urban center and neighboring provinces. It encompasses such entities as a teaching hospital and trauma center. There is also a large teaching and research center. This site offers the ERAS face to face educational classes which

provide information for colorectal patients from a few days to a few weeks prior to their surgery. These classes were a result of patient feedback, and offer patients access to other members of the ERAS interprofessional team beyond the surgeon and the nurses. The physical sprawl of Site B is in the NE quadrant of a large urban city (Alberta Health Services, 2019).

### **Observations of the Enhanced Recovery After Surgery Education Protocol at Site A and Site B.**

*Site A.* At Site A, I interviewed HCP1 (nurse) and she took me to the room where she met with patients and showed me the PE package they were given. HCP1 (nurse) outlined the steps that occurred when a patient was referred to their office for a procedure. During their visit, the patient may already know their diagnosis or be provided with diagnosis at that point. They are given a package which includes: Wellspring information pamphlet (support services), two booklets: ERAS: *On the Road to Recovery* and *ERAS and your Bowel*, Canada's Food Guide (diet/nutritional information), and a video sheet (outlining the videos available). Patients may or may not (depending on the surgeon they see at Site A) also be provided with a handwritten drawing of a bowel, outlining the nature of their specific surgical procedure, and various instructions done by the surgeon. The surgeon's nurse ensures all PE is explained and answer any of the patient's questions at that time.

*Site B.* At Site B, I observed the ERAS education class offered to patients which they could elect to take. This class was approximately one hour and forty minutes. In attendance that day were six patients and one caregiver. Patients and the caregiver were given a folder with PE materials. The patients were referred by the Pre-Admission Clinic Unit (PACU). The pre-package includes: Wellspring information pamphlet (support services), innohep (treatment for blood clots and self-injection steps), ERAS: *On the Road to Recovery* and *ERAS and your Bowel*,

Canada's Food Guide (diet/nutritional information), videos (lists the videos that will be watched in the class), and ERAS and your bowel. The nurse facilitator went through each of these materials, one by one focusing on the ERAS: *On the Road to Recovery* booklet; going through it page by page (13 pages.) The nurse educator who facilitated the class, displayed and offered patients an opportunity to physically touch and examine the oxygen tubes, intravenous lines, leg stockings and other surgical materials. that patients may wake up with in the recovery phase after their surgery. The class offered opportunities for patients to ask questions in class and one and one with the nurse following the class.

A dietician also entered the class at the one-hour point and went through Canada's Food Guide and highlighted the importance of protein and nutritional intake during recovery. She discussed what foods to avoid and what foods may cause blockages and why and what food options would be good for a post-surgical diet. She also offered samples of different flavors of a protein (*Ensure*) drink that patients would have offered to them post-surgically. She explained the importance of protein in the recovery phase. She then closed her section by providing patients her contact information and offered time for questions.

The nurse educator resumed and concluded the remainder of the class by informing patients about how to manage pain, fluid management and explained the first few weeks at home (things to watch for: blood clots, bleeding, monitor incision, your doctors' number will be given to you at discharge), cancer support services (Wellspring), and the injection kit for how to do your own injection.

The class was followed by a question period and patients were given a PE package which included blood lab requisitions and pre-surgery instructions (bowel prep). This session aimed to

educate patients, and covered many of the aspects that are involved in the pre/peri/post-surgical process.

### **Observations: ERAS Educational Face-to-Face Class**

The elective education class is offered for ERAS colorectal surgery at Site B. I learned of this ERAS face-to-face education class through my interview with a patient(MP1) from Site A. This class was offered to patients anywhere from days up to several weeks prior to surgery. It is an opportunity for patients to see other members of the ERAS interprofessional team and have face-to-face interaction with nurse educators and a dietician who informed and described the pre- peri and post-surgical process to patients. This class had been offered for over 6 years and there was interest from patients for the class to occur. Patients were referred to this class by the Pre-admission Clinic (PAC) when they were informed of the date for their surgery.

The class was two-hours long and taught for ninety minutes by a nurse educator, and thirty minutes by a dietician. Patients were given an opportunity to touch and see the equipment they may wake up with in the recovery room such as the IV bag, various tubing, oxygen tubing, leg compressors and other surgical materials. There was also an opportunity for patients to ask questions and receive answers immediately to which HCP4 (nurse) commented “Overwhelming... [the surgical procedure], and it’s [the class] probably something that takes away the element of surprise.” HCP5 (nurse) stated that patients find the information straightforward, and they like to see that equipment they will be wearing afterwards like the oxygen and the IV,” and “Some [patients] have even commented that they like the taste testing of the supplements, and also they know they can ask for vanilla if they get tired of chocolate.” HCP4 (nurse) stated that those who were able to attend the classes “have more knowledge base

going into surgery and coming out of it compared to our other surgeries that don't have any classes prior or on the ERAS protocol".

The dietician offered protein drink samples (to see which flavor they would prefer when they are recovering) and outlined the importance of nutrition and protein intake when recovering from surgery. The main objective of this class is:

Well, the hope with this pre-surgery class, it is that they have a good expectation of what to expect on how to prepare for the surgery, as well once they are here and when they go home. So that there's no surprises. Same thing throughout the hospital stay so that they understand what is going on and the same thing once they go home so that hopefully everything transitions smoothly (HCP5) (nurse).

### **Document Review**

The purpose of including document review in this study is to determine if there is a gender bias in the PE material. I was given a PE package at Site A and Site B, both packages contained the same materials, of which a sample is scanned and included in Appendix B. The package consisted of primary sources for the surgery: *On the Road to Your Recovery: A Patient's Guide to ERAS* (booklet outlining the surgical journey from the pre to post-surgical stages) and *ERAS-Your Bowel* (pamphlet), *Your Surgery Journey* (pamphlet which has codes for links to a 12 video series addressing different stages of the surgical journey), and secondary sources which are supplemental to the surgical journey: *Wellspring Calgary* (pamphlet for cancer support services); offered in the Site B PE package were *How do self-inject with innohep?* (pamphlet for the treatment of blood clots) and Canada's Food Guide (pamphlet).

When I reviewed each document's different communication aspects, such as language and diagrams, I examined the pictures/images used in the PE materials, I noted that 7/10 pictures

were male and 3/10 were female. However, the incidence of colorectal surgeries for men and women are 50/50. The videos depicting women are few and the ones that used women are more representative of tokenism than reality. It is not a helpful depiction of women undergoing this surgery; for example, there is a woman depicted after her colonoscopy riding a horse. In my discussion with HCP4 (surgeon), he expressed that is something that would not take place in real life, as she may be able to or may not want to be riding a horse that soon after a colonoscopy. Thus, there is an underrepresentation of authentic and realistic depictions of women, female experiences and outcomes in PE documents and materials and would recommend further document analysis of the PE materials.

### **Participant Profiles**

As I embarked on conducting the interviews, I hoped to gain insight into the personalization of PE from the perspectives of patient experiences and the expertise of the HCPs, specifically in the ERAS colorectal surgical intervention. I wanted to explore if there may be a benefit in the personalization of PE in the binary of gender; men and women. Focusing on the PE, I also wanted to consider what aspects patients felt would be most valuable or ideal in PE. Data was collected from two groups of participants; patients (FP for female patients and MP for male patients) and healthcare providers (HCP).

I recruited both groups in a different manner given their context. I began recruiting for HCPs on September 16, 2018, shortly after ethics approval for the study was granted. I conducted HCP interviews from October 24, 2018 to January 30, 2019. For the patient group, I began recruiting on October 31, 2018 and conducted an initial round of interviews from December 20, 2018 through to January 9, 2019, I then recruited patients for my second round of interviews until February 20, 2020. As I began to see that the information gathered had repeated,

and that there were recurring patterns and little new information from the participant groups, I determined that I had reached data saturation and thereby the number of participants in the study was 19. Consistent with a qualitative approach, the decision to end accrual at 19 participants was based on the theoretical criterion that no new themes were emerging in the later interviews.

For HCPs, I sent emails inviting them to participate in the study. Eleven HCPs were contacted, of which nine agreed to be interviewed and participated in the study. I aimed to collect data from representatives of the ERAS interprofessional team only. Six HCPs were from Site A and three HCPs were from Site B. In total; I interviewed two surgeons, five nurses (including an ERAS education lead), a dietician and a psychosocial oncologist, all of whom reviewed and agreed to provide informed consent for participation. I have coded each HCP participant as HCP#. The # will be replaced by a number signifying the code I have given to the participant.

For patients, I posted a recruitment notice in clinics where patients who fit the study criteria would likely see the poster outlining the invitation and description of the study. I was also presented with a list of patients and their phone numbers who met the criteria for the study from a nurse (from Site A), from which I elected to call each patient informing them of the study and inviting them to participate. If they expressed interest and provided an email, I sent the patient consent forms and scheduled the interview. I accepted all patients who met the eligibility criteria, and all of whom gave their informed consent to participate.

I recruited four female patients, five male patients and one female caregiver. All the patients included in this case study had their surgery and post-operative care at Site A; except for female patient 4(FP4) who had her surgery at Site B. No other patients from Site B responded to the recruitment poster despite my attempts at recruiting participants from this site on two occasions. I coded the patient participants as MP# and FP# representing male patient and female



patient respectively and using the # as a placeholder here to signify the number of the participants in the group (which is not significant).

Both HCPs and patients were assigned these signifiers to maintain their anonymity and confidentiality. Table 1 shows the summary profiles of participants, N=18. To maintain anonymity and not identify this participant in the context of the practice and this study; HCP8 does not have a gender identifier. Throughout the following two sections when patients referred to their HCPs (either surgeons or family physicians), I used the pseudonym of Dr. X and Dr. Y, respectively.

Table 2

Summary of Profile Data of Study Participants N=19

Female Patient Participants			
FP	Age	Site	Patient Profile
1	40-50	A	Had surgical procedure and aftercare at Site A. Received an ERAS PE package prior to surgery by the surgeon's nurse in the surgeon's office. The information was disseminated to the patient shortly before surgery (patient was unclear exactly when). Patient self-reported compliance and adherence to instructions in the educational materials. Patient had caregiver at home.
2	50-60	A	Had surgical procedure and aftercare at Site A and this was not her first procedure of this type. This patient was given a package of numerous information sheets prior to surgery by the surgeon's nurse in the surgeon's office. The information was disseminated to the patient three weeks prior to surgery. Patient self-reported compliance and adherence to instructions in the educational materials. Patient had caregiver at home.
3	90-100	A	Had surgical procedure and aftercare at Site A. This patient was given a package of numerous information sheets prior to surgery by hospital staff in the emergency room at diagnosis. The information was disseminated to the patient shortly before surgery on the same day to caregiver (patient does not remember much about her surgery and is not sure of exactly when). Patient self-reported compliance and adherence to instructions in the educational materials most of the time. Patient had caregivers upon discharge and was traveling out of her home province to visit family at the time of the unexpected surgery. Due to this, her surgery was at Site A and her aftercare was at another hospital and then a nursing home facility in the same province.
4	50-60	B	Had surgical procedure and aftercare at Site B. This patient was given a package of numerous information sheets prior to surgery at the face to face class conducted in the hospital within two weeks of surgery date. Patient self-reported compliance and adherence to instructions in the educational materials. Patient had caregivers upon diagnosis, during hospital stay and discharge. Patient reported being a nurse but did not disclose that to her care team during her hospital stay.

CG1	unknown A	She and other family members were present with their mother (HCP3) at the emergency room and received some materials prior to surgical procedure. An on-call surgeon performed the surgery. The family did not receive the same care package as outlined in the study, however they received PE such as pamphlets and online resources as related pamphlets and websites to explain the procedure and aftercare. The caregivers read the material and self-reported compliance as best as they could. The caregiver was involved in aftercare and due to the patients age, there was post-surgical care in another hospital and nursing home facility.
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#### Male Patient Participants

MP	Age	Site	Patient Profile
1	40-50	A	Had surgical procedure and aftercare at Site A. This patient was given an ERAS PE package prior to surgery by the surgeon's nurse in the surgeon's office. The information was disseminated to the patient a month prior to surgery. Patient self-reported compliance and adherence to instructions in the educational materials. Patient had caregiver at home and a full-time nanny.
2	50-60	A	Had surgical procedure and aftercare at Site A. This patient was given an ERAS PE package prior to surgery by the hospital at the time of diagnosis. The information was disseminated to the patient the day of the surgery. Patient self-reported compliance and adherence to instructions in the educational materials. Patient had caregiver at home.
3	50-60	A	Had surgical procedure and aftercare at Site A. This patient was given an ERAS PE package prior, to but was unclear to what was all included. It was given to him by the surgeon's nurse in the surgeon's office one month after his initial visit and one month before surgery. The information was disseminated to the patient approx. a month prior to surgery. Patient self-reported compliance and adherence to instructions in the educational materials. Patient had caregiver at home.
4	40-50	A	Had surgical procedure and aftercare at Site A. This patient was given prior to surgery by the surgeon's nurse in an ERAS PE package the surgeon's office. The information was disseminated to the patient shortly before surgery (patient was unclear exactly when). Patient self-reported compliance and adherence to instructions in the educational materials most of the time. Patient had caregiver at home.
5	60-70	A	Had surgical procedure and aftercare at Site A. This patient was given an ERAS PE package prior surgery by the surgeon's nurse in the surgeon's office. The information was disseminated to the patient before surgery (patient unclear of timing). Patient self-reported compliance and adherence to instructions in the educational materials. Patient had caregiver; however, caregiver was away for most of the time of recovery at home.

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#### Healthcare Provider Participants

HCP#	Role	Site	HCP Profile
1	nurse	A	Disseminated PE to patients pre and post-surgery and follow up. She has not been directly involved with the creation of some PE resources.
2	nurse	B	Is a surgical recovery nurse who provided clinical care for patients at the peri surgery stage from recovery to discharge. She disseminated ERAS PE and ERAS clinical direction to patients at Site A. She has not been involved in the creation of the ERAS educational resources.
3	nurse	B	Is a surgical recovery nurse who provided clinical care for patients at the pre and peri surgery stage from diagnosis, recovery to discharge. She disseminated ERAS educational resources and ERAS clinical direction to patients at Site B. She has not been involved in the creation of the ERAS PE.

4	nurse	B	Is a surgical recovery nurse who provided clinical care for patients at the pre and peri surgery stage from diagnosis, recovery to discharge. She conducts an ERAS education class for patients which describes the prep for surgery, the recovery (including some of the surgical equipment the patient can expect to experience as they wake from anesthetic, diet etc.), the hospital stays, discharge and follow-up. She disseminated ERAS PE and ERAS clinical direction to patients at Site B. She has not been involved in the creation of the ERAS educational resources.
5	nurse	B	Is a nurse educator who has provided clinical care for patients at the pre and peri surgery stage from diagnosis, recovery to discharge. She oversees an ERAS education class for patients which describes the prep for surgery, the recovery (including some of the surgical equipment the patient can expect to experience as they wake from anesthetic, diet etc.), the hospital stays, discharge and follow-up. She has disseminated ERAS educational resources and ERAS clinical direction to patients at Site B. She has not been involved in the creation of the ERAS educational resources.
6	surgeon	A	He is not involved in dissemination or creation of the ERAS educational resources.
7	surgeon	A	He is not involved in dissemination or creation of the ERAS educational resources.
8	psycho-oncologist	A	In order to protect this HCP's anonymity, I will not include the gender as an identifier. This HCP is a psycho-oncologist who sees patients pre/peri/post-surgery. This HCP conducts individual and group therapy for colorectal patients and has developed their own educational pamphlets and programs for patients at Site A and B.
9	dietician	B	Conducts an ERAS education class for patients which describes dietary and nutrition needs for the prep for surgery, the recovery (including some of the surgical equipment the patient can expect to experience as they wake from anesthetic, diet etc.), the hospital stays, discharge and follow up.

## Findings

In the following two sections I present the key findings that emerged from the analysis of data for each participant group through in-depth interviews, and observations for educational protocols for Site A and B.

I began the process of my first cycle of coding by ‘coding for the code,’ using descriptive coding (Miles, Huberman, & Saldana, 2014, p. 73-74; Saldana, 2013). This coding was a “way to initially summarize segments of data” (Miles, Huberman, & Saldana, 2014, p. 86).

I then applied a second cycle coding to observe pattern codes group “those summaries into smaller number of categories, themes or constructs” (Miles, Huberman & Saldana, 2014, p. 86; Saldana, 2013). Given this premise, I summarized this section from most prominent to least prominent findings that emerged from the data for both groups of participants; HCPs and site

information followed by patients. I outlay findings from the data analysis based on the sub-research questions. This research study was guided by four secondary research questions:

### **Secondary Research Questions**

1. What are the perceptions of patients regarding the PE resources?

Extended questions include:

- a) How was the PE disseminated?
- b) How effective/useful were the PE resources?
- c) Do you feel a sex and gender sensitive approach could have improved your outcomes?

2. What are the perceptions of clinicians regarding the PE resources?

Extended questions include:

- a) How was the PE disseminated?
- b) How effective/useful were the PE resources?
- c) Do you feel a sex and gender sensitive approach could improve outcomes?
- d) Were patients involved in the creation of these resources?
- e) How are these resources produced and how do they assess them?

3. Does a positive outcome to surgery depend on compliance with these educational resources?

4. What would a sex and gender sensitive approach look like for PE resources? How could a sex and gender approach be used?

I use qualifiers for the descriptive analysis findings/research findings data: 100% represents “all”, 99-75% represents “overwhelming majority,” 75-50% represents “majority,”

50-30% represents “some,” under 30% will represent “few” (Bloomberg & Volpe, p.151). I first unpack findings for the HCP group followed by the patient group of participants.

## **Healthcare Providers**

### **Perceptions and Experience**

In this section I aimed to understand how PE was created and if patients should be involved, what the objectives were, how it was disseminated to patients, if HCPs had feedback from patients in regard to the PE, if HCPs felt patients complied to PE instructions and if HCPs felt personalization of PE would benefit patients.

**Creation of ERAS patient education.** A majority (8/9) of HCPs stated they knew that there was an interdisciplinary team of HCPs who created these educational resources. Some HCPs (4/9=44%) did not know who created the ERAS PE materials specifically but were aware of a team that created them provincially. HCP1 (nurse), HCP2 (nurse) and HCP3 (nurse) were aware of a provincial interdisciplinary healthcare team that created the resources. HCP7 (surgeon) and HCP9 (dietician) were on the committee that created some of the materials, and HCP8 had created material given the specific intervention. HCP1 (nurse) had created her own PE materials with the assistance of the surgeon and the receptionist she worked with. This material was created for the post-surgical/discharge period, as it was felt patients were lacking some information at this stage and was “hoping this handout with the flow chart will be of use to them [patients]...I do give out the card with the colon cancer follow-up, but ERAS specifically, no we don't have anything we can give them [for discharge].”

**Objectives of the tools.** All HCPs (9/9) answered this question by responding that the primary objective of PE tools was to educate the patient through the pre, peri and post-surgical process. This included aspects of pre-surgical preparation steps (bowel prep), the surgical

process itself, what to expect in the hospital, and discharge instructions for aftercare at home and psychosocial implications (HCP6 and HCP8). HCPs expressed a variety of answers in relation to objectives.

HCP6 (surgeon) felt the objectives of PE resources “helps them [patients] to prepare what to expect postoperatively and how they will recover. [It] helps organize their expectations of the post-operative period” and went on to add that they also help in getting the patient “psychologically ready that they will have some pain...other things they should expect post operatively...including if they will have drains, how they will be cared for, [and] the type of pain control.” In respect to ERAS instructions specifically, HCP2 (nurse) and HCP4 (nurse) endorsed the objective was also in regard to post-surgery and a quicker recovery, as reflected in her role of a recovery nurse; “The biggest thing with the ERAS program is we want to push the mobility aspect and the nutrition aspect after surgery,” and also allowing patients to feel a part of the recovery process; she states “they’re feeling like they are participants in their care, you don’t want to make it like a patient divided healthcare system team, we want to make sure they are informed” (HCP4).

While the PE did have these objectives, one participant stated it was unclear if the information that is sent home to patients was sufficient and it was hard to know; “we don’t do follow up phone calls to truly know that” (HCP5) (nurse).

HCP 8 (psycho-oncologist) who sees patients in a psychosocial capacity, both in an inpatient and outpatient capacities, stated the purpose of creating the PE materials is to “inform the patients of a certain intervention,” which includes the content, objectives, and if the intervention meets their needs. This is dependent on patients who are newly diagnosed vs people who are going through treatment” and this intervention is based on “forms of cancer related

stress,” which is “evidence based psycho-oncology clinical interventions in different formats with which individual, couple, family, groups of psychoeducational formats.”

**Patient educational resources.** The PE materials consisted of an ERAS surgical package which contains pre, peri and post-surgical instructions in the form of booklets, pamphlets, and links to videos (offered online that a patient must enter the URL into their computer browser) which are inclusive of diagrams and photos that are on some of the materials. At site A, HCP6 (surgeon) also hand drew a diagram of the colon at the time of getting consent from the patient for the surgery. It was used to expand on explanation of the procedure in a simpler and more visual way; describing such aspects as where the surgery is likely to take place in the individual patient’s colon (personalizing for the patient).

HCP1(nurse), HCP2 (nurse), HCP4 (nurse), and HCP5 (nurse) presented me with PE materials they handed out to patients, which were consistent with the ERAS PE; however, some materials varied at Site B as they coincided with the ERAS face to face educational class. HCP8 (psycho oncologist) had information on clinical interventions and programming offered to patients specifically related to psychosocial aspects. Site B offered the elective ERAS educational classes, and HCP4 (nurse) stated “they get a handout and they get a little booklet to record their intake for the first few days and information on what ERAS is and explains what it is and what is behind it.” Intake refers to the fact that “For ERAS we record what they eat for the first three days. In their educational booklet, we have an intake/out-take hand out where they record; that as part of their care” (HCP4) (nurse). HCP4 (nurse) further described the PE materials for the class:

In this ERAS class, we are provided with different pamphlets and resources that we pass onto our patients and we cover most of it in class, we go through one booklet quite

detailed. Then we pass on the extra resources for the patients to refer to before and after surgery. Outside after class, if they have anything special, like going home with injections or any medication; or even something that the patient has asked me and that they want more information on. If I can't find the answers to the questions, we have a unit nurse educator who is great at helping us track down resources (HCP4).

HCP4 (nurse) had just created a PowerPoint presentation for patients to follow along with but had not used it at the time of the interview. The purpose of the slides was to offer patients another way to present/receive the information or the education class I observed; "we would just follow through it with the booklet for those who like to learn differently; some like to read it and some like to see it. They can follow along and ask questions as we go, and we try to answer as we go along." In the class, a video is shown on how to give yourself an injection post-surgically. HCP5 (nurse) stated, "that video would be shown again [post-surgically and] the nurse would be watching that person [patient] demonstrate giving an injection and answer questions and of course there is written information that you saw as well."

At discharge HCP1 (nurse), HCP2 (nurse), HCP4 (nurse), and HCP5 (nurse) stated patients receive a carbon sheet with after discharge instructions. HCP7 (nurse) spoke to variations of PE materials that could also be given out as needed:

It would mainly talk about if they have dressings or staples and when to remove them and if they had those, to avoid any heavy lifting...It is not written on that sheet but if they had an ostomy created, then the nurses will give them [patients] that information as well, what their follow-up is and what to do with any medication that they had...so general information (HCP5) (nurse).



HCP9 (dietician) spoke to her part in the education class as well as her contact with patients pre- and post-surgery at Site B:

I teach 30 minutes [of a 2 hour] Enhanced Recovery After Surgery class and the nutrition that is offered in the class...If the surgeons or nurses consult me on ERAS patients, I will see them on any issues or the patients can also ask for a consult which we educate them for in class too...If there are any nutritional concerns after discharge there are other community resources we can send them for follow up too (HCP9) (dietician).

After I attended the ERAS class, I interviewed HCP9 (dietician), and I followed up with what information was given at discharge in terms of nutritional aspects as I was hearing from patients in the interview process that nutrition was an area of interest for them, and that it had not been covered adequately. HCP9 (dietician) responded with:

Yes, if they are just going to Alberta Health Living, I just give them the phone number that they can call and book in an appointment themselves. There's also a malnutrition clinic and that requires me to do the paperwork for that referral. (HCP9) (dietician).

HCP9 (dietician) also referred to other PE that can be offered to be more personalized given the situation of the individual patient, there was nothing that she would offer in terms of sex and gender approaches, but "We do have lots of subdivisions of handouts... Things like if we're going for surgery and there's a lot of weight loss like 30 pounds or more, or if they are experiencing constipation there are handouts for that."

**Patient feedback.** The majority of HCPs (5/9) stated that patients had offered some feedback on the PE materials and (4/9) did not receive any feedback. HCP1 (nurse) stated that some of the feedback reported was that patients had reported that the "information is dry and that they will not be looking up the links provided on the handouts," however, the HC1 (nurse) felt in

response “that it [the PE] was fine, the information they need is on the paper handout.” HCP7 (surgeon) commented that he had feedback that patients appreciated the diagrams he hand drew at the time of diagnosis or at the time of consent for surgery:

Yes, we have had both sides, people always appreciate the diagram and writing it out when I draw that and I have them take it home with them and I write some notes on that like: how long their expected hospitalization is, how long it will take in surgery, how long they will be out of work, you know all those things and what the major complications are and that is all written down and handed out to them. So that is always liked and the other feedback was what I gave you about ‘When can I have quinoa?’ So, we have those kinds of things where we say, ‘ok so we have to revise that because it is not clear enough’. We have had some other comments and I don’t think we have bad stuff, I think everyone appreciates taking something home and I don’t think there is any question that is a good thing (HCP7) (surgeon).

Hpc2 (nurse) and HCP4 (nurse) stated that patients find the information overwhelming with the surgery and the outcomes of the surgery; as a result, HCP2 (nurse) stated “the educational resources seem like one more thing to do,” going onto say:

If I was in their shoes I would be overwhelmed as well. I’m not sure if I would be thinking about the educational resources but I would be thinking about my family...we should give them a small video before right before their surgery and tell them to bring their education resources with them to reduce the overwhelming feeling they have (HCP2).

HCP4 (nurse) stated that most patients experience this as their first time to the hospital and the PE resources, “when they come in and have an idea, ‘how and what’s going on’ helps reduce the anxiety for them.”

**Dissemination of PE.** HCPs disseminated PE at varying stages from hours to weeks prior to surgery. From the interprofessional ERAS team, nurses were predominantly the HCPs who disseminated the PE to patients except for HCP8 (psycho oncologist) and 9 (dietician) who enter the process as needed given their context. HCP9 (dietician) provided the nutritional information that is offered in the class and post-surgery on a case by case basis. Both surgeons (HCP6 and HCP7) were not involved in this process directly with the patient, however, HCP7 (surgeon) gave his patients a hand-drawn diagram and directions, in addition to the ERAS PE which patients commented was very useful.

HCP4 (nurse) was not certain about how PE was disseminated prior to the patients who attended the ERAS class and felt they may have been given some materials from their doctors’ offices (both family doctors and surgeons), but not from the unit in the hospital. “The first time to get anything from us it would be in this class [ERAS face to face education class] and throughout the hospital stay” (HCP5) (nurse). HCP5 (nurse) also stated that PE materials are disseminated at the class:

All of the printed information that you would have seen today and they view the video... [injection video] at some point again [during hospital stay] and when it comes to carbon copy sheet which is right at discharge...[it] contains after discharge instructions and information (HCP5) (nurse).

HCP8 (psycho oncologist) stated “When I identify that there is a need for education, I offer resources; case by case. Then I offer information whether it is pamphlets or contact

information for people that they can go to get the information...” and went on to say “there is a stand in the Cancer Center with pockets for every program is placed” (HCP8) (psycho oncologist).

**Compliance to PE and outcomes.** Most HCPs (7/9) felt that patients did or tried to comply to the PE and felt that there were better outcomes for those patients who did. A few HCPs (2/9) such as HCP1 (nurse) and HCP3 (nurse) felt that there was a 50/50 split in compliance as it was felt patients; “[patients] don’t want to face the fact they are going to have this surgery and want to put it on the back burner or they want to ignore it and sometimes they just don’t care about reading material” (HCP1) (nurse).

HCP6 (surgeon) felt “It would be really hard to say, whether that has been measured [compliance and outcome].” However, “there was no question that educating them about the surgical process is a good thing and I cannot say I have encountered many defiant or non-compliant patients and they are grateful for the information they receive...some of it is mandatory” (HCP 6) (surgeon).

For those HCPs who saw patients post-surgically such as HCP2 (nurse), a recovery room nurse who had PE materials to give to patients regarding the post-surgical instructions, she would review them with the patient. She felt they did comply with the PE instructions as “It requires a lot of time and effort from the nurses,” the patients “are tired after the surgery and they are thinking about their prognosis...they were stressed from that and maybe not be mentally well and it takes a lot of education to emphasize that this [ERAS protocol] will help them to recover.” She further reflected “I have not had any patients that did not adhere to these recommendations... If we have some kind of block or reason for not moving as fast, we simply give them time...educate them again and encourage them.” She also felt that nurses “...also ask

what we can do to help them so it's more of a collaboration and they are pretty good at this." For patients who followed directions, HCP2 (nurse) felt they recovered earlier and thought there was shorter patient stays and better outcomes for them. HCP3 (nurse) validated this response "Definitely 100%... You see it in the ones you have to push [they] are usually the ones who are slower getting discharged. The ones who adhere to the instructions are just super eager to go home and be part of their care."

HCP4 (nurse) and HCP5 (nurse) did not feel they could measure compliance and HCP7 (surgeon) stated "most people are fairly overwhelmed with the amount of information they are getting. I think a lot of them don't remember what they're receiving, which is why we are trying to present in a variety of ways." HCP9 (dietician) felt that recovery was dependent on nutritional aspects such as "One of the main things is, after surgery if they are not eating well and also protein [intake]." In referencing the ERAS face to face class, she states "As you can tell from the class, protein is spaced out throughout today and if patients are not feeling well most of the time they tend to drop off on their protein intake" (HCP9) (dietician). Overall, patients did their best to adhere to the PE depending on their situation and it was thought if they did comply "I would say there is better outcomes" (HCP9) (dietician).

**Caregiver educational materials.** In two interviews, caregiver education organically entered the conversation, both HCPs thought it would be useful. HCP3 (nurse) stated "a lot of them [caregivers] are really interested...recently I had a young 20-year-old patient...I think her patients are really keen..." and HCP8 (psycho oncologist) articulated "We extend care to the caregivers as well as we approach that type of intervention from a systems perspective. It is not only illness for the individual; it is illness for the whole family system and caregiving system as well."

**Personalized sex and gender approach.** Some HCPs (4/9) did not feel that a personalized sex and gender approach was needed in colorectal surgery. HCP1 (nurse), HCP6 (surgeon) and HCP2 (nurse) did not feel there was a need to personalize instructions to their patients depending on their sex. Even when asked about aftercare or post-surgical, HCP1 (nurse) stated that “bowels react the same whether they are male or female, so we just talk about how it is going to be.”

In respect to sex and gender personalization according to HCP6 (surgeon), most women in the pre/post-menopausal stage do not have many issues,” however for men they “have more difficulty with urination post-op because they have a degree of prostatism and they have more challenges voiding after surgery” (HCP6) (surgeon). HCP6 (surgeon) commented that “I do ask my younger patients who is taking care of the kids, whether grandma is there and whether the husband is taking time off to help care for the kids.” Both HCP3 (nurse) and HCP6 (surgeon) reflected that there may be implications for patients both in terms of sex/gender and age; as “for younger patients, it might be better to have male/female diagrams especially when it comes to issue of sex” (HCP3) (nurse).

**Other areas of personalization for PE.** Although I did not explicitly inquire, HCPs reflected on the personalization of PE beyond sex and gender personalization. Varying opinions were expressed such as “specific patient instructions would change the overall outcome” (HCP1) (nurse). However, another participant felt they “don’t think it’s realistic to offer one-on-one [personalization] to everybody” (HCP5) (nurse). Areas of personalization that HCPs felt would be beneficial to change or highlight were aspects that were similar to the patient participant group, such as nutritional information, sex, age and food intake. In terms of food intake

postoperatively, “it should be reinforced that patients don’t have to eat everything, they can just nibble, consume little bits” (HCP6) (surgeon).

**Approach change depending on their sex.** HCP response varied when asked if their approach changed to their patients depending on their sex. HCP1 (nurse), HCP3 (nurse), HCP4 (nurse), HCP5 (nurse) and HCP6 (nurse) reported they did not feel they changed their approach and communication towards their patients depending on the sex. However, HCP1 (nurse) and HCP6 (nurse) felt they may change their approach based on the personality of their patients instead of sex. HCP2(nurse) and HCP7 (surgeon) stated they may change their approach on sex of their patient slightly; “Some guys are more stoic or not responsive and women are more open...sometimes I modified my approach but still adhere to protocol” (HCP2).

Given the context of HCP 8’s (psycho oncologist) intervention, this clinician reported having created different PE materials for men and for women. However, the PE was specialized in different ways; “the objectives are the same for both programs, but the language was slightly different.” HCP8 articulated the changes for women, stating “I would put on the top expressing or sharing emotions as one of the potential benefits one could get from attending the group,” and for men “I would start with stress management.” This clinician based the approach on theories of masculinity and endorsed “It is the same content but the delivery is changing...Sometimes we build interventions based on some stereotypical expectations and we as clinicians need to mind that...[and] make resources available and let patients decide what will be best in meeting their needs” (HCP8) (psycho oncologist).

**Patient Involvement in the Creation of Patient Education.** All HCPs (9/9) reported that there was no patient involvement in PE and that they were not aware of any.

**Technological app.** All participants except for HCP 8 (psycho oncologist) were asked this question as it was not applicable given this HCPs intervention with patients; the overwhelming majority (7/9) stated a technical app would be useful. HCP1 (nurse) felt it would be faster and “I think typing in all of these links is a bit tedious, mind you, you can scan the QR code, which I don’t even have on my phone so I don’t know.” HCP6 (surgeon) and HCP3 (nurse) felt an app would be useful for other diseases as well, although were not sure how it would look and reflected on the majority of patients being in an older age group, which may be problematic if the patient is not technologically savvy. HCP3 (nurse), HCP5 (nurse) hpc7 (nurse) and HCP 9 (dietician) felt an app would allow the opportunity to educate on related aspects and it could be “really useful because then I think if they are embarrassed about a topic, like the sexual topic, then they can just look that up themselves without having to ask” (HCP5) (nurse). As a dietician, “There could be a whole tab on nutrition, if you are not eating well did you try or consider these points? Protein ideas? If they misplaced our handout...” (HCP9) (dietician).

Not all HCPs were onboard with the idea, HCP2 (nurse) felt given the age of the patients “we would have to be mindful of that. It should be made in a way that it’s very accessible to them.”. Table 4 summarizes HCP responses based on the sub research questions for this study. There was a mix of HCPs from both sites and they all with the exception of one surgeon disseminated PE to patients, all HCPs felt that patients should be included in the development of the PE, most HCPs felt that patients complied with the PE and some HCPs felt a sex and gender approach to PE may be useful.

Table 4

Summary of Profile Data of Study Participants from the Healthcare Provider Group (HCP) N=9

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HCP#	Role	Site	Provided PE to patients	Patient involvement in development of PE	Felt patients complied with PE*	S&G PE **
1	nurse	A	yes	yes	yes	maybe
2	nurse	B	yes	yes	yes	no
3	nurse	B	yes	yes	yes	no
4	nurse	B	yes	yes	yes	no
5	nurse	B	yes	yes	yes	maybe
6	surgeon	A	no	yes	50/50 split	maybe
7	surgeon	A	yes	yes	yes	no
8	psycho oncologist	A	yes	yes	yes	yes
9	dietician	B	yes	yes	yes	no

\*self-determined compliance reported by HCPs in reference to patient

\*\* S&G refers to sex and gender

## Patients

### Perceptions and Experience

**Patient experience.** In this section, I unpack the experience of the patients during their surgical journey. Patients were asked how effective and helpful they thought the PE was, if they complied with the instructions, when they received it, and what they felt was missing. Overall, both male and female patients reported having a positive experience despite the difficult journey they were navigating.

Male patients reflected on their experiences as MP2 summed up the sentiment by stating “...for a rotten thing, I think they [HCPs] did a good job. I think the process has been good and the people have been fantastic, can’t say anything really bad about it.” MP1 echoed this sentiment with their comment “...I actually had a pretty good experience. I was not wondering what the

heck is going on,” and added, “the one on one with the surgeon was very helpful.” MP3 and MP4 commented on multiple factors that contributed to a positive experience such as their experiences with their healthcare team (family doctor, surgeon, nursing staff), the PE itself, and their experience with pre and post care. MP3 reflected “The nursing staff was phenomenal as far as I was concerned, they guided you along the process... but quite an amazing experience that was actually quite positive...”(MP3). MP4 stated “...when I went to see Dr. X, he did a great job, and not just the surgery part but when I got to see him and when we sat down, and it was not a lot but he wasn’t in a big hurry... I had a good experience that way.”

When reflecting on the ERAS instructions post-surgically, such as early mobilization, chewing gum, consumption protein etc., some patients felt this was communicated more effectively in the PE and others felt that their nurses were fundamental in reinforcing the instructions. MP3 commented, “I think I got that more from the literature,” however he knew it was helping him recover earlier and stated nursing staff inquired “Did you bring chewing gum?...Are you having a bowel sound?...more like these things can help you get out of here in four or five days rather than a week or more.”

Female patients made similar comments: FP2 stated that this was not her first abdominal surgery, and she felt she knew what to expect but the reinforcement of specific ERAS instructions in the PE was useful; “I saw the difference in receiving the information and what stood out in my mind this time was they would say things like start chewing gum, I remember that...[it was] what to get the digestion going.”. FP4 was the only patient who attended the face to face educational class and upon being asked how useful she found the PE and the class she responded “Very. They went into a lot of detail around patient responsibility like, bringing in

gum, hard candy...taste testing of the Ensure. There was also a lot of talk about and information on the papers when we got to the unit and other paperwork...”.

Some factors that contributed to a less positive experience included factors such the gap in nutritional and post care information/instructions. FP2,FP4,MP1,MP4, andMP5 commented on specific areas that they felt they were either not prepared for, or they simply did not understand in terms of the process. Specifically, the interactions to the drugs, the pain they felt afterwards, a lack of a view of how they would realistically feel post-surgery, and how the healthcare team may not be mindful that the patient may be encountering this ordeal for the first time.MP5 reflected on this and said “Again, I did not understand my post-surgery, how I was going to feel and how this program addressed the psychological impacts of the surgery and how to get back on my feet sooner. That part, I really did not understand.”

Mp1 reflected on his experience with ERAS as he felt it did not work for him; from his perspective, he felt that HCPs may not realize the relative unfamiliarity of the experience and invited aftercare instructions:

It turned out ERAS did not work that well for me... I followed the program for the first few days... but from a patient's perspective, the sense that I get is that the surgeons and the clinic staff are seeing people but they forget what the experience is like for the patient...it [PE] was pretty scant and there wasn't a lot given to me as I left the hospital that kind of said well 'here is what you should expect in your recovery, here is some tips and tricks on how to get through it'...(MP1).

The pain that was experienced and the drugs that were given post-surgically were also factors that appeared to affect the patient experience for MP1 and MP4. Both reflected on their experiences and thought that there should be more information given; in this aspect, “I had a bad

experience with medicine... Either just from the fact that you are in pain or you are just waking up..."(MP4). MP1 mentioned comparing his experience with another patient that had recently undergone the same procedure, but had taken the educational class at Site B; "it sounded like they get a bit more out of it than I got from the videos because there was an opportunity for some interaction and have some question and answer."

Fp4 also reflected on her post-care experience with specific experiences during her recovery:

Post-care, mine was not smooth. So, mine was different, I call it 'nurse curse', (laughs). I felt my care was not as good as it should have been depending on who the staff member was. There was not a lot of help, I remember one morning early on in my recovery probably about 5am...lots of tubes ...lots of everything and needing to be up and walking around and trying to get my suitcase open but I had IVs in each arm and a catheter and then a tube in my nose and I couldn't get my suitcase open to get my underwear out. I had a hospital gown on because my stomach was so swollen. So I closed my hospital gown up as best as I could and by the time I got ¾ around the unit, a staff member came up behind me and said 'you need to be wearing underwear' and I said 'I can't get them right now' while the staff do have temporary mesh underwear and that she could have offered to me but she didn't. I was humiliated so I did not ask for them. Things like that do not help. I was able to ... my family changed my bedding if my stoma spilled over and helped me freshen up in the bathroom. I believe if I would have rang someone would have given me towels and linens, but I did not have the feeling that I would have that much assistance.

**Overwhelmed and anxiety.** Although I did not set out specifically to enquire about anxiety and feelings of being overwhelmed with diagnosis or with the surgery, it seemed to be an aspect that was highly reflected upon by patients. All of the patients and the caregiver (9/9) spoke to a spectrum of areas which evoked these feelings and spanned from a lack of understanding of what was being explained, the shock of diagnosis, the preparation and worry surrounding the surgery, variability in the experiences patients could have, imagining what could go wrong, lack of control, and giving their lives up to the healthcare system, and so on.

Patients reflected on how they felt their brains were functioning and their emotional states. For example, MP4 expressed “...how much your brain can be completely useless to you because of stress or just preoccupied thoughts, it just doesn’t work the same. And the expectation should be that it shouldn’t...” FP1 had reflected on not remembering some of the PE due to being overwhelmed, “Okay so I did receive another sheet from the [provincial health authority that Site A and B fall under] about the preparation for the surgery and other things that were useful because it is overwhelming”(FP1). Another participant spoke to his emotional state being affected, stating “I have had a very hard time keeping my emotional state intact when things don’t go well for a day or two”(MP1). FP2 reflected on not wanting too many details and only having to deal with what she needed at the time: “I just need to know what I need to know, not everything that is happening in my body. That can lead to anxiety as you are imagining the things that are happening in the body or what is going on.” MP4 articulated his anxiety and his lack of control over and surrender to the situation in this way:

But let’s go back to what we talked to a little bit earlier about; the patient’s brain is diminished for whatever reason but the big blanket statement would be stress about lots of little things inside... it is also the time coming up to surgery and worrying about

that...The really important things that you really need them to hear and to make sure that because [you] saw the stuff that they tell you this is really going to help you...but at the end of the day, do you really have any control over that except for to say yes or no?

Zero... so, do I have any choice when I'm unconscious and I've already said yes? (MP4).

The caregiver perspective was also recognized in this area as CG1 commented on how anxiety evoking certain aspects can be for a caregiver, specifically during the aftercare for her mother:

I was initially quite anxious about the bag. We were not told about how often it needed to be changed. All I kept thinking of was that we are going to be on the highway or the gravel and then we're going to have an issue, I mean that is what I was thinking...Ok where are we going to change this bag? (CG1)

Fp4 articulated how the multiple people who were involved in her care as a whole were helpful mentally with well needed assurance:

I think I was prepared from the different groups; the stoma nurses that I saw, and I am so thankful that I was able to see them at the time of the preadmission clinic and the morning of surgery; they gave me a lot of mental help and reassurance. They actually marked out where the stoma would be and if it would be temporary or permanent and they were just able to answer a lot of my questions and they started from scratch because my husband was with me and they were very good about that, so I think between them, Dr. X and the nurse who did the education class and the nutritionist; it was a lot of information at the one time but if you don't live close to the center then you don't want to keep making trips. It was a lot to think about, but it was good care.

**Remembering the patient education.** Another aspect which patients spoke about was remembering the PE. All patients (9/9) remembered receiving some sort of PE in various forms; however, some patients (fp1, FP3, MP1 and MP3) did not remember receiving certain documents or at times when they received them. FP1 stated “I didn't watch any videos, so I don't remember getting anything that had videos on it...I don't remember that.” FP3 did not remember the surgery at first either; “I don't really remember the surgery. I just went in and they sort of discussed it and decided that I must go ahead with the surgery, they couldn't do anything else.” Similarly, when asked about the video component of PE, one participant commented “I probably did get that sheet and maybe there were links to video...you know its kind of a bit of a blur, that time period... I do recall something saying about the videos” (MP3).

**Caregiver experience.** Patients expressed how integral their caregivers were as part of the entire process from diagnosis to post discharge from the hospital. Patients were also aware that their caregivers and families were on this journey with them. Comments ranged from how caregivers were there to listen on their behalf, provide support, and advocated when they were unable to comprehend what was being offered to them for example in terms of instruction. FP2 and MP4 offered high praise and spoke to how instrumental caregivers were in the postsurgical period. MP4 reflected, “My wife...was home with me during my recovery and the whole process...I get to brag about my wife, she is unbelievably helpful and diligent and whatever else, and nothing bad to say about how much help I had.”MP1 and MP4 encompassed the role of their caregivers aiding them with PE in these comments:

She [wife ofMP1] would have read some of them, not all of them [the PE]. I had passed on some of the videos, but I know that she picked and chose the stuff she thought would be most relevant to her as a caregiver and not the person going through the surgery. She

was often there for the first while talking to the nurses and my doctor and she was fairly involved...(MP1).

I can tell you this, she was at every meeting, I received all the information and face-to-faces that I did, and she heard things differently than I did. Which is partly because that's human beings, partly because I'm focusing on something that she is not and she is focusing on something and worried about things at other times...She was there for all of my appointments so she learned everything that I knew along the way...(MP4).

MP1 also went on to comment beyond the PE aspect to his caregiver's experience during the day of surgery, as it was not as smooth as it had been conveyed to them:

...because I took a long time to get out of recovery... For her [MP1's wife], there was a bit of a black hole, maybe a mix up on the day, she was wondering what was going on...then a few hours later I popped out and everything was fine but that was a bit lacking (MP1).

Fp4 reflected on how her caregivers and other caregivers she saw on the unit were very willing to help if they knew how to do it:

Oh yes and I saw it on the unit...if the family members were shown what to do, they were more than willing to help and more than willing to do it. As long as he [her husband] knew what to do he [her husband] was more than comfortable helping out but there is a lot that goes with it because you don't know if you have cancer or not. You know the surgery was a success but what does that mean? At least for me...what does that mean for the future, you know? He was worried and stressed and they go through a lot.



**Household roles.** Patients were asked to describe if they felt that their roles or duties in the household were affected by the surgery and the surgical recovery once they got home. Male patients MP1, MP2, MP4, MP5 commented that they tried to keep the household normal, had someone at home to help them recover, and how the surgery impacted some of their household roles and duties during the recovery. MP1 reflected on his experience when he returned home:

I went from having a very busy life at work to home to a fairly screeching halt at home where I was not feeling very well or sleeping well. Luckily, we have a full-time nanny ...after a little while I started to do more looking after the kids...walking kids to school and picking them up...Getting back more into to sort of the role I was doing especially of being a parent, it helped my recovery...I was really fairly helpless and was a bit of a burden on people...but it was one of the things that my wife and I talked about...playing that role again...It has definitely been a motivating factor to me to get back to play a role in the household in terms of cooking dinners, doing errands, getting kids [from school], helping with homework, getting kids to bed all that kind of stuff...(MP1).

Female patients commented on how they had support at home both physically and emotionally and were able to resume household duties when able to do so. FP3 commented on her age-related implications and the fact that patients do need some care and attending post-surgically:

What I'm trying to get at is when you are in that age group you're relying more on your caregivers to do the reading, to do the aftercare a little more than if you were in a younger demographic, who may go home to young children and when you are in an older demographic you have other concerns... I was lucky that I didn't have to go home and

look after little kids, that would be hard...I would actually be taking care of myself (FP3).

In response to her mother's comment, CG1 responded to a possible age-related complication, in their case, her mother's eyes:

I think that that is a bit of the distortion though because you're saying that if you went home you would be taking care of yourself...you would have *Homecare* [nurse care service] come in and take care of you (CG1).

Fp4 commented on how much help she needed when she went home

I couldn't go into my regular routine, nothing like that. I needed help. I could barely climb the stairs and of course there was no stairs in the hospital, but I could barely get upstairs. I was exhausted and I don't know how someone would have done it without support. I am not saying community support or anything like that but definitely, it was a bit of a sad situation; I needed help...It was very difficult and I was very deconditioned as I was in the hospital for two weeks and you can be up and walking around as much as you are able to but it is nothing compared to what your role is at home.

**Patient education.** In this section, I outline the PE that patients received. The majority of patients (8/9) received the ERAS packages describe previously at both Site A and B. One exception was patients at Site B, who could elect to take the ERAS face to face class.FP4 was the only patient in this study who had the face to face educational class and found it very useful as she was able to show her caregivers the tubing, have a nurse educator present to ask questions and even taste samples of the protein drink she would be offered during recovery.MP1, MP2, MP3, FP4 and FP2 commented on videos, ERAS instructions (bringing chewing gum to the hospital to prevent gas and bloating), booklets as parts of the package: "Yes, there was videos

that I could watch but I read the booklets”(MP2), and “Yes, mostly all the patient care instructions about what to bring to the hospital what to expect and helpful tips such as bringing chewing gum for gas or bloating and those types of things”(MP3) and “I made sure I had what I needed like the mints and gums”(FP4).

The exception in the patient group that did not receive a PE package was FP3 (1/9 patients) who had her surgery on an emergency basis after presenting at the emergency room of Site A with stomach pain. FP3 does not remember receiving any information, however she was aware her caregivers would be given PE information and she would be informed post surgically by them. CG1 further commented that they did not get the surgical package:

Yes, she would have received that in the doctor’s office but because she went from the emergency room straight into surgery, she missed that step... I think it would’ve been helpful. If I had known more about it before...It came on so suddenly that I couldn’t have any of that fret about worrying about what was going to happen. It just happened and that was it...we would read it to mom (CG1).

Overall patients received similar pe, knew they were undertaking an ERAS intervention as the PE materials had instructions and patients found the PE representative of the procedures they were going to be undergoing, particularly in the pre and peri surgical periods. Patients found certain elements of the PE more helpful such as videos, diagrams and ERAS instructions:

**Videos.** Videos seemed to be the most useful part of the PE for some patients. Some patients found the video links very helpful. MP1, MP4, FP2, FP4 and MP5 watched videos and found them informative. MP1 articulated his experience with the videos as:

I would say the videos from my perspective were among the most useful and then second to that were the specific instructions on what do you need to do in the days leading up to

your surgery. For instance, I had a bowel prep, what types of food to eat and what not to eat...so the specific instructions were helpful. In terms of the videos, they helped with what was going to happen on the day (MP1).

Fp4 also commented on the videos received and viewed in the face to face educational class

From the teaching class there was some sites and videos we went to and some videos we were able to watch and nothing that really that went through what you would go through after surgery...and each patient is different but nothing for what you would go through after surgery and the real expectations or the real things that happen after surgery.

**Diagrams.** MP1, MP2, MP3, MP4, MP5, FP1, FP2, FP4 and CG1 found diagrams in the PE were helpful for patients. The diagram that was drawn out by their surgeon was also mentioned and considered to be very helpful; FP2 commented “definitely the diagram [from her surgeon].” FP4 commented on the diagrams she received and how informative they were not only for her in the class but also her husband:

I felt they were good and I did a lot of research before, I am a nurse as well...I felt very well informed and the teaching class re-informed what I had known, but for my husband who is totally naive about all of this it was really really good.

**ERAS instructions.** All of the participants, with the exception of FP3 and CG1, referred to ERAS specific instructions and the spectrum included pre-surgery: carbohydrate intake to the post-surgery: gum chewing, protein intake, early mobilization, etc. Most patients were positive with regard to these specific instructions. MP1 articulated this as “It [PE] was part of the package early on and it did have information on ERAS and what it was about and in terms of getting people eating right away and getting people up and walking around.” Another participant

commented “it was [PE instruction] before the surgery...your carbohydrate and protein boosts and the antibiotic before the surgery...I was in the hospital for four days and it could be up to 7... it was amazing”(MP2). MP3 and MP4 validated these comments by adding “I think it’s a really great program to get people get up and moving after surgery... there was even motivational signs [in the ward after recovery] ...saying ‘you had walked this much before’...it was quite an experience. It is very beneficial program this ERAS”(MP3), “I wanted to get well as soon as I could...It was a supportive thing it wasn’t a demanding thing... these things can help you get out of here in four or five days rather than a week or more...”(MP4) and “I kept a tally of output/stoma and bladder and kept that at my bedside and I would give to the nurse at the end of their shift”(FP4).

**Dissemination.** All patients were asked when they received the PE package, there was no consistent answer given as patients presented with their own individual cases and at different stages of disease and intervention and as a result, no standard time stated. Patients spoke to receiving the PE several weeks prior to the surgery up to the day of surgery. FP1 stated “I think in my case it was the ideal time; shortly before the surgery. I had enough time to read information, it wasn’t too early or too late I think it was fine.” FP2 stated “I was diagnosed in October and my surgery was December 1<sup>st</sup>, say maybe three weeks prior.” MP1 reflected “I received those probably a month before my surgery, so from the time of my diagnosis as I had colorectal cancer... then they sent me a package after that...”. FP4 reflected on how rushed her surgery was and that the ideal time to receive the PE would have been 2-3 weeks in advance.

My surgery was booked last minute, so I got the information about 2 weeks’ notice in advance, so mine was very rushed; everything happened in one day; the blood work, the education class....I didn’t go through it piece by piece right away when I received it, but I

did before surgery. Ideally 2-3 weeks in advance would be great. More time would have been a good thing and I had to pick and choose what was important for me...

**Compliance with the patient education.** All patients self-reported they did comply (9/9) even referring to some specific post-surgical instructions such as “Yes, and even the blowing of the air bubbles after surgery. I was dedicated to doing that to keep your lungs active and stuff, so you don’t get pneumonia in there” (MP2). Most felt that they complied and took initiative to get better “I certainly did, I consider myself a very good patient and follow directions from the doctor very well. At the hospital I have questions, I write them down and they’re always answered to satisfaction”(FP2). MP4 and MP5 went on to say they tried or did the best they could. MP4 stated “For the most part I actually did try to, I can’t say 100% but I remember getting up as early as I can and maybe for the enhanced healing part [ERAS]...”

**Caregiver educational materials.** CG1, FP4, MP1, and MP4 expressed they felt caregivers may have benefited from their own set of informational materials. When asked if CG1 and her siblings would have benefited from a different educational approach, CG1 responded “...I think that pamphlet would have been helpful.” Specifically referring to post-surgical instructions, she further commented that they ended up “learning through osmosis...we just figured it out through watching...I think it would’ve benefited us...” Other patient comments were:

I think yes, and I think it also depends on the demographic...if you have some coaching upfront that said if you were going to be a caregiver here are some things...some tips on how you can be a better caregiver right off the bat. So, things like encourage your partner to stretch themselves a little, not too much, do it in a supportive way but keep their mind on the progress too (MP1).

MP4 reflected on a couple of aspects that his caregiver may have benefitted from in terms of education or information. The first was nutrition post surgically, as one participant stated “nutrition, is a big deal and we just do not talk about it... I would suggest that we almost ignore it from a medical standpoint...I don’t know if that could help, because caregivers tend to feed patients” (MP4). MP4 went to reflect on his frame of mind and articulated:

That is a good question, again it is content... my initial thought is yeah, she probably could have benefited from specific information that would say ‘when dumb dumb isn’t paying attention this is what you should pay attention for him’ kind of thing. Maybe because sometimes we don’t know what is good for us, sometimes I am saying ‘I am fine’ and she is saying’ no you are not fine...I didn’t even think about that part of it and hundred percent she did not receive any of that information, I did, but she did not. Could be useful (MP4).

### **Personalization of Patient Education**

**Sex and gender approach.** Overall, all of the patients interviewed (9/9 and 1 caregiver) stated that they did not feel that personalization of tools was needed in respect to sex and gender in this surgical intervention as they felt that bowels were the same in both sexes. MP2 expressed “I thought it was personalized enough,” while MP4 stated “I didn’t feel it wasn’t personal...I understand the expectations of all literature is fairly generic and so I didn’t feel it wasn’t personal or it was impersonal” (MP4). FP4 stated “I can’t say there was anything that needed to be different for me in terms of being female.”

***Male and female representation in the ERAS patient education.*** Male and female patients expressed feeling represented in the PE (9/9) and MP1 articulated that “I certainly didn’t

feel unrepresented.” Other comments that participants relayed focused on gender neutrality as if it was something that they were not cognizant of:

Yes, I do because I think the surgery that I had was it something for both men and women. If it had been something just for women, it would've been different. I didn't feel it was that short of information, it was more generic or that it was not enough information because I was female. So, I didn't feel underrepresented at all actually. Yes, because again it's same for men and women right, the whole colon is all the same, so I didn't feel there was any difference (FP1).

Never even crossed my mind whether the diagrams were male or female I was just looking at insides. I don't know how other people will answer your question and I think that is an interesting study and it never even crossed my mind whether I was looking for material that was a male or female. What I was looking was a part of my anatomy something that was inside of me. I was not thinking about gender at all when we were talking about taking a piece of my colon out. So, you know it never even came into anything of a picture (MP4).

Yes, I think it was gender-neutral...Again, I can't see where the men vs women side...I racked my brain thinking about how would the gender played into it and I just can't come up with anything...I cannot think of a time where the gender element or in any consultations I received had a gender element in it and felt it was done very well in regard to whether it was a man or a woman (MP5).

Fp4 reflected on this question in terms of her femininity as opposed to sex differences in her comment:



I will be honest at the time although it would be nice to maintain your femininity through the process, especially for someone like me who did not want to have the surgery but knew I needed to have the surgery, I can't say there was nothing that needed to be different for me in terms of being a female. The only thing I would say for other females is to bring something that makes you feel good...I didn't bring in a housecoat as that would be too much, but I brought in pretty wraps that I could cover up with around my shoulder for warm and it make me feel good. So maybe I was wearing the ugly hospital housecoat, but even a cream. It is quite shocking and my daughter in law is eight months pregnant and my stomach is bigger than her and I am not a big person. I could not even wear my bra as it was too much to get around the tubes and would it even be comfortable? Things like that...they would help you take a shower, but you have to have less on you to do that.

Most patients commented that they felt gender was not something they specifically focusing or noticing suggesting a normalization of the PE, however FP4 mentioned that she wanted to “maintain her feminity” during this time suggesting she may have noticed the standardization in this aspect.

**Diagrams.** When asked if patients felt they were represented in the diagrams in the PE, FP1, MP3, MP4, and MP5 each referred again to the fact that the colon would be same for both men and women, so it was not something they noticed. FP2 reflected on the fact that “both men and women were represented in the videos.” CG1 reflected in a similar way to an extent as the comments above, however she articulated more deeply on both gender and age-related aspects:

Yes, that is a good question in the pamphlet there is a picture of a man and his wife...

The man has the bag and the woman is the caregiver. But when I read the pamphlet, I was

more focused on... It was more unisex to me. I didn't care, it was talking about what people experience, now there was questions that came up on it: 'Will we be able to have sex?' 'Will we be able to have children?' ...one thing that really stood out for me is different ages would have different concerns. How they responded to this would depend on their age group. So, there is a male and female thing and an age thing (CG1).

**Other areas of personalization that emerged.** Although I had not intended to ask about areas beyond sex and gender regarding personalization, various aspects emerged for patients during the interviews. For example, the distinction in elements of personalization emerged as patients spoke to specific gaps in the PE. A majority of patients (5/9 patients and including 1 caregiver; 6/9 participants) felt that some personalization of tools would be beneficial. Based on participant experience, objective details surrounding the surgical procedures were done fairly well; however, a clear desire for more personalized information in certain areas was expressed. Specifics emerged for the pre-surgical period around explanation of surgical markings (for placement of ostomy and ileostomy bags), description of the operating room, age related issues and the psychological aspects/effects preceding surgery. For the post-surgical period, the focus on gaps in the PE was presented around bowel movements, sexual function, bladder function, pain management, drug effect and nutritional information. Participants expressed these disconnects in various ways:

***Bowel movements.*** MP1 and MP5 reflected on their lack of understanding and lack of information regarding bowel movements. Aspects such as the amount, the soreness/pain and they did not understand what was considered normal. MP1 stated:

...help with things like having to go to the bathroom too much and also skincare and avoiding really raw skin around the anus...That was not part of the 'hey you are going

home and if you are going a lot [referring to bowel movements] make sure you switch over to wipes' ...It was simple but I felt that was a bit lacking...I am now in my surgery brain where I am not really thinking all that clearly... it has not been suggested(MP1).

**Nutritional information.** Many patients (5/9); FP1, FP3, MP1, MP4, and CG1 mentioned nutritional information. FP3 was given some direction stated, “one thing that I know is that you don’t eat cabbage and stuff like that...I think one of the nurses or doctors told me that,” but she did not receive any specific post discharge instructions. Her caregiver commented “What would’ve been helpful is that ...in the hospital they would’ve given you a checklist to tell you these are the foods to avoid or eat in moderation. They could’ve placed on her bed stand...we would’ve seen it” (CG1).

Other comments were comprised of a sentiment that spanned hospitals not making nutrition important at the site or at discharge and a general dismay of not being provided with nutritional information for a surgery that primarily focuses on the digestive system.MP1 referred to receiving that information more when he visited his surgeon, as he enquired about it rather than in any PE he was given; “...I got 90% of it from meeting with Dr. X and his staff and asking a ton of questions but it would have been so easy just to hand you the information sheet as you go out the door,” while MP4 referenced his hospital stay and the importance of nutrition:

...that is not where hospitals go...but nutrition is a big deal and we just do not talk about...Hospitals feed patients, I mean I had my colon removed...they show up with a tray of food that is milk and is cheese is yucky processed meat...some highly cancer-causing foods...the enhanced recovery; this is like nutrition and you got to heal your body and nutrition is the only thing that will do that (MP4).

**Bladder function and sexual function.** Sexual and/or bladder function concerns did not emerge from the interviews with the three female patients. However, MP1 and MP2 (2/5 of male patients and 2/9 of all patients) spoke about concerns surrounding aspects of function and lifestyle being affected post-surgery. MP1 articulated this in the following comment:

...two of the complications that stood out for me where one of the risks was you might lose control of your bladder and the other one was coming out with some sexual dysfunction. I recall coming after surgery just keeping an eye on this, first bladder control and it was not one of those things I didn't think about for quite some time was sexual dysfunction but eventually I was like have I had an erection in the last two to three weeks or not and everything is going to be working? (MP1).

When asked if this was explained to him anywhere in the materials, MP1 stated "No, not in the materials, but in the discussion, I had with Dr. X [his surgeon]. I don't remember that being written down anywhere." MP2 reflected on concerns:

I wasn't a hundred percent clear on what that meant. That was one of the most confusing parts, I don't even like to talk about it in case it happens. The surgeon would know that I was being marked by someone else. Being a man, you might even be afraid to have this be done...that changes a person for sure and their whole lifestyle if the surgery wasn't successful in that way (MP2).

**Ostomy and ileostomy bags.** Ostomy and ileostomy bags, their placement and the uncertainty of whether they may wake up with one was another area that participants felt was vague. MP1, MP2, MP4, FP1 and CG1 representing a majority of participants (5/9) reflected comments that suggested anxiety and concern around this aspect. Participants expressed their sentiment and confusion in the comments below:

The thing I would have probably benefited more from...I was introduced to what the bag looked like and how it worked. I had a vague notion of the bag and it was going to be attached somehow but I didn't know how and all that kind of stuff, so it came very late in the process. It could have been deliberate, so you are not thinking about it all that time... but what did the equipment look like, how does it work and how is it attached? It could have been done in any number of ways, whether it was just pamphlets or information or things like that. That was something that really wasn't part of the package of earlier information...(MP1).

I was initially quite anxious about the bag we were not told about how often it needed to be changed. All I kept thinking of was that we are going to be on the highway or the gravel and then we're going to have an issue, I mean that is what I was thinking...Ok where are we going to change this bag (CG1).

Confusion on how the bags functioned was also expressed by FP3, who stated she let the air out of her bag, and I asked how she learned to do that; she had to learn to let the air out of the ostomy bag on her own; "I just did" (FP3).

**Ideal patient education tool.** FP1 felt what she received as PE was what she considered ideal PE. "I guess it was what I received." Other patient comments were not so content and a focus on a simple and phased approach, increased use of diagrams, a more ideal time for dissemination, and a reference was made to support aspects such as linking patients up with other patients that had undergone similar procedures emerged.

*Simple.*MP3 and MP4 felt that PE would be most beneficial if it was as simple as possible.MP3 felt "the simpler the better," and MP4 expressed how he relied on the healthcare

provider to guide him as a patient; “I am actually relying on you guys to tell me. So, if you’re talking about the delivery of material, simple is always better.”

**Phased approach.** Another aspect was to phase out the PE, aiding in compartmentalizing what the patient had coming up. MP1 offered why this would be helpful and he articulated:

My thought is that the information approach be phased in a similar way where it is ‘here is what to expect in the surgery don’t worry about all the other stuff right now’ because quite frankly if people were talking to me about what my recovery was going to look, I might have been preoccupied by that. I would say it does make sense to compartmentalize things so that you are not dwelling on things in advance...(MP1).

**Diagrams:** MP4 reflected on how diagrams offered a way that information could be made simpler; he shared his viewpoint in the following comment:

Pictures and things, you know this is how McDonald’s trains people...the diagrams helped me [referencing bowel prep]...nobody understands this until you actually go through something similar...people that are not dumb but have a lower capacity to sit and problem solve but are going through something complicated(MP4).

**Dissemination.** MP2, MP3 and MP4 suggested that PE be disseminated as early as possible.

**Post-surgery and after discharge PE.** MP1, MP2, MP3, MP4, MP5, FP3 and FP4 commented on wanting more information for the post-surgical period. MP4 articulated this gap by referencing not only his mental state post-surgically but also wanting to know if what he was experiencing was considered normal:

Maybe some information on ‘here is what to expect afterwards’...you got a lot on your brain and your brain is possibly foggy to say the least...This is so important to have in

your brain because you can think you're dying and it could just be normal... 'here are what people experience' or 'maybe that is what normal or not normal'... 'am I feverish or am I just healing?'... I think it's important to give people a sense of trajectory...(MP4).

**Support.** FP4 and MP1 commented on how the support of someone who had gone through the process "would be beneficial":

...it is education/support...linking people up with others that have gone through the experience ...if you could talk to someone who could say this was my experience it actually does get better and it just takes time and as much it is annoying to hear that ...here are the things to look for. In an ideal world (laughs)(MP1).

**Patient involvement in patient education.** A majority of participants; CG1, FP1, FP2, FP3, MP1, MP2, MP4, and MP5 (8/9) stated they felt patient involvement would be useful in the development of PE. As a caregiver, CG1 thought "...patients could give a great deal of input into what educational tools, that would be helpful." One participant commented "I have been finding educational materials on my own to a certain extent and passing it on to my doctor. I think it would be beneficial" (MP1). Not all patients were favorable, as MP3 felt that it may not be feasible for patients to offer input as he felt he "put my hands in the faith of the medical system," and felt that he didn't "know how much patient involvement you really need" (MP3).

**Technological app.** A majority of participants (8/9) stated that a technological app would be a beneficial tool to aid patients with engaging with PE. Aspects such as checklists, specialized/important instructions, patients' personal information could be held on the app, and perhaps it could provide feedback to a patient's progress, etc. were some responses that occurred. MP3 felt that it would be useful as he commented "there's a lot of things for you to remember and sort; anything to help [ensure] that you've done the important steps in particular." One

participant felt it would be useful in “post-surgery, some kind of help desk or an email too...or a FAQ app,” and one participant summed it up as “an app could be a hub” (MP1).

Table 3 summarizes patient responses based on the sub research questions for this study. Patients fell in the age categories between 40-100, most were from Site A so they did not have a face to face educational class, most had the ERAS information package, and all complied to the PE, most felt that the representation of sex and gender was good and did not need to have more in this regard however there were aspects of other personalization that patients felt was important. Most patients also felt that patient involvement in the PE would be very beneficial and that caregivers could benefit from their own materials.

Table 3

Summary of responses for patient group and caregiver (p) N=8 and (cg) N=1

MP	Age	Site group	PE offered *	Did you comply **	sex & gender PE needed	Other personalization	Patient involvement needed?	CG PE needed ***
MP1	40-50	A	info package	yes	no	yes	yes	yes
MP2	50-60	A	info package	yes	no	yes	yes	yes
MP3	50-60	A	info package	yes	no	yes	no	no
MP4	40-50	A	info package	mostly	no	yes	yes	yes
MP5	60-70	A	info package	yes	no	yes	yes	yes
FP	Age	Site group	PE offered *	Did you comply	sex & gender PE needed	Other personalization	Patient involvement	CG PE needed



				**		needed?	***	
FP1	40-50	A	info package	yes	was good	no	yes	yes
FP2	50-60	A	info package		yes	was good	no	yes
FP3	90-100	A	no	yes	was good	yes	yes	yes
FP4	50-60	B	info package & face to face class	yes	was good	yes	yes	yes
CG1		A	yes	yes	was good	yes	yes	yes

Note:

Dissemination refers to when the patient received the PE or when the HCP gave PE to the patients

\*PE slightly differed between patients

\*\*Self ascribed compliance by patients

\*\*\*Believed patient involvement would helpful in the development of PE tools

N=18; 9 HCPs (2M and 7F); 8 patients and one caregiver (4F and 5M)

### **Limitations**

The findings described here represent an interpretation and analysis of the views of nine patients, one caregiver, nine HCPs in two urban hospital sites, and for one surgical intervention. These participants chose to participate in this study based on their experiences and context with the subject matter of the study. However, they represent a small sample of participants, therefore I acknowledge that there may differing and even conflicting perspectives from these participants. Thus, I recognize that the findings are bounded in a specific locality and may not be generalized to other sites. However, other patients, HCPs, sites and even other surgical interventions may

resonate with aspects of these findings and choose to transfer some aspects of this study to support the development of PE materials.

## CHAPTER FIVE: THEMATIC ANALYSIS

### Overview

Through the process of interviewing patients and healthcare providers (HCPs) I set out to determine whether a sex and gender sensitive (SGS) approach to PE had an impact on patient experience. Chapter four presents a descriptive summary and synthesis of data on: 1) participant experiences and perspectives regarding PE, 2) perceived compliance to PE vs outcomes and 3) conceived thoughts of ideal PE. In this chapter, I discuss six themes that emerge from analysis of the data process as seen through a feminist post structural (FPS) lens. Through the FPS analysis of these six themes, I highlight how concepts of language, discourse, subjectivity and power appear to interplay within the structures of medicine. These concepts continue to emerge and have a role in patient/HCP interaction and more specifically in the creation, dissemination and compliance of PE.

### Analysis

Merriam & Tisdale (2015) refer to analysis as the ‘meaning making’ of the findings, I aim to foreground the patient experience and perspective and to determine if PE could aid in better experiences through a sex and gender sensitive (SGS) approach. I was challenged to and hoped as Aranda (2018) states to “explore, understand or even trouble” what individuals (patients), their families (caregivers) and HCPs experienced with PE to understand the “urgent and pressing concerns” in the surgical experience (p.5). The FPS perspective outlines this research, as articulated by Aranda (2005; 2006; 2015; 2018; Arslanian-Egoren, 2002; Adams, 2000) as it explores issues of “diversity, difference and equality in healthcare” (Aranda, 2006, p. 136). This is important when considering a more inclusive SGS approach, where the production

and use of the knowledge needs to be unpacked/deconstructed within the hegemonic structures of medicine.

For the scope of this study, the term SGS refers to the binary of male and female as FPS views on gender are on a far broader spectrum as “some feminists now questioning whether it is possible or meaningful to distinguish between these terms [male or female]” (Aranda, 2018, p.5). However, Aranda (2018) recognizes that gender implications remain “very influential, often as taken for granted, common sense understandings or debates in health” (Aranda, 2018, p.5). Furthermore, a FPS lens has been used in healthcare studies as viewpoint “seeks to identify and expose biases that marginalize the healthcare needs of women”; “seeks to develop new knowledge for understanding gender differences” and aligns for this proposed study in respect to the discourse and language in the PE documents and within the interactive component (Arslanian-Egoren, 2002, p. 512).

Using this FPS lens in a positivist space such as medicine and healthcare where a “positivist orientation assumes reality exists ‘out there’ and that it is measurable, stable and observable” may expose underlying tensions in healthcare surrounding sex and gender (Merriam & Tisdale, 2015, p. 9). However, using a FPS approach may also shine a light with which to explore the data where gender discourses and relationships in healthcare intersect. The objectiveness and structures of healthcare and why they exist in this way can be given meaning and value through a FPS framework (Aranda, 2018; Arslanian-Egoren, 2002). The FPS view also has the capacity to “uncover the intricacies of interactions embedded within the health care system in ways that can offer meaningful directions for change to social, institutional and health care practices” (Aston, 2016, p. 2252) which is evident through my analysis. The key components of the FPS theoretical framework include discourse, language, power, knowledge,

agency, and gender. These concepts emerge throughout the themes and are constructed through the data (Merriam & Tisdale, 2015). Clinical environments consist of gendered relationship dynamics surrounding “health behavior work,” in interactions or communication regarding improvement of the health of others (Reczek & Umberson, 2012).

Through the process of construction and deconstruction of the findings and the use of FPS lens, I compare interviews with male and female patients as well as with healthcare providers (HCPs) and their perspectives, experiences and positionality in the context of the PE. In this chapter, I describe how I continually compared the participant’s perspectives and the themes to develop a deeper understanding of how these interplay with one another and the relationship of these perspectives and themes with the theoretical framework for this study. Through the application of the FPS lens to the findings/data, I explore how social construction and hegemony exist in medicine and how this carries forward to PE. This perspective also extends to the interaction between patients and HCPs. Six themes emerged and are discussed in this chapter: 1) the recognition of surrender by patients, 2) the dimensions influencing patient agency, 3) personalization of PE, 4) sameness and difference in the sexes, 5) the omission of ageing in the PE, and 6) the role/position of nurses in the healthcare hierarchy.

### **Theme One: The Recognition of Surrender**

Aranda (2018) references Foucault (1971, 1976, 1980, 1988) in regard to the “emergence of Enlightenment...which saw the growth in the authority of medicine...these ‘regimes of truth’ combined knowledge with power to create powerful discourses, which produce the truth about the world, revealing the role of power in doing so.” (p.30). Discourse is imperative in comprehending “how these ideas, bodies of knowledge come together and coalesce into particular sets of expertise, authorizing or legitimizing actions or effects” thus creating the

structure and hierarchies in healthcare while further reinforcing and cementing knowledge and power (Aranda, 2018, p.30). Modern medicine deployed a specific way of seeing, a “medical gaze” which could penetrate illusion and see the hidden reality, the hidden truth of the body that could only be understood by the medical expert (Hancock, B.H., 2018)

**Knowledge and power.** Evident throughout participant interviews was a sense of surrender to the knowledge/expertise, power and positionality of HCPs. This surrender was exhibited both explicitly and implicitly during several areas of the dialogue. For patients, these aspects of surrender emerged as they reflected on their experiences through the surgical journey. Some areas where these sentiments came to light were in statements of surrender to the HCP directives (reliance or dependence), comments about being overwhelmed or anxious during the experience itself, when discussing compliance to the PE, in describing the nuances of the patient experience, and within the HCP and patient interactions. For HCPs, this notion of surrender surfaces in both overt and covert ways; through displaying that they were the knowledge holders and thus they held the power in the interactions with their patients. This became increasingly apparent in the interviews with HCPs through the description of the objectives for the PE and their interactions with the patients.

The awareness that knowledge and power is held by the HCPs is evident in both male and female patient interviews. Male patients were vocal and expressed this sentiment as “I put my faith in the hands of the medical system” (MP3). MP2 spoke of his experience with his family physician prior to getting to see a surgeon. Despite complaining about his symptoms, he felt he was not taken seriously and that the knowledge he had about his body was not taken into consideration.

I am actually quite disappointed with my family doctor because I was having a lot of symptoms for some time, like blood in my stool and he would say it was my diet and this and that...I didn't really like going there because he would say in a roundabout way that 'your fat'. That was his analysis of my illnesses...I actually had a hernia and I mentioned that, he said 'No, you don't have a hernia you're too fat and that your muscles are...' so when I get to surgery, I have colon cancer and a hernia that needs to be repaired.

Mp4 described his conversation and experience suggesting reliance and surrender to the knowledge and power of his surgeon and HCPs with comments such as "I am actually relying on you guys [HCPs] to tell me" and further elaborated:

Some of it is 'this is where we are going to cut you and this is what we are going to take out of you' so your like, sure that's great but at the end of the day do you really have any control over that, except for to say yes or no? Zero...[quoting his surgeon] 'I'm going to take this picture of you and once I get in there I'm going to decide how much I'm going to take because I have to see it', and it's like, ok so do I have any choice when I'm unconscious and I've already said yes?...So lack of control...I'm putting my life in the surgeon's hand, putting my life in the chemotherapist or oncologist's hands or medicine or doctor or whatever. I have very little control right now you know, I mean I don't even get to say no to appointments. I don't want to die but I do not want to die going to appointments if I am going to die...So either way I don't want to go. So, my point of control is a big deal and the lack of control and I don't think we have control...if we give people a sense of control, I think that would be useful.

Female patients expressed this sentiment using more positive terms than male patients. FP2 indicated that she relied on what her HCPs provided her, “They [HCPs] did put my mind to rest with a lot of questions that I had...I was able to have them all answered” and “I consider myself a very good patient and follow directions from the doctor very well. At the hospital, I have questions, I write them down and they’re always answered to satisfaction.”.CG1 commented about her mother’s reliance and surrender to HCPs, “I thought that they had a very nice approach with mom and mom would lie back and let them do what they needed to do because she was the patient.”. FP3 commented that she had witnessed knowledge being passed down to incoming HCPs; “the nurse was instructing the younger nurses on how to use the bag and what to do with it”. FP4, who is an HCP herself, commented that although she had medical/clinical knowledge, she still relied on the other HCPs and their specialized experience with this ailment, “I am a nurse as well, so I was able to be in touch with my stoma team where I work...so I knew what to look for...I felt very well informed and the teaching class re-informed what I had known...”.

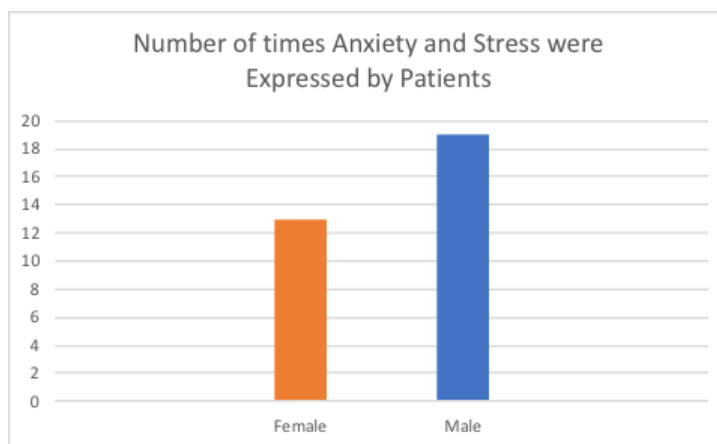
Patient comments reflected an undertone of not only reliance on the knowledge of the HCP but also a sense of subordination; which translates into a lack of power due to a lack of knowledge. Not surprisingly, patients are not viewed as those who hold knowledge in these spaces, while HCPs are seen as the ones who are the ‘owners’ of the knowledge and thus owners of the power. Reliance and dependency on HCPs is reasonable given the context of a healthcare environment as patients may be perceived in a subordinate role in the process compared to their HCPs (Waitzkin, 1984). It is evident in healthcare and medical environments that HCPs hold knowledge that the general public does not have or cannot acquire due to the structure and organization of healthcare.



**Anxiety and stress.** All patients expressed a sense of being overwhelmed or comments about experiences with anxiety during the experience in relation to the diagnosis and the process of the surgery; which in turn signaled a possible lack of power during the entire ordeal for both male and female patients. The table below reflects the number of times comments relating to stress, anxiety or a sense of being overwhelmed were expressed by patients during the nine interviews.

Figure 2

Number of times anxiety and stress were expressed by patients  
(n=9; Males: 5 Females: 4)



Comments made by female patients reflect stress and anxiety prior to the procedure and how the PE and information from HCPs; “...the information relieved a lot of anxiety...it did alleviate a lot of stress prior to surgery” and “I just need to know, not everything that is happening in my body. That can lead to anxiety as you are imagining the things that are happening in the body or what is going on.”. FP1 reflected on the sense of being overwhelmed by her comment, “...the preparation for the surgery and other things...it is overwhelming”.CG1 further commented on the sense of not knowing and relying on the HCPs for information during

many stages of the ordeal such as post-surgery “I was initially quite anxious about the bag, we were not told about how often it need to be changed” and regarding the pre-surgery she commented “we were not really given any information... We, me and my sister, were a little mystified and wondering what was going on.”.

Male patients were quite expressive in relaying the sentiments of anxiety and feeling overwhelmed. Some male patients reflected on their mental states; for example, “your mental state changes so I thought I was awesome at walking around and stuff, but objectively that was just not the case” (MP1) and in reference to pre-surgery MP1 stated “the time coming up to surgery and worrying about that. You know, no one wants to be cut, some days it’s like ‘I’m good today’ but then there’s other days why can’t I get this off my brain”. MP4 commented, “the patient’s brain is diminished for whatever reason, but the big blanket statement would be stress lots of little things inside about. You got a lot on your brain and your brain is possibly foggy to say the least”. In reference to the overall experience, MP1 expressed that it may be helpful for HCPs to understand what patients may be going through: “the doctors are seeing so many people and as wonderful as Dr. X is ...a little bit more could have been done remembering what it is like to be the patient and the anxieties that a patient may have”. MP5 stated the anxiety was affecting his eating, “I was worried after my surgery that I wasn’t eating any of my food”. MP2 stated his anxiety around the potential of coming out of the surgery with an ostomy bag “Being a man you might even be afraid to have this be done...just the marking [for the surgery and the bag] and the intimidating part about going into the operating room and seeing so many people there”. MP5 expressed his high levels of anxiety associated with the medication he received and several times in the interview he mentioned his dismay at his experience with the drugs, the HCPs response

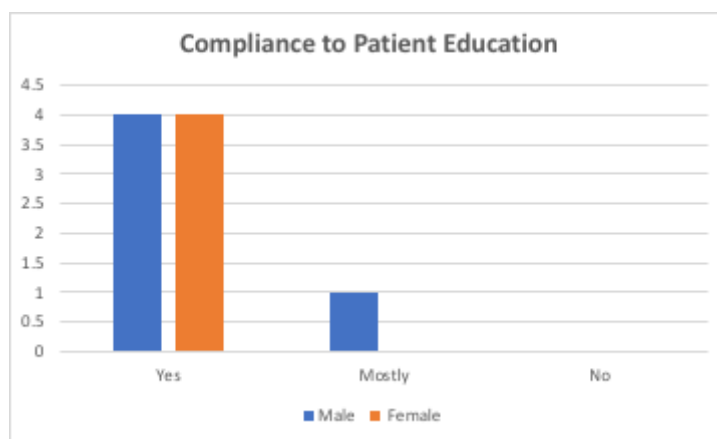
(and/or lack of) and his reactions (how it made him feel being unprepared to deal with the effects he might feel)

I know everybody is different but [referencing what he would have liked to hear his HCPs say] ‘Here is what we are going to give you for medication and here is what it does to you. If it does this to you then tell a nurse’ or ‘this is normal’. This is so important to have in your brain because you can think you’re dying, and it could just be normal.

All patients stated they were compliant (or tried their best) to adhere to the instructions that were in the PE, which further suggests that the knowledge, power and discourse associated with HCPs were seen as the relevant knowledge base. Figure 3 shows the frequency of compliance statements made or reported by patient participants during interviews.

Figure 3

Compliance with PE materials for male and female patients (n=9; Males: 5 Females: 4)



The nuances and intricacies of the HCP and patient relations and interactions with patients also suggest the reliance on HCPs. This is evident in comments from both patients and HCPs. Scaffolding onto the comments previously expressed in this section when referring to surrender and reliance, female patients (FP1, FP2, and FP4) expressed the interactions with

HCPs as positive albeit still ones in which there was surrender and reliance. For example, FP2 commented that she was told not to get too far ahead in the process and she seemed to appreciate this, “ I am a person who takes things one step at a time and that is what [my doctor] told me ‘now don’t think ahead this is the first step’, that in itself was very helpful” and CG1 commented “The ostomy team gave us that pamphlet but because mom was in the hospital we had a feeling that if we need something they were here and we had help with it” following up with “ ...mom though she was in the hospital and she was being looked after, she was to focus on getting better and they would look after it...” suggesting reliance and surrender to the HCPs and reflective of it appearing as support. Some participants (FP2,FP4,CG1) reflected on power relations in reference to access to their HCPs (surgeons) and the different departments involved such as the pre-admission clinic and the different departments during the hospital stay. FP2 referenced the different departments she was told about and expressed some confusion in regard to this, “I was notified that I was going to be given information and at the hospital have different departments...this department will call you when you have to schedule an appointment...”. FP4, commented on the hierarchy she had to wade through to connect with her surgeon and get information “Dr. X’s [her surgeon] admin [administrative assistant] can’t answer details about the surgery and Dr. X gave me a lot of information, it was frustrating...trying to plan when you can’t plan.”. She also referenced the various hierarchical areas she received information from, “I received information from the PAC [Pre-Admission Clinic], information and documentation from the educational class and then at discharge and then information and documentation from the ET care team and nutritional services was involved and I received information from them as well. Verbal information from Dr. X [surgeon] and from his admin.”(FP4). CG1 reflected on little information was given and how confusing it was to understand who was in charge and

“There were a lot of residents on and each person had a bit of information...We, me and my sister were a little mystified and wondering what was going on.”.

Male patients also commented on a fairly positive experience, such as MP1; however he relied heavily on his surgeon to tell him how he was progressing as he stated in his comment “if it is bad, it is bad and if I am still in the range of normal ‘I have still seen people in your position who have had a full recovery and it is all fine’ [quoting what he wanted to hear from his surgeon] that is what I want to hear.”. MP1 also reflected on multiple levels of hierarchy/layers in the preparation for surgery such as having to go through the “pre-operation clinic...MRIs and CTs, then the plan was to go ahead with surgery, and shortly after that I got a call from the pre-op clinic...then they sent me a package after that.” MP3 reflected on how busy his surgeon was so he did refer to the nurses more “...Dr. X...surgeon and very busy so he can spend time with you in the rounds, but the nursing staff is there always...”.

**Power relations.** “Power relations” require us to look at how interactions between people are influenced by “social and institutional contexts” (Aston, 2016, p. 2253). In the context of the patient and HCP interaction, the construction of organizational and societal structures (the healthcare system) and how individuals (patients and HCPs) interact within these constructs speaks to how power influences the actions upon actions, on existing actions or on those which arise in the present (Aston, 2016, p. 2254; Foucault, 1982). Foucault (1982) argues that power relations within a binary such as “medicine over the population” leads one to understand how power is connected with “knowledge, competence and qualifications” and how this allows for a beginning of understanding to the “struggles against the privileges of knowledge” and “what is questioned is the way in which knowledge circulates and functions [and] its relations to power” (p. 780-781).

With regards to the female patient, again subjectivity can also add or negotiate itself in the situation (Weedon, 1997). This can be reflective in “conscious and unconscious thoughts and emotions of the individual, her sense of herself and her ways of upstanding her relation to the world” and these have been acquired through social, historical and political forces (Weedon, 2002, p.23). In this study, female patients not seeing themselves as different or not wanting to see themselves as different in this surgical context, may reflect how power and discourse reinforce and normalize knowledge without taking into consideration the female experience (St. Pierre, 2000). Aston (2016) states that we need to analyze these “intricacies of interactions in order to understand how power relations are involved in the investments people make in discourse as well as processes of normalization” (p.2254). Thus, how power plays out in the interaction between the patient and HCP can give us insight into how power relations exist in this exchange and how knowledge is hierarchically associated and finally normalized or standardized in a formal structure of construct of society. Through the analysis of patient and HCP interviews, this study gains new insights into how patient proceeded through various hierarchical structures in the health care system, from diagnosis, through pre, peri and post-surgical care. This progression and who and how patients interacted within these interactions formalized the structure of their care within the construct of the healthcare structure.

HCPs in this study exhibited care and expressed their desire for patients to recover well, yet there was an underlying sentiment that they were the ones in the relationship that held the knowledge and power. This sentiment was evident in the discussions covering PE objectives, compliance, patient involvement, instructions, etc. For example, HCP6 (surgeon) referring to the objectives of PE as “obviously, that sort of information and often to get them ready that they will have some pain and some of the things they should expect post operatively, like they will have

drains, how they will be cared for, the type of pain control they get...”. Again, HCP2 (nurse) in speaking to the agenda of the system “these tools help us to reach our goal to have a faster recovery and educate them and basically have a shorter stay”. When asked if HCPs received any feedback regarding the PE HCP7 (nurse) stated “we honestly don’t do follow up phone calls to truly know that. The only way we would know that is if they have questions at the surgeon follow up visit...They are all given the number for Healthlink so they could call if they have any questions...”. When HCP and patient comments are compared, one can see the implicit and explicit undercurrents of power and knowledge that are evident in this hierarchical relationship.

Using a FPS lens, a researcher can view debates within healthcare as the relevant binaries of male and female, agency and structure, health and illness, rationality and emotion and the self and the other. The self and the other debate is evident in this theme as well. Honneth (2012) describes how ‘the I in We’ is how we shape our ‘private, intimate, personal lives as well as our social and collective lives’ and these relations influence “the more formal institutions” such as healthcare (Aranda, 2018, p.5). In this study, I noticed that comments from patients when compared to HCPs show an undercurrent of having to wade through the levels of hierarchy to access their HCPs. Patients were often confused and once they had access to their surgeon, the time they had access to him/her was limited and regimented. HCPs comments reflect the awareness of being the holders of knowledge and a great awareness of the hierarchical system of healthcare. This influence on relations in healthcare becomes assigned “the privileged and powerful practitioner in relation to an abject”, disenfranchised, marginalized or excluded other” (Aranda, 2018, p.5), which in turn reinforces the sense of surrender on the part of patients.

In terms of the question, where does knowledge exist; within the patient’s body or with the knowledge of the HCP and the healthcare system? The structure of society which within it

includes the healthcare system, suggests clinical expertise has offered the HCP hierarchy in this binary. The knowledge in society sits with the HCP and not with the patient. Aranda (2018) speaks to the “relations of self and others” that shape our “social and collective lives” (p 5). She elaborates with the underlying importance of associations which in “healthcare often becomes characterized as the privileged and powerful practitioner” when we look at the patient as the “excluded other” (p.5).

### **Theme Two: Dimensions Influencing Patient Agency**

Expressed throughout participant interviews was the effort/desire of patients to have some control over their recovery and health outcomes. This desire for agency was exhibited in dialogues with patients through the exercising of acts such as compliance with PE (see Figure 2), independently researching gaps in PE (MP1, MP4, MP5, CG1, FP4), and ensuring that they kept up with their appointments. Male and female patients expressed various forms of agency throughout the surgical journey. Conversely, lack of agency was expressed through statements referring to their post-surgery recovery and the lack of PE or instructions/guidelines offered, referring to the anxiety that patients experienced, and was more explicitly expressed in the view that they felt patient involvement would be beneficial and is needed in the creation of PE. HCPs facilitated an aspect of autonomy for patients through the development and dissemination PE. However, the focus of PE was directed at clinical objectives set for patients in the form of instructions on how to achieve desired outcomes. Through interviews with HCPs in this study, comments often referenced how the surgical journey contributes to a lack of control felt by the patients. This lack of agency was expressed through explicit statements from HCPs referencing the anxiety their patients felt and the varying experiences some patients had during the surgical journey.



As a patient proceeds through the surgical journey, not only do they rely on HCPs as the holders of knowledge and power within the structure of the healthcare system; the context of their ability to be involved in their health outcomes comes into the question. The hospital stay itself can include many unavoidable stressors such as pain, sleep disruption, separation from loved ones, as well as from daily routines, all of which can lead to uncertainty about the process and can lead to lower patient satisfaction (Patient Engagement Hit, 2019). This uncertainty can be associated with the periodic engagement and disengagement by the patient with the process of contributing to the improvement of their own health.

**Compliance to PE as a form of agency.** Patients in this study described how they engaged in their surgical journey process in the form of compliance with the PE. Agency was exhibited by patients in this study in the form of the high rate of compliance (see Figure 2). Compliance with PE in this study was a way for patients to engage or exercise agency in their own recovery; this is a form of agency adopted by the patients in terms of something they “do rather than they have” (Aranda, 2018, p.5). It is a part of the surgical process that patients are given access, control and even power to engage in. In this study, the patient participants described how they wholeheartedly engaged in and wanted to follow directions to improve their outcomes.

Selected male patient comments regarding compliance with PE consisted of: “Yes, I did! [comply with PE]” (MP1), “Yes, even the blowing of the air bubbles after surgery. I was dedicated to that to keep your lungs active and stuff so you don’t get pneumonia in there” (MP2) and “For the most part, I actually did try to, I can’t say 100% but I remember getting up early as I can and maybe for the enhanced healing part [ERAS]” (MP5). Selected female patient comments consisted of: “I consider myself a very good patient and follow direction from the

doctor very well.” (FP2) and CG1 commented “I think after the fact patients could give a great deal of input into what educational tools would be helpful.”.

Patients also expressed compliance with specific ERAS instruction in the pre, peri and post ERAS specific PE instructions such as “they went in a lot of detail around patient responsibility like bringing in gum and hard candy” (FP4), “...I had to bring two packs of chewing gum...that was the part that stood out in the information...Did it help, the gum? I imagine it did but I did chew a little bit of it” (FP2) and “I watched a series of videos...I had bowel prep, what types of food to eat and what not to eat...I was chewing gum, getting up and walking around like even the first day” (MP1). Comments emerged in reference to gaps in the PE that patients independently addressed, such as “I have actually sent stuff that I have found ...and I had this notebook that they (HCPs) half-heartedly joked about, me and my notebook...I found this thing [from a medical school in the United States]...and I was like this is perfect and you should give this out.”(MP1) and FP4 “I did a lot of research before”.

In this study, engagement and compliance with PE materials (see Figure 2) was a way for a patient to gain some agency in the relatively uncertain process of their health outcome. Further to patient engagement with the PE; patients can “adapt[s] their sense of self influence by their interaction and interpretation” with the materials and this could “further influence their beliefs, values and practices” (Richardson et al., 2018). Cited in Cassidy, Goldberg & Aston (2016), Weedon (1996) refers to the element of agency which is produced by social relations and Scott & Butler (1992) state it is based “on the assumption that individuals have control and can make changes to their lives” (p. 2381). Aranda (2018) adds agency is how much “voluntary action or freedom or autonomy or independence” an individual has is shaped by the broader discourses

within socialization and this shapes an individual's "thoughts, actions and interactions..." and thus agency becomes something "we do rather than have" (p. 5).

**Anxiety and stress as dimensions affected by lack of agency.** Lack of agency was expressed by both male and female patients through statements referring to their experiences in post-surgery recovery, comments expressed around anxiety and more in the view that patient involvement would be beneficial in the creation of PE. The post-surgical recovery phase was a period about which most patients expressed feelings of anxiety, stress and lack of agency. FP2 "having a brochure specifically for aftercare for family or friends helping out the patient that would be useful". FP4 commented on her post-surgical experience on several occasions throughout the interview; "I had a lot of questions for post-surgery", "it was a bit of a sad situation; I needed help" and more explicitly in her comment

Post-care, mine was not smooth...there was not a lot of help...I remember one morning early on in my recover probably about 5am, lots of tubes, lots of everything...I couldn't get to my suitcase to get my underwear out...so I closed my hospital gown as best as I could...a staff member came up behind me and said 'you need to be wearing underwear' and I said 'I can't get them right now', while the staff do have temporary mesh underwear that she would have offered to me but she didn't. I was humiliated, things like that do not help...my family changed my bedding if my stoma spilled over and helped me freshen up in the bathroom. I believe if I would have rang someone would have given me towels and linens, but I did not have the feeling that it would have that much assistance. Mp1 describes a similar experience:

Had they sent home [post-surgery instructions] with patients like me right from the very get go, I would have much more of a road map of what kinds of things to expect and

things that you can do to help with things like having to go to the bathroom too much and also skincare and avoiding really raw skin around the anus...this was not part of the 'hey you are going home and if you are going a lot make sure you switch over to wipes' or something like that."

Other patients also expressed similar dissatisfaction with the post care instructions. These comments from MP5 indicate a lot of unanswered questions:

Again, I did not understand my post-surgery, how I was going to feel and how this program [ERAS] addressed the physiology impacts of the surgery and how to get back on my feet sooner...you are waiting up to 4 weeks to see the surgeon and anxious that whole time...something post [surgery] would be very useful as well...there is a point right before you are discharged where you are feeling good enough to go home and probably thinking...when can I drive and what can I expect when I get home? So maybe an hour type of consultation prior to discharge and something like a video series that I can go back to...if I forget.

For both male and female patients this real or perceived lack of post-care information posed a significant lack of control. This was further reflected as patients were unanimous in the expression of anxiety and feelings of being overwhelmed. Although, I did not ask any specific questions on the subject there were ripples of anxiety and feelings of being overwhelmed that were acknowledged and explicitly expressed by both HCPs and patients. For patients, the spectrum of responses was expressed in comments such as "I was worried after my surgery that I wasn't eating any of my food" (MP5) and "I just need to know what I need to know, not everything that is happening in my body. That can lead to anxiety as you are imagining the things that are happening in the body or what is going on." (FP2).

**Desire for agency.** Patient participants FP1, FP2, FP3, FP4, MP1, MP2, MP4, MP5 and CG1 commented that patient involvement in the development of PE was important and useful. In the interviews with female patients, there was a strong undercurrent that emerged as a need or desire for engagement with the process of patient involvement in the PE. Comments such as “who better to tell you what works and what doesn’t than the people experiencing it” (FP3) and “probably feedback...would be helpful” (FP1).

Male patients seemed to exhibit a more overt desire to be engaged. Comments included, “after surgery, it would be good if the patient looks at this and says I maybe would like something more of this or this given to me...maybe after the fact?” (MP2) and “I have had this desire to be more involved in this as I say I have been finding educational materials on my own to a certain extent and passing it onto my doctor...I would be happy to look into materials” (MP1). Both CG1 and MP1 found information on their own and MP1 stated “finding educational materials” on his own and “passing it on to my doctor”, thought it would be “useful” to have patient input (MP1). However, one patient; felt that patients could rely on the healthcare system and it may not be feasible for patients to offer input as he felt that he didn’t “know how much patient involvement you really need” (MP3).

Another area that was reflective of the surrender or reliance on HCPs was the exclusion of the caregivers from the perspective of the patient. One of the stressors mentioned earlier in this section was being away from loved ones during the hospital stay. In this study caregivers were seen by patients (MP1, MP2, MP3, MP5, FP1, FP2, FP3, FP4) as very important and interwoven in their health journeys all the way from the start to well past discharge. There was an expressed interest for some as caregiver educational materials (MP1, MP2, MP3, FP3, FP4). From the perspective of the patients, the exclusion of the caregiver throughout the process was

addressed by many patients MP1, MP2, MP3, MP4, FP3 and CG1. A male patient stated “I get to brag about my wife, she is unbelievably helpful and diligent” a female patient commented on her husband as a caregiver when asked if he would have benefited from caregiver educational materials “he did extremely well, he is that type of person so I don’t think it would have helped” (FP1).

Caregiver education organically entered the conversation with HCPs, as their perspective suggested caregivers were included in the journey. HCP 3(nurse) commented “a lot of them [caregivers] are really interested...recently I had a young 20-year-old patient...I think her parents are really keen...”. HCP8 (psycho-oncologist) added to this in her comment that “We extend care to the caregivers as well as we approach that type of intervention from a systems perspective. It is not only illness for the individual; it is illness for the whole family system and caregiving system as well”. HCP1(nurse) reflected on caregivers from a gendered perspective “women are more likely to take the reading material...when we have a man coming in...the wife will take the material...maybe the women are more likely to read it... it’s just me guessing as nobody has ever told me that and I have no proof...even if I hand it to the man [the patient], he will hand it to his wife...”.

Although, this study revealed there was a recognition of several factors exhibiting how difficult the surgical journey can be for patients; the main focus of the PE from the HCP perspective was predominantly on the objective clinical aspects related to the pre and peri surgical event(s). The PE had little capacity or interest in aspects associated with the emotional component of a traumatic event in the life of the patient which was opposite of HCPs comments. Several HCPs (HCP1, HCP3, HCP8, HCP9) mentioned patients reporting that post-surgery was a time of increased anxiety for patients. HCP9 commented on patients on discharge “sometimes

they [patients] are leaving the hospital and their bowel movements are formed and sometimes they are not formed, so maybe just more information on...to develop a regular routine, it might take some time and write the down for them...something that falls off the radar”.

Furthermore, none of the HCPs interviewed were aware of any patient involvement in the creation of the PE. HCPs also commented on patient anxiety and reflected an acknowledgement of the somewhat obvious human reaction when an individual is faced with a diagnosis that could change or end life. This sentiment was expressed by comments such as “if I was in their shoes I would be overwhelmed as well. I’m not sure if I would be thinking about the educational resources but I would be thinking about my family” (HCP3) (nurse) and “they only take in about 10-15%, especially if they have a cancer, as they hear the word cancer they just...their brains go someplace else” (HCP6) (surgeon).

Aranda (2018), outlines the key idea of agency and structure; agency in the terms of how much autonomy people have and how structure in our socialization shapes us. Expanding on agency, she emphasizes that autonomy is unveiled, “as practice” or discourses shape a “particular picture of the world and involve a particular way of knowing, talking and doing”. Leading to further constructs of our “knowledge, language and power”; in this study, the construction of interventions can shape the way patients, HCPs, and society see the roles in the structure of healthcare (p.5). Overall, patients articulated not only wanting to be included in the development in PE but also identified the areas that were lacking in the PE suggesting another area that patients could engage and exercise agency.

### **Theme Three: Personalization of PE**

Patients in this study portrayed themselves as proactive in their approach to their health outcomes not only by compliance to the PE and to instructions from their HCPs, but also by

researching areas of interest independently of their HCPs and identifying gaps in the PE. There was a strong undercurrent indicating lack of agency, knowledge and power in the surgical journey for patients and the interview process itself became a space that allowed for patient voice to be exercised. Patients defined these perceived gaps in terms of the need for increased personalization in PE pertaining to a variety of topics. In their desire and belief that patients should be included in the development of PE was a currency or value placed in the knowledge and experience of the patient. It was expressed that this value and consideration of patient voice would produce PE that would be more representative of the areas that patients felt were important and beneficial.

Regarding sex and gender sensitive (SGS) implications, I found that female patients were reluctant and expressed little additional need when referencing the PE. Female patients expressed sentiments such as, “I thought it was fine” (FP1), which was shared by FP2 and FP3, to this statement from FP4 who further elaborated with

I would say to other females, bring something that makes you feel good, I didn't bring in a housecoat as that would be too much, but I brought in pretty wraps I could cover up with around my shoulders for warmth and it makes me feel good...I could not even wear a bra as it was too much to get around the tubes and would it even be comfortable?

Things like that.

**Knowledge, power and normalization.** Power and discourse are reinforced in the normalized knowledge and truths about women as evidenced in the effective indifference from female patients in respect to not addressing issues specific to their sex and gender (St. Pierre, 2000). There has been a normalization, or a pseudo of the male experience used to express the female



experience in medicine; thus, silencing or making the female experience irrelevant. Pappas (1990) refers to aspects of the women's movement in relation to the power and the human body

The clash between doctors and patients is not only over different ideas about illness and health. The awareness of the elemental power over the human body is an important source of anxiety, grievance, and discontent in the doctor-patient interaction. It is the source of much of the criticism of the medical profession expressed in the women's health movement and the patients' right movement (p. 202).

Male patients expressed and were comparatively more open and made comments directly associated with SGS implications for them. For example, "I think that with men it is a bit different as to how they approach this kind of stuff and nobody wants to hear... 'I don't want one of those' [ostomy bag] (MP4). MP2 stated "Being a man, you might even be afraid to have this done" [regarding the ostomy bag]. MP1 articulated this aspect

...two of the complications that stood out for me were one of the risks was you might lose control of your bladder and the other one was coming out with some sexual dysfunction. I recall coming home after surgery just keeping an eye on this; first the bladder control and it was not one of those things I didn't think about for quite some time was sexual dysfunction but eventually I was like have I had an erection in the last two to three weeks or not and is everything going to be working?

Beyond SGS implications, male and female patients explicitly stated they wanted more information in their PE. Other areas of personalization were post-care instructions (FP3, CG1, FP4, MP1, MP2, MP3, MP4, MP5), ostomy bag care (FP3, FP4, MP1, MP2), caregiver education (FP3, CG1, FP4, MP1, MP2, MP4, MP5), age related implications (FP3, CG1), educational classes (MP1, FP4), nutritional aspects (FP3, CG1, MP1, MP2, MP4, MP5), and a

technological app (FP2, FP3, FP4, MP1, MP2, MP3, MP4, MP5) It may go without saying that patients are the ones experiencing the disease, and yet they are considered largely a passive component in the consideration of how to educate them for their own care or take into consideration aspects of their knowledge, experience and needs. Due to the broader discourses constructed around processes such as PE, namely, “discourses always involve knowledge, language and power, that then have material or real-world effects such as interventions” then perhaps this inattention to female voices and experiences is unsurprising given that this is how healthcare as a structure within society has been constructed (Aranda, 2018, p.5). Females have been excluded historically from research and medicine (Eichler et al., 1992; Klinge, 2010; Kuhlmann & Annandale, 2010); in this study, these findings suggest furthermore, how impressive the role of the patient may be, and particularly how important the inclusion of the female patient may be in designing and implementing PE?

Language is used to create reality rather than to reflect it, creating certain fixed meanings and legitimizing knowledge (Weedon, 1997). In this study HCPs, through the PE, used language to fix meanings for aspects of the surgical process and have been exclusive and inclusive of the components they believed to be important. HCPs determine factors such as what the patients will undergo, when this will happen and what they conceive the patient needs to know and do. Some comments included “we point out the before, during and after surgery expectations and how they can prepare themselves for surgery like weeks before surgery and what surgery will look like” (HCP1)(nurse), “these tools [PE] help us to reach our goal to have a faster recovery and educate them and basically have a shorter stay” (HCP3)(nurse) and HCP7 (surgeon) commented, “our [PE] tools are primarily two things; i) surgery and operations and ii) colonoscopy are the initial things we give out or we give them in the clinic”. More importantly through the use language,

power and discourse may exclude the patient from the healthcare process, predominantly the female patient. Society defines and characterizes its structures such as healthcare by the phenomenon of language and discourse, in this case, the use of PE (Arslanian-Engoren, 2002; St. Pierre, 2000).

#### **Theme Four: Sameness and Difference of the Sexes in Patient Education?**

During interviews, the participants in this study appeared to be fairly apathetic to the representation of sex and gender in the PE. Both male and female patients reported not noticing sex and gender as an issue that captured their attention as they were reading and engaging with the PE materials.

When asked if they felt represented in the PE, male patients (MP1, MP2, MP3) commented that they felt well represented. MP4 and MP5 commented

...it never even crossed my mind whether I was looking for material that was a male or female. What I was looking at was a part of my anatomy something that was inside of me. I was not thinking about gender at all, when we are talking about taking a piece of my colon out...is this information male or female, it never even came into play (MP4)

Yes, I think it was gender neutral...I can't see the men vs women side...I cannot think of a time where the gender element or in any consultations I received has a gender element in it...I racked my brain thinking about how would the gender play into it and I just can't come up with anything (MP5).

Female patients also expressed that they did not feel underrepresented. For example, FP1 commented

I think the surgery that I had was something for both men and women. If it had been something just for women, it would've been different. I didn't feel it was short of

information it was more generic or that it was not enough information because I was female. So, I didn't feel underrepresented at all actually.

FP2 commented regarding the gender representation in the diagrams and PE videos she recalled "Yes, there was men and women in the diagrams and videos. I think that was because it was men and women talking, but I don't remember if there's both men and women patients, but I know that there was men and women HCPs. I guess that's what we have for reaching out to both genders right?" and then later reflected on the PE she remembered receiving, "I felt it was general and I don't think it was focused on any gender... unless there's something affecting the woman differently than the man regarding surgery. It is bowels so we're all made the same in that way...". FP4 commented "I can't say there was nothing that needed to be different for me in terms of being a female."

Applying the FPS lens, this theme further describes how power and discourse reinforce and normalize knowledge and truths about women (St. Pierre, 2000). Furthermore, the lexicon of medicine has been developed to use language and discourse to not only exclude the patient from the healthcare process but has long focused on male hierarchical patterns in both research and practice (Eichler et al., 1992; Klinge, 2010; Kuhlmann & Annandale, 2010). This may explain how women in this study suggested that they did not see their experience as a gender or as an equity issue but may be perceiving these structures, their own subjectivity and power imbalances as a way that society has been structured through the use of language, discourse and knowledge. Aranda (2018) describes the concept of sameness and difference.

In healthcare this approach is just as evident as in wider society, with the indirect and covert forms of power manifest in institutional forms of discrimination...deemed to the result of individual or interpersonal attitudes or behaviours, or the mantra to treat

everybody the same regardless of their difference when those differences significantly matter. (Aranda, 2005, 2014, 2018).

HCPs also reported not noticing or not being perceptive to sex or gender. Most HCPs felt that they did not feel that a personalized sex and gender approach was needed in colorectal surgery. HCP 1(nurse), HCP6 (surgeon) and HCP2 (nurse) did not feel there was a need to personalize instructions to their patients depending on their sex. Even when asked about aftercare or post-surgical HCP1 (nurse) “bowels react the same whether they are male or female, so we just talk about how it is going to be” and “... it is bowel surgery, and everybody has bowels”. These comments indicated, “when equity in men and women is presumed, there is a blindness to gender differences in position, influence, life condition and experiences, which are important factors for health and illness and the consideration for this can result in gender bias and result in unawareness of discrimination based on gender” (Risberg, Johnson & Hamberg, 2009, p. 4).

In respect to sex and gender personalization according to HCP6 (surgeon) most women in “the pre/post-menopausal stage do not have many issues”, however for men they “have more difficulty with urination post- op because they have a degree of prostatism and they have more challenges voiding after surgery” (HCP6) (surgeon). Although, HCP 6 also commented that “I do ask my younger patients who is taking care of the kids, whether grandma is there and whether the husband is taking time off to help care for the kids”. Both HCP3 and HCP6, reflected that there may be implications for patients for both in terms of sex/gender and age, as “for younger patients, it might be better to have male/female diagrams especially when it comes to issue of sex.” (HCP3) (nurse).

Most HCPs self-reported not changing their approach when they were interacting with male and female patients; it is not evident if they did and were aware it. It was uncertain if male

or female patients had a different view of receiving an ostomy. When if HCPs approached their patients differently based on sex and gender comments elicited consisted of: HCP1 (nurse) “No, I hope not, maybe I do but I try not to because it is bowel surgery and everybody has bowels...bowels react the same whether they are male or female”, HCP2 (surgeon) “I don’t see any real differences between the two sexes in this regard”, HCP3 (nurse) “it really depends on where the patient is. Some guys are more stoic or not responsive and women are more open...so sometimes I modified my approach but still adhere to the protocol [ERAS]”, HCP6 (nurse) “I don’t gear it [PE] towards a male or a female” and HCP4 (surgeon)

I think in certain things yes, and I think, it is a good question. I think it is not the resources hemicolectomy specifically but more in how you speak to them...for example if you are getting it and you’re a woman...or you’re a man, it is the same...I don’t know if the gender thing matters...I mean I do as I unconsciously discuss it differently with a woman...

Given the context of HCP8’s (psycho oncologist) intervention, this clinician reported having created different PE materials for men and women. The PE was specialized in different ways however “the objectives are the same for both programs, but the language was slightly different”. HCP8 articulated the changes for women, “I would put on the top expressing or sharing emotions as one of the potential benefits one could get from attending the group” and for men “I would start with stress management.”. This clinician was informed by theories of masculinity and endorsed “It is the same content but the delivery is changing...Sometimes we build interventions based on some stereotypical expectations and we as clinicians need to mind that...make resources available and let patients decide what will be best in meeting their needs.” (HCP8) (psycho oncologist).

HCP8 further elaborated on language and communication in respect to gender.

I felt that the language, the way we communicate something would speak more if we take into consideration gender, culture and context around gender differences. In my interventions I am not only informed by theory but also by clinical experience; these are the two sources setting for my interventions and my approaches. Men in my clinical case would articulate when they described their experience with cancer, how they tried to maintain or convey a strong presence among family members and how important it was to keep it all together for the sake of the family, and how many times when I would initiate conversations with them and ask them about how they were feeling they would go into describing it with what they were doing. There was a difference with the language they used and, in the way, that they carried themselves or in the way they articulated expectations of themselves, that was not only theirs but of the family or society as well. That and certainly in line with theories of masculinity informed me into using a different approach and we know there has been a lot of work done with discourse and language analysis. I had read an article a while ago saying instead of using the word ‘support group’ for men and they would use words like ‘a club’. Just to make it more appealing for men.

In this study the quote “it is bowel surgery, and everybody has a bowel” HCP1 (nurse) assumes of the concept of sameness between men and women. Risberg et al. (2009) emphasize that knowledge of biological differences is not enough to prevent gender bias. Historically, studies have involved using “men’s experiences of health and illness could be a proxy for women” (Aranda, 2018, p.23). This also “makes visible the hidden labour or harm women experienced...in healthcare ...in which patriarchal biomedical control and discrimination”

exist(ed) in women's lives" (p.23). These considerations could explain why in this study participants and some HCPs were not cognizant of sex or gender; when not only the biology of a man and woman is clearly different, but their experiences and social expectations are as well.

### **Theme Five: Omission of Ageing**

Woven throughout both patient and HCPs comments were suggestions that colorectal disease was an illness considered to be one that older people experience; however it was evident that age or the mention of aging related aspects of the disease were omitted from the PE. Colorectal disease tends to be more prevalent in older people with the majority of disease occurring in the 50-79 age range; with the mean age of colorectal cancer in men being 68 and women being 72 (Steel, Park, Johnson, Martin, Stojadinovic, Maykel & Causey, 2014; Colorectal Alliance, 2019). Overall, in this study patients belonged to the younger end of the spectrum; however, comments were made in various areas with regards to ageism by both patients and HCPs.

Female patients in this study ranged in age from 40-50 n=1, 50-60 n=2 and 90-100 n=1. FP2 reflected on colorectal being a disease for older people, "I am 54 years old and maybe some patents are a lot older going through this and I think it affects more people at a later age group than for me, I think.". FP3 underwent the procedure in her 90's and reflected on a pragmatic age-related aspect, namely that because she was older, she did not have children at home to take care of "I was lucky that I didn't have to go home and look after little kids, that would be hard." and was being taken care of by her adult daughters. From a physiological aspect, she referred to her eyes not functioning well and needing homecare to aid her daily and as a result she did not "have or want to have any concern to know how to change the bag" (CG1), but felt "I think I could've changed my bag [ostomy bag] if I didn't have my eyesight issue" (FP3). CG1 also commented



on her father having a bag for 15 years “I don’t think if she [his wife] was the one with the bag that he would have been cleaning it”. Analysis through the FPS lens, Weedon (1997) refers to “conscious and unconscious thoughts and emotions of the individual, her sense of herself and her ways of upstanding her relation to the world” (p. 23) and that these have been acquired through social, historical and political forces (Arslanian-Engoren, 2002). From the perspective given by FP3 and CG1 in this study, we can see how within her age group, not only did age and physiological implications enter the conversation, but gender roles and expectations also were very apparent.

Fp3’s daughter CG1 commented that “Mom was more the passive patient” referring to FP3’s age and the fact that CG1 and her sister (FP3’s other daughter) were the caregivers and the ones who were engaging with PE and the HCPs. When asked to comment about the sex and gender aspects in the PE, CG1’s reflection included age and also included an interesting and telling comment referring to “unisex” while referencing there was a ‘man’ and his ‘wife’ and she was his caregiver, the normalization of the diagram and the context did not seem to be something that was reflected on as a sex and gender issue by this or any other participant in the study:

Yes, that is a good question, in the pamphlet there is a picture of a man and his wife...the man has a bag and the woman is the caregiver...It was more unisex to me. I didn’t care it was talking about what people experience, not there was a questions that came up ‘Will we be able to have sex?’...’Will we be able to have children?’, and so one thing that really stood out for me is different ages would have different concerns. How they responded to this would depend on their age group. So, there is a male/female thing and an age thing.

Male patients in this study ranged in age from 40-50 n=2, 50-60 n=2 and 60-70 n=1. There were subtle mentions throughout comments that suggested that colorectal disease was most likely a disease for people in their 70's and a technological app may not be accessible to that age group (MP1, MP2).

HCPs also mentioned age in their interviews. In reference to technological apps, HCPs stated that PE may be useful in this form however "cancer seems to be a disease of age...so less so for cancer", HCP2 (surgeon) and HCP3 (nurse) commented that the "colorectal age group...is older so we would have to be mindful of that". HCP3 (nurse) and HCP 6 (nurse) made comments pertaining to age ranges being an issue, as "60 to 65 and over is different than 40's...affect how they receive and perceive the tools [PE]" HCP3 (nurse).

Although there were some images of older people in the PE, other indications of what aging populations might face with this disease and surgery were not addressed or evident in the PE. From the FPS lens, Aranda (2018) speaks to the relative silence when it comes to aging in feminism, except those looking at aging and gender. She cites Beauvoir's (1972) discussion which suggests, due to the "societal abandonment, neglect and the inevitable demise to old age" that has been portrayed in the past and across cultures and is more of a "sociocultural rather than biological" response (Aranda, 2018, p. 149). Beauvoir (1972) also includes other socioeconomic aspects such class, gender, wealth, housing etc. which "as old age generates anxiety, isolation, loneliness and a rejection by broader society (Aranda, 2018, p. 149 from de Beauvoir, 1972, p. 603). Aranda (2018) suggests that what is missing from the discourses in aging and health is going beyond the binary of aging well which would assume you are keeping your "young looking body" vs the "frail or leaky and unbounded bodies" that aging actually brings when not

done well (p. 150). The omission of aging in this study's PE could also be reflective of the not wanting to address the binary.

FPS theorists attempt to “undo ageing” or trouble how age and the connection of the body is understood and move to a way of “meaning or fashioned by and within culture” that in relation to intersect “subject positions of gender, class,...together with power relations of sexism ...reinforced by social institutions of ...healthcare...generate embodied subjectivities and identities and the gendered and classes experiences of age and ageing” (Aranda, 2018, p. 152; Twigg & Martin, 2014; Hockey & James, 2003).

### **Theme Six: Role/Position of Nurses in the Healthcare Hierarchy**

The role of nurse in the ERAS interdisciplinary team is interwoven throughout the process of care. In this study, most patients described their interactions with nurses as informative, positive and supportive. Patients expressed value and importance for nurses who provided care and instruction for them throughout all the phases of their surgical journeys. Many patients commented on various aspects that nurses aided them with such as pain levels (FP1), the ability to ask multiple questions so they would be at ease (FP2, FP3 ,FP4, MP1, MP3, MP4), and remembering PE and instructions disseminated by nurses (all patients). PE has shown to have significant impact on the reduction of anxiety and the improvement of patient's satisfaction in the healthcare setting (Visser et al, 2001). It has also been shown to improve agency and elements of self-care (Gallefoss et al, 1999; Grey et al, 1999; Johansson et al., 2003) as cited in (Ghorbani, Soleimani, Zeinali, Davaji, 2014, p. 551). The majority of patients in this study mentioned the reduction of anxiety as a result of speaking to their nurses and also as a result of having the PE instruction; this was also exhibited in the words full of gratitude and praise the patients had for the nurses that cared for them.

Male patients in the study spoke to how important the nurses were to their recovery (MP1, MP3, MP4). Selected patient comments that reference their interactions with the nurses, include MP3 commented how he felt nurses were a fundamental part of the process,

I believe everybody that was involved in that care especially the nursing staff. The nursing staff was phenomenal as far as I was concerned, they guided you along the process pay your RNs as much as you can because they are the life blood system...those nurses were phenomenal...I am coming out of province, these people treated me like family.

Female patients in the study also reflected on how important nurses were to their recovery (FP1, FP2, FP3, FP4). FP3 reflected on care from both doctors and nurses, "I had real good doctors and nurses and the care; I can't say enough about that." And her daughter CG1 commented "What I noticed about the nurses which I appreciated was that they had a very matter of fact approach with mom about it [the ostomy bag]." FP2 reflected on her surgeon's nurse "they put my mind to rest, I had a lot of questions for Dr. X [her surgeon's] nurse, I was able have them all answered" (FP2). FP4 being a nurse herself, also reflected on her mind being put at ease, "I think I was prepared from the different groups, the stoma nurses that I saw, and I am so thankful that I was able to see them of the Preadmission Clinic and the morning of surgery, they gave me a lot of mental help and assurance". PE offers some reasons and has value for the patient and is considered a part of care "high quality nursing care" (Nasir & Nasir, 2006) as cited in (Ghorbani et al., 2014, p. 551). In this study, both male and female patients felt nurses were the primary source of PE, and that the care nurses provided aided in reducing their anxiety.

The nurses who participated in interviews in this study ranged from being part of the ERAS interdisciplinary team and informing the creation of some PE materials, disseminated the

PE (pre-surgery phase), cared for the patients during the hospital stay (peri-surgical phase) and also nurses are connected with patients upon their follow up visits in clinics (post-surgery phase). HCP5 (nurse) commented on ERAS PE “I find when you explain what the purpose is behind ERAS, I think patients are really keen and you tell them the results. We have had really good results with our colorectal population...you explain it to them, and it clicks a lightbulb in their head.”. HCP6 (nurse) who conducts the educational class at Site B stated “Yes, I do I agree it is beneficial too [the ERAS pre-surgery educational class and PE] and like I said a lot of patients have not had surgery before. When they come in and have an idea, how and what’s going on helps reduce the anxiety for them. Overwhelming, it is and it’s [the class] probably something that takes away the element of surprise.”. This study captures insights from HCPs about one of the functions of nursing in which PE/patient teaching and nurses have educated HCPs, patients, and their families around illness prevention, disease, and health (Bastable, 2003; 2008). In this study nurses were fundamental in PE from primary, secondary and tertiary levels; these levels incorporate some form of PE, to aid the patient in improving and promoting prevention in health, slow down disease with medical intervention, and support the aim of “extending life expectancy” and quality of life (Bastable, 2008, p. 25).

Most patients in this study, male and female, expressed spending less time with their surgeons and more time with the nurses. MP1 commenting that nurses did not have “quite frankly, the nurses, they were good, and they would come in to check, but they did not have time to make sure had been up walking around 10 to 12 times a day”. Validating this MP3 stated “a surgeon is very busy so he can spend time with you in the rounds, but the nursing staff is there always, and they were the pinnacle of the ERAS system.”. FP4 stated that between seeing different HCPs, she was able to a lot of information “Dr. X and the nurse who did the education

class and the nutritionist, it was a lot of information at one time but if you don't live close to the center then you don't want to keep making trips.”, and that the stoma nurses were very informative.

In respect to FPS the binary of the nurse/physician is exposed, Aranda & Law (2007) reflect on how nursing has attempted to be more inclusive

In claiming to develop, and use both its own, and others theoretical, and practice-derived forms of knowing, nursing attempts to either make the dualism of nursing, and medicine more inclusive through its insistence upon sameness with medicine in making similar occupational claims to professionalism, and scientific knowledge, or in its attempts to reverse the binary, whereby nursing has asserted its difference, and distinctiveness from medicine (p. 565)

Fairman & D'Antonio (2008) identify the significance of nurses making hospital and medical practices possible throughout the history of clinical practice. The authors identify the importance of nursing practice and medical theory thus identifying what is integral to clinical practices; legitimizing the importance of nursing to clinical practice (Fairman & D'Antonio, 2008). In this study this positioning was apparent in the interviews with patients and HCPs and throughout the ERAS standard of care. This study also shows how nurses, through their intimate connection with both PE and patients, can further be the HCPs that inform and create PE that is more reflective of the information that patients require.

### **Synthesis**

In this chapter, I explored six themes that emerged from the analysis of findings in the previous chapter. The six themes that emerged were 1) the recognition of surrender by patients, 2) the desire for patient involvement/agency in the process, 3) personalization of PE, 4) sameness

and difference in the sexes, 5) the omission of ageing in the PE, and 6) the role/position of nurses in the healthcare hierarchy.

Both male and female patients that were interviewed for this study expressed an overall positive experience in their surgical journeys. The patients all expressed complying with the PE and the instructions from their HCPs. At the same time, however, an analysis of the findings indicated an awareness of gaps that existed in the PE with respect to some SGS and other personalization. There was also a sense or an awareness of hegemonic and neoliberal forces which exist within the stratifications of medicine. These forces have been in place for over 30 years with the beginnings around the Thatcher and Regan eras, replacing “notions of citizenship” with consumerism and the “exercising of rights and responsibilities in the realm of health and self-care” making the patient “the unit of value” in healthcare instead of “the broader socio-political or economic context” (Aranda, 2018, p.13). Aranda (2018) cites the British government’s slogan of ‘no decision about me, without me’ which has now become law and places a legal imposition to involve patients “in efforts to ensure relevant, acceptable and affirming forms of healthcare” (p. 15). Ultimately, this force rationalizes the patient involvement but takes away government resources and funding (p. 16). In study, this was relevant with the compliance required by the patient to the PE and to the instructions given by HCPs. This compliance is relayed by HCPs as a component in the success of the health outcome and places a responsibility on the patient to be involved.

Male and female patients did not express much awareness of a sex and gender approach to the PE in a manner that suggested difference between the sexes. The revelation of sameness vs difference was something that emerged in the dialogues. Initially, patients were unaware of or not cognizant of gender aspects by revealing that they felt this was a surgery that affected bowels

and because we all have bowels, there was no real reason to have distinction between the sexes. However, through the desire for increased personalization some SGS aspects emerged. While HCPs revealed formally and informally that they changed their approaches when interacting with a male or female patient and even at times addressed different issues not only based on the sex but also the ages of their patients. Aranda (2018) argues through feminist analyses showed not only androcentric, but also ethnocentric, homophobic and ageist elements that exist in the nature of healthcare (p.26). These aspects expose the deep androcentrism of a neoliberal capitalistic society and are seen in the exclusion and inclusion of gender throughout healthcare interventions, including PE (Aranda, 2018).

Patients expressed a desire to be involved in their own care and strived to gain some agency through the process by complying with PE, following instructions that were given by their HCPs and some independently ventured off to research the gaps they felt existed. Through the interview process, patients also expressed the need to want to be involved as part of the medical process. This sentiment was brought forth in this study and is not baseless. Patient involvement has become part of the medical education platforms such as the Association of Medical Education of Europe (AMEE) in the 2019 conference, the *Plenary 3 - A Call to Action: Patients as Partners in Healthcare Professions Education and Practice* and global calls for action to include gender in research impact assessments (Oveseiko et al., 2016). HCP9 referenced the PaCER study, which collects “general feedback...on patient perspective” that they [HCPs at Site B] have used to help direct their educational classes. Patient participants offered suggestions on how to fill gaps in the PE through suggestions of inclusion of some SGS aspects such as sexual function along with increased information on post care, nutritional aspects, ostomy bags, caregiver information, age related implications.



There also seemed to emerge a dissonance with what the HCPs and patients anticipated as clinical objectives for PE. HCPs reported the objectives being primarily to inform and educate the patient for the pre and peri surgical periods. Although there was a recognition by some HCPs suggesting that patients were not appropriately equipped with information upon discharge. ERAS PE was predominantly focused on preparing for surgery and the hospital stay with little post discharge information. For the most part patients agreed and expressed that the pre and peri care periods were addressed in effective manner and that they felt quite prepared for these stages, however expressed that they felt a considerable gap and disconnect in the post care period.

There was a very clear indication of who held the power and knowledge throughout the process. It was indicative in the role that the patients held with respect to the HCPs and within the HCPs themselves; the nurse and the doctors/surgeons. From the FPS lens, Aranda (2018) reflects of Foucault's theories of power as his "view of power is inherent in all relations, in all knowledge and way of talking and acting in the world." (Aranda, 2018, p.6). In this study power was reflected in the hierarchy of roles within healthcare and specifically within the ERAS protocol within the how the roles of the patient and various HCPs were structured. Although nursing has been inherently interwoven in medical practice; physicians (in this case surgeons) as Rosenberg (1997) argues in *Framing Disease* (1997) hold a strategic position to formulate and develop language, specific methods and have the power to create disease categories and are well positioned to "rationalize, mediate and legitimate relationships between individuals and institutions in a bureaucratic society." (Fairman & D'Antonio, 2008, p.437).

### **Summary**

In this chapter, I conducted a thematic analysis of findings from nine male and female patients, one caregiver and nine HCPs interviews. These findings were synthesized into six

themes which were interpreted through the FPS lens. The themes revealed the recognition of underlying hegemonic forces in medicine. The desire for more inclusive patient & caregiver involvement and personalization of PE; an approach that values the experiences and knowledge of patients came to light. This approach will in turn ensure more inclusive PE and will foster the patient in a partner context. In Chapter Six, I further discuss these interpretations in the context of prevailing hegemonic forces in medicine and will present recommendations for future development of PE that aims to be more inclusive for all patients.

## CHAPTER SIX: DISCUSSION AND RECOMMENDATIONS

### Overview

The purpose of this case study was to determine if and how the application of a sex and gender lens to PE with the ERAS protocol may result in insights and findings that could lead to improved patient outcomes, experiences or satisfaction. I hoped to develop an understanding of how this lens might both provide new insights and uncover challenging gender biases and inequities that may perpetuate the hegemonic approach to medicine and patient education (PE). It was an expectation that findings from this study may be used to inform and incorporate a more inclusive approach to PE in ERAS.

In Chapter five, I outlined six themes that emerged from the continued analysis of findings from chapter four. First, surrender by patients. Prominent factors that influenced surrender were being overwhelmed or anxious during the surgical journey, the reliance on PE, the nuances in the patient experience and the HCP/patient interactions. Second, the lack of patient agency. Many factors contributed to patients feeling a lack of control and uncertainty particularly during the post-surgical period and also through the exclusion of patient voice and undervaluing of patient experience in the process of the development of the PE (which was predominately clinically focused leaving many important areas of interest unmet for patients). Patients also attempted to gain some agency and seized the opportunity to be involved in the process of their surgical journeys and health outcomes where they could, particularly by complying with PE and keeping up with appointments. Thirdly, were the perceived gaps identified by patients in the PE. These perceptions appear to be fueled by patients wanting more personalization in the PE, in both sex related aspects and a variety of other aspects by patients. Fourthly, patients and HCPs for the most part were apathetic to the representation of sex and

gender aspects in the PE. Many factors, including the normalization of dominant hegemonic structures in healthcare and society through the use of language, discourse and power, appear to influence this perception. Fifthly, despite colorectal disease being one which exists in an aging population, the lack of ageing related implications in the PE was evident and factors such as ageist undertones in healthcare and society may be implicitly functioning. Finally, the sixth theme that emerged as important was the role/position of nurses in the healthcare hierarchy. Given the proximity that nurses have to patients, their primary involvement in dissemination and ensuring compliance to the PE; nurses may need a more prominent role in the creation of PE materials for the ERAS standard of care.

This chapter summarizes how these themes relate to the research questions in conjunction with the research literature, how they interplay and how they align with the theoretical framework. Key findings from the study follow and this chapter concludes with a description of the study implications for future PE and with recommendations for future research.

## **Discussion**

### **Alignment with Research Literature**

In this chapter, I summarize the study themes through the interpretation of the research findings with existing literature. I group them based on how they relate to my research questions and unpack participant experiences to illuminate how engagement with the PE in this study compares with the research literature. The primary research question for the study is: How do men and women approach patient education and how does that impact patient experience, satisfaction and/or outcomes within the ERAS protocol for colorectal surgery? Analysis is guided below by the secondary research questions.

***Secondary Research Question 1: What are the perceptions of patients regarding the PE?***

This secondary research question was addressed through participants' responses to various questions that delved into the patient experience and engagement with PE. In this study, I set out to explore how male and female patients perceived PE. I wanted to know how individual patients felt about their experience with the PE resources, and whether across patients these experiences were similar and how they differed, and how so. Did patients find PE useful and easy to use? Did patients feel they were disseminated to them at an appropriate time and what would an appropriate time to receive them be? Finally, I wanted to know if patients felt a sex and gender sensitive (SGS) approach to PE would have improved their outcomes or patient satisfaction.

In general, both male and female patients reported having a positive perception of the PE in terms of their experiences and regarding the type of information they received. Patients felt they received information that they thought was important in terms of pre-surgical care was more than adequate and the peri-surgical care was also reported to be adequate. More male patients reported that post-surgical care was an area that could be more robust in addressing aftercare and longer-term aspects. Some patients reported not remembering the PE or the instructions but then being reminded by the HCPs in the hospital. Finally, participants; both male and female patients and HCPs reflected on SGS implications in the PE and in this study, it was largely an area that they were apathetic about. I began to wonder if participants truly did not see a reason for a more personalized sex and gender approach to the PE or if there may be other factors at play that were causing individuals to report an indifferent response in this regard. I found this response quite an

interesting outcome as there is contradictory evidence in the literature in terms of sex and gender implications in colorectal disease.

Scaffolding on to my literature review; there is evidence in the literature that sex/biology can impact some colorectal diseases such as Irritable Bowel Syndrome (IBS). The Canadian Society of Intestinal Research reports that both sex and gender can affect IBS outcomes and gastrointestinal (GI) disease (GI Society, 2020). In terms of sex differences, women experience hormonal changes during the various stages of the menstrual cycles that may make IBS symptoms worse due to the production of a type of cyclic fatty acid called prostaglandins, responsible for pain and inflammation and these can penetrate the bowel wall through the bloodstream which can cause abdominal cramps and diarrhea (GI Society, 2020; Houghton, Lea, Jackson & Whorwell, 2002; Mulak, Tache & Larauche, 2014). In this study, the age of women was in the range of pre-menopausal to post-menopausal. Even during the pre-menopause to post-menopause there is a reported decrease or increase in the symptoms of IBS due to hormonal fluctuations (Mulak, Tache & Larauche, 2014) and may even present significantly more severe IBS symptoms than premenopausal women (Lenhart, Naliboff, Mayer, Chang, 2019). Interestingly, the biology aspect reflected in this literature did not appear to be represented in the findings of this case study; instead, a focus was placed on everyone has bowels that operate in the same way. The only area that biological sex appeared to be implicated in this study was male patients referring to wanting more information on sexual function. When asked if patients felt represented in the PE with respect to gender, the answer was still the same and a relatively indifferent response, which again contradicts the research literature.

Literature not only shows sex in bowel disease can have an impact on the individual, but there is also evidence that there is a gender-role effect with respect to the way that men and

women respond to Gastroesophageal reflux diseases (GERD); which is a disorder due the malfunction of the upper portion of the digestive tract (GI Society, 2020). Chen, Thompson, Jamieson, Devitt, Watson (2011) conducted a study which compared how women and men experienced GERD. Heartburn and other symptoms of GERD were reported to doctors more often by women than men; men experienced more negative outcomes as a result and the authors state it could be related to gender roles. This may be associated to the norms in society claiming that women will report symptoms to their doctors sooner and men tend to ignore symptoms for an elongated amount of time before speaking to their doctors and they underreport them (Chen et al., 2011; Voci & Cramer, 2009). Just as sex, gender also did not emerge in this study as an area that patients felt needed increased attention in the PE. I began to question these outcomes and feel this is an area that could be further engaged and delved deeper into with future research.

There were however areas that both male and female patients focused on in terms of where they felt or where they were willing to express that increased attention was needed. Other aspects of personalization such as medication side effects, pain management, nutritional aspects, post-surgical care. Patients in this study spoke about emotional aspects such as anxiety and some patients reported some uneasiness and wanting some information on sexual aspects. Grady, Buckley, Cisar, Fink & Ryan (1988) conducted a study of 100 cardiac patients, to explore if the information they were provided with for their surgeries was sufficient and to explore where gaps may exist. Sibbern, Sellevold, Dale, Watt-Watson and Dihle (2017) conducted a [systematic review](#) of eleven qualitative studies exploring patients' experiences of enhanced recovery after surgery. The authors found themes that are similar to those found in my study, such as individualized treatment vs. standardized care, balancing symptoms and expectations for rapid recovery, and a lack of security at discharge. Sibbern et al. (2017) also found that PE aided in patients feeling

prepared and ready for surgery and that patients were motivated to participate in their recovery. In alignment with the studies they reviewed, the authors found that patients felt they were better prepared pre-operatively, but it was contradictory about post-care. Further, aspects such as medication side effects and aftercare were not as adequately addressed. Somewhat contradictory to the findings in my study was that Grady et al. (1988) found patients did not desire as much information about emotional changes or sexual activity.

The PE that was predominantly disseminated with participants in the present study was in the forms of pamphlets, educational classes, and videos. Dissemination or when patients received these materials varied as patients reported a broad timeline regarding proximity to surgery. One patient, who went to the emergency room, presenting with severe abdominal pains and required immediate surgery, other patients were given a week and others had several weeks to prepare, one patient attending an educational class and was given more information. Most patients reported wanting PE as soon as possible. Both male and female patients reported receiving all PE from nurses. PE has been a responsibility of nurses in the past (Stonecypher, 2009). In alignment with the research literature presented, nurses have been fundamental from the beginning and throughout the evolution of PE; they have been teaching and engaging in PE, not only with patients but also their families and healthcare providers (Bastable, 2003; 2008). Although nurses have been recognized for introducing the processes for educating patients, they also have produced some of the materials associated with PE (Bastable, 2003; 2008). In this study, nurses were the ones who disseminated the ERAS PE, they were engaged in teaching and both patients and caregivers. However, contradictory to this literature, nurses that were interviewed in this study did not produce the ERAS PE, although a few were involved in producing other areas of



PE that was deemed needed such as nutritional and some post care material (currently being developed).

Both male and female patients reported complying with the instructions of the PE and HCPs. Sahay, Gray & Fitch (2000) conducted a study on patient perspective on the psychosocial impact of colorectal cancer and they also found patients complied with the PE. Pomey, Ghadiri, Karazivan, Fernandez & Clavel (2015) revealed how patients viewed their engagement with HCPs regarding their direct care. Patients described themselves as proactive “regardless of the HCPs openness to their role as partners” (p. 1). Three types of practice were highlighted by patients i) continuous learning that allows patients to acquire experimental knowledge about their health, including scientific and technical knowledge ii) patient assessment of the healthcare they receive; both quality and how it aligns to the patient’s personal preferences and the relationship they have with their HCP (and the HCP’s knowledge) and iii) adaptation practices. The authors state that “Patients appear to play a more active and less docile role in their own direct care than suggested so far in the literature, regardless of the degree of reciprocity of the partnership or the degree to which the health professional seeks to encourage patient engagement.” (p.1).

In alignment with this case study, participant responses also revealed a desire to participate from both a patient perspective and there was a desire from the HCPs to offer space for patients to be involved. It may help to incorporate what patients feel is important in terms of unaddressed gaps and topics in the PE.

The most prominent factors that patients relayed were they felt the PE was clinically focused and finding the PE effective and useful, however patients identified gaps. Gaps existed in both SGS as well as other areas. Patients in this study reported gaps in the PE in areas such as

the ostomy bag, sexual and bladder function, post-care instructions, nutritional information and other aspects.

Sahay, Gray & Fitch (2000) also found patients expressed concerns regarding lack of information and potential gaps in PE regarding aspects similar to the ones in this study, such as “long-term management of the illness including diet and nutrition-related complementary/alternative therapies, postoperative complications, and stoma care.” (p. 44).

In my study, patients also reported that these areas were important and given that ERAS patients tend to spend less time in the hospital, as is one of the goals of ERAS filling in these gaps for patients with pertinent recovery information that offers realistic expectations for recovery, would allow them to gain agency and engage in a pragmatic way in their recoveries at home. Most male patients in the study reported having caregivers, primarily their partners aiding them at home upon return. Male patients reported wanting to get back to household activities as a way of feeling more like they were recovering and contributing to the household. Female patients also reported having caregivers, primarily partners and children supporting them in household roles upon returning home but did not address returning to household activities as a way of recovery or contribution to the household. Female patients given their age demographics did not speak about having responsibilities to take care of children however one female patient did mention that if she had children, recovery at home would have been much more difficult and different.

Many questions can be raised from a potential gap in PE, and what more can be done to do to fill those gaps. For example, how important should patient voice be in the development of PE? What might patient empowerment look like given they do not have the medical expertise and are not taken into consideration in the structure of medicine in respect to knowledge and

power. It may go without saying; patients are the ones experiencing the disease and though most patients expressed wanting some involvement, one patient commented he would not want to be part of this process and leave it “to the professionals” and the “in the hands of the medical system”(MP3). Given these comments, some patients may want to be removed from this aspect and let the professionals lead the process, leaving/freeing patients to focus on getting better. To address the inclusion of patient voice and perspectives, Pomey et al. (2015) put forth some recommendations/practices as they suggested patients can be partners in their health despite the “paternalistic approach to healthcare, where health professionals make all of the decisions with little or no input from the patient” (p. 2).

Patients as partners are proactive in the care partnership, and this translates into three types of engagement practices. Learning practices allow them to acquire experiential knowledge about their health, as well as scientific information and technical know-how; assessment practices involve evaluating the quality of the partner relationship, as well as the health professional's actions, recommendations, scientific knowledge, and technical know-how; and adaptation practices concern patient partners' attempts to narrow the gap between what they need to ensure appropriate care and what health professionals provide (p. 16-17).

Gillis, et al. (2017) conducted a study that also explored patient experience with the ERAS program. The authors found similar findings to those found in my study such as patients desired being partners in their care, recommended extensions to ERAS guidelines pre and post PE, and also adding a patient peer mentoring program and the recognition that one standard does not fit all. Although there were many similarities with patient responses in the study by Gillis, et al (2017), in my study I found that patients wanted more information post-surgery and felt that

the pre-surgery aspect was well done by the ERAS PE. The rationalization indicating the need to prepare patients emotionally, psychologically and physically for surgery using pre-surgery PE made by Gillis et al. (2017), given the expressions of anxiety and stress by participants in my study, may be a very effective way to address this aspect. Gillis, et al. (2017) also developed a framework that they offer to “encourage sustained patient engagement with the ERAS system” (p.8) using their findings which is also validated by themes and findings of my study.

The aim of the current study has been to gain insight into how men and women engaged and used the PE resources they were offered, how that interaction shaped their experiences, if they complied with the instructions and whether they felt a more personalized sex and gender approach would have resulted in better patient experience. When HCPs try to educate and inform patients in the ways of these PE resources several questions result, how can that manifest for the individual patients? How does the diagnosis affect patients? In this study all patients reported being overwhelmed and anxious; how might these feelings differentially affect engagement for men and women, and are they anxious about the same things or different things?

***Secondary Research Question #2: What are the perceptions of clinicians regarding the patient education resources?***

This secondary research question was addressed through various questions that delved into the HCP experience with PE. I wanted to explore what HCPs felt was important and needed in the PE, what they felt the patients would benefit from, who created the ERAS PE And if they felt a SGS approach would be useful.

PE is defined as “teaching of the patient; process of assisting the patient to gain knowledge, skill and a value or attitude related to a health problem or for health promotion.” by the Medical Dictionary for the Health Professions and Nursing (2012). In alignment with, HCPs

in this study overwhelmingly reported that PE had the primary purpose to educate the patient through the pre, peri and post-surgical processes. This included aspects such as the pre-surgical preparation steps (bowel prep), the surgical process itself, what to expect in the hospital, and discharge instructions for after care at home and psychosocial implications .It was also evident in this study, given the knowledge and power that the HCPs had they were the ones in the patient/HCP interaction setting the course of direction for the patient. There was an undercurrent in the responses of HCPs indicating power in the form of knowledge, although perhaps well warranted, but still a representation of dominance.

Pappas (1990) validates these aspects by stating “dominance in the doctor-patient interaction is achieved through positively motivated behavior based on a faith in medical science.” (p. 201). HCPs in this study, maintained and explicitly stated their care and interest for the patient’s recovery. They also reflected on the benefits to the healthcare system as well as their and patients’ behaviors and actions being motivated in a positive way based on these aspects as well. It was also evident in the interviews with patients that they were not compelled to comply with the PE and that compliance was suggestive in nature as HCP5 (nurse) confirmed this when asked if she felt patients complied to PE, “that’s strong language”. Waitzkin (1984) points to the doctor-patient relationship as

Ideological utterances within the doctor-patient relationship are seldom repressive. That is, health professionals rarely compel clients to take specific actions or forcefully restrain them from taking other actions. Within medical encounters, ideological communication takes much of its force from the symbolic impact of medical science and the asymmetry of the doctor-patient relationship (Waitzkin, 1984, p. 342)

In the ERAS protocol, most HCPs were aware of a provincial team that created the PE and that it was made up of the IPC ERAS team, predominantly headed by surgeons and doctors. In contradiction to literature, Stonecypher (2009) states that although we are seeing many HCPs being involved in the creation of PE, in general, nurses have historically been the creators, nurses in this study did not contribute to the development of PE or know if there were nurses who did. As Bastable (2003; 2008) describes, patient teaching has been a nursing function and that nurses have educated healthcare providers, patients, and their families around illness prevention, disease, and health for decades. According to Bergh, Karlsson, Persson & Friberg (2012), PE is an important aspect of the daily care provided by nurses though it lacks structure. This literature aligned with the present study as nurses were the primary HCPs disseminating PE and engaging and teaching with patients; in turn, some patients reported nurses were essential in their hospital stays and recoveries. Based on the findings of this study, the increased involvement of nurses and patients in the creation of the PE may improve the relevance and validity of the PE by adding valuable insights.

Marcum, Ridenour, Shaff, Hammons & Taylor (2002) conducted a study on PE and the perceptions of nurses. The authors found that ninety-two percent of nurses reported PE was a priority in their nursing care. The authors point to three aspects that hinder effective PE: time, staffing, and receptiveness of the patient and three aspects that garnish effective PE: more time to teach, providing inclusive teaching guidance sheets, and making resources more accessible. In the present study, nurses were the ones who educate the patients through the PE, both nurses and patients reflected on the time constraints for nurses as well as gaps in the PE. This study found that there may be implications for both nurses and healthcare organizations in respect to these aspects, nurses may want to look at how to fill the gaps in the PE through the feedback they

receive from patients and healthcare organizations may want to look at the patient load assigned to nurses.

Scaffolding onto the time with HCPs particularly the time spent with nurses Butler, Monsalve, Thomas, Herman, Segre, Polgreen, & Suneja (2018) observed “using a network of stationary and wearable mote-based sensors to electronically record location and contacts among health care workers and patients” (p. 972.e9). They found that physicians spend less time with patients than nurses as well as “nurses spend almost half of their time in close proximity to patients, either in their rooms or at a nursing desk immediately outside a patient room.”, while they found that “physicians and nurses rarely spend time together in the patient room” (p. 972.e15). When examining the hierarchy of the structure of healthcare and how it has been constructed; limited contact with the physician/surgeon and the relatively more contact offered to nurses reflects the power and knowledge structure in healthcare. This was also indicative of this study and given the proximity presented to nurses with respect to patient experiences; nurses may be better situated in the aspect of the creation of PE and ERAS PE may benefit from their increased involvement.

HCPs in this study also spoke to potential gaps in the PE. While the PE had clear clinical objectives that HCPs felt were important in the pre, peri and post-surgical care. HCPs reported not knowing if that was enough information for patients after discharge including after care for the variations of bowel care, nutritional aspects, emotional states of their patients. Further, some HCPs also commented on the potential disconnect with information HCPs are relaying and what patients may be taking away; what might be missing is not what the HCP may have anticipated and may even think they have addressed the aspect, but that is not congruent with the patient perspective

Pomey et al's (2015) findings align with the present study's participant responses that revealed a desire to participate from a patient perspective and there was also a desire expressed from the HCPs to offer space for patients to express and potentially incorporate that input. It may help improve these materials and processes to incorporate what patients felt was important in terms of unaddressed topics in the PE. HCPs in this study reported and perceived gaps in the PE for their patients in areas such as the ostomy bag, sexual and bladder function, nutritional information and other aspects. Gillis et al. (2017) also pointed to a disconnect between what patients and HCPs felt was important in the process of ERAS recovery; for example, HCPs felt that writing a daily journal was very important, however patients did not feel this was important and reported not knowing why this was considered important.

Another area that was nuanced by HCPs was the aspect of ageing, it was referenced subtly by some HCPs and patients in this study. Wyman, Shiovitz-Ezra & Bengel (2018) state that ageism can occur at both the micro (personal) and macro (institutional or structural) levels. The authors indicate that ageism can manifest at a micro level in attitudes among HCPs in the form of communication styles that are ageist, diagnostics and treatments that are age-biased in terms of clinical decision-making and older patients expressing self-directed ageism. They also state that at macro levels ageism occurs in the reimbursement structures in healthcare, clinical trials and participation of older people, policies governing care (institutional), geriatric-specific training for health care professionals not being emphasized. Further research in this area with respect to gender and ageing in PE may offer increased insight into the implications that continue to exist here.



***Secondary Research Question #3: Does a positive outcome to surgery depend on compliance with these educational resources?***

This secondary research question was addressed through pertinent questions being posed to both patients and HCPs; patients were asked if they complied to the PE and HCPs were asked if they felt compliance lead to better patient outcomes and satisfaction. Compliance to ERAS protocol has been found to result in shorter hospital stays and has decreased the rate of complications (Taurchini, et al., 2018; Jurt et al., 2017). Compliance with PE and desire of engagement did not appear to an issue for participants in this study. Patients self-reported that they complied with the PE and HCP instructions. In a similar response, HCPs indicated their belief that patients tried their best to comply with the PE instructions and the opinion that compliance to the PE did in fact lead to better outcomes for patients. Both patients and HCPs agreed mutual involvement in the creation of PE would be beneficial.

This expressed need for patients to be involved in the medical process has come to the forefront in this study and does not appear to be baseless. Patient involvement has become part of the medical education platforms as a basis for HCPs such as the Association of Medical Education of Europe (AMEE) in the 2019 conference, the *Plenary 3 - A Call to Action: Patients as Partners in Healthcare Professions Education and Practice* and global calls for action to include gender in research impact assessments (Oveseiko et al., 2016).

Furthermore, Pomey et al. (2015), referenced earlier, highlighted how patients viewed their engagement as proactive with HCPs regarding their direct care regardless of HCP approachability or openness. The authors state that “patients appear to play a more active and less docile role in their own direct care than suggested so far in the literature, regardless of the degree of reciprocity of the partnership or the degree to which the health professional seeks to

encourage patient engagement.” (p1). This was reflected in this study as patients did go beyond the information provided by their HCPs to find information that they felt was not in the PE.

***Secondary Research Question #4: What would a sex and gender sensitive approach look like for patient educational resources? How could a sex and gender approach be used?***

In this study, both HCPs and patients did not express explicitly that they felt an SGS approach was warranted, and instead reported that everyone has a bowel and it must operate similarly thus there is not really a need for differentiation. Most HCPs acknowledged not seeing a need in the PE to specifically address SGS implications (except for HCP8), however, some did reflect on changing their approaches when communicating with men or women. This is not to say that SGS PE is an unimportant consideration, but this may be reflective of a gap in SGS curriculum in nursing and medical schools. Kling, Rose, Kransdorf, Viggiano & Miller (2016) illuminate the lack of HCPs recognizing SGS implications as well as a dismissal of constituent exposure to SGS based medicine in post graduate medical trainees. The authors continue to highlight the importance of this exposure given the push for personalization in medicine and sex and gender are central to the individual. This may explain the lack of importance stated by HCPs, and by extension patients, in this study.

The Canadian Patient Safety Institute (CPSI) produced a *Guide to Bowel Surgery* in April 2019 that incorporates much of the feedback that has come from this and other studies regarding ERAS PE. It has taken a comprehensive approach to ERAS PE in colorectal surgery from the pre to post-surgical process to strengthen the protocols. Participants in this study did not receive this PE and HCPs did not mention or appear to be aware of the CPSI resource either.

The research questions and unpacking participant experiences in this study illuminated how engagement with PE compared with the literature. In the following section, these aspects are further aligned with the theoretical framework and inform the key outcomes of the study.

### **Key Findings of the Study**

As I approached this case study, I wanted to gain insight into patient experiences and the notion of patient voice in PE. Furthermore, I was also very aware that I did not want to have a study with exclusively female participants as I wanted to explore if there was a difference between men and women. Finally, I was aware that including only women in the study may conflict with the “validity of truth-claims and conflict with feminist values...use of women-only samples can give us exactly the same problem as men-only samples, raising questions about, for example, claims to have established authentically female ways of knowing” (Oakley, 1998, p.713). Aligning the study with the FPS theoretical framework, I started out developing questions that were not specifically gendered. I wanted to allow these aspects to emerge organically instead of calling out inequality or gender bias which may have caused some participants to become defensive and focus on this aspect to primarily explore if participants were aware of gender as they engaged with PE. Although I did ask some questions that might lead to speaking about roles in the households and perceptions of representation in the PE, I wanted the participant to rely on their experiences and wanted to learn from their perspective within the context of those experiences. Upon reflection, I may have added more pointed questions to uncover more directly the sex and gender aspects that may or may not be present in the undertones of the participant comments.

In this study, it was also important for me to delve into and explore the perspectives of HCPs to gain a breadth and depth into the relationship between the developer and the end users

of the PE. This is a strength of this study as it allowed a holistic view of why PE is created what HCPs set out as objectives and how it is intended to be used and why PE can be such a useful tool for HCPs to aid in improving health outcomes for their patients as well as the patient/end user perspective. It was important for me in this study to explore if sex and gender implications were taken into consideration in the development of the ERAS PE.

This study was guided by the Feminist Post Structural (FPS) lens as the theoretical framework and social constructivism as the philosophical paradigm. As described in my literature review, the theoretical framework's key components include discourse, language, subjectivity, power and knowledge and provide a solid foundation for the exploration of sex and gender implications in healthcare (Aranda, 2018). This framework has been used in healthcare studies as it offers intersections of sex, gender, power and inequality to be explored (Aranda, 2006). The underpinnings of this study are based on the social construction of gender. DeLamter & Hyde (2010) state that "social constructionists see gender not as a trait of the individual —as essentialists do—but rather as a process external to the individual" (p.16). This study set out to explore a sex and gendered approach to PE and "gender is defined by interactions between people, by language, and by the discourse of culture" (DeLamter & Hyde, 2010, p. 16). In this study, elements of the key components of both the theoretical framework and the philosophical paradigm began to filter through, interweave and interplay from the data analysis as the themes emerged. Further interpretation of the themes in chapter five informed another level of analysis of and to unpack the data and literature through the FPS lens led to several insights into barriers and challenges that exist for inclusive ERAS PE emerged. The following section outlines the key findings from this study.

**Key Finding #1: Perceptions of sameness may undermine sex and gender differences in PE**

This study revealed aspects that patients and HCPs revealed in terms of sameness regarding sex and gender. Bringing into question how we account for differences intrinsic in the challenges in equality of the sexes expressed through the feminist movement and beyond. The emphasis on equality and standardization may undermine the differences in sex and gender as this strives for a gender-free neutral state which assumes the standard as a male neutral/normal state. For the scope of this study, the sentiment of sameness between men and women emerged with respect to the representation of sex and gender in the ERAS PE. As this aspect was emerging, I was continually asking myself why men and women were responding in this way? Was I looking for something that may not exist or was I not asking the right questions to elicit it? Was this a manifestation of how the discourses in society led to standardization or normalization and was this in turn then being reflected in how healthcare and ultimately PE was developed? Why is the standardization with the ERAS PE, and medicine still based on the male standard? Was the standardization that seemed reflective of attempting to create a sense of sameness be negating the differences that exist in the biology of men and women? When were the aspects of sameness and difference important in ERAS PE? As I began to analyze and interpret these findings through the theoretical framework, there was a congruence with the literature and theory.

Risberg, Johansson & Hamberg (2009) suggest a theoretical model with three steps for analyzing gender bias in medicine “based on feminist theories on the meaning of gender difference and sameness and how it interacts with gender equity and inequity” (p. 10). The approach is outlined in three steps. In step one, they list assumptions based on men and women, in step two, they outline approaches to gender and in step three they unpack gender bias. Step

three states “when equity in men and women is presumed, there is a blindness to gender differences in position, influence, life condition and experiences, which are important factors for health and illness and the consideration for this can result in gender bias and result in unawareness of discrimination based on gender” (p. 11). In this study both participants who were male and female patients and even HCPs appeared to assume a ‘gender blindness’ which is a presumption that may create a bias towards discrimination of sex and gender specific implications.

The authors state that gender bias can occur when there is a “genuine differences to consider in biology and disease, as well as in life conditions and experiences.” (p. 8) and from “assuming differences where there are none, when dichotomous stereotypes about women and men are understood as valid” (p.14). Thus, assuming men and women are the same or assuming they are different can effectively lead to gender bias; the branches for equality and equity can stem out in factors that attempt to standardize or normalize however it is important to understand what this equality is based on if the factors are warranted. I found this applicable to this study as I set out looking or perhaps even assumed there was a difference and was surprised to see that both the patients and HCPs said they did not observe or perceive difference instead there was an insistence of sameness and gender blindness. Findings from this study and the theoretical framework used in this study align with the model used by the Risberg, Johansson & Hamberg (2009) in terms of “conceptual thinking can be useful” when you want to prevent gender bias in clinical work and documents and we must be very aware when we are assuming or not assuming SGS implications (p. 14).

Aligning this study with the literature there was an expression of sameness among both patients and HCPs. Further scaffolding onto the concepts that Risberg, Johansson & Hamberg

(2009) raise, biological and social norm differences (sex and gender implications) between men and women have been shown to affect colorectal disease in many studies and there have been many factors in this regard documented that affect this disease (GI Society (2020); Houghton et al. (2002); Mulak, Tache & Larauche (2014); Lenhart et al. (2019)). In this study, the aspect of biological difference is not reflected in the ERAS PE nor was it explicitly referenced in the interactions with either male and female patients and their HCPs in the interactions. This sameness/difference binary for both patients and HCPs warrant further exploration as evidenced by participant responses and literature. Furthermore, the concepts of equality and equity between the sexes and genders come into play while recognizing the dichotomy of sameness and difference between men and women. In this study PE was considered from the perspective of the majority of HCPs as well as male and female patients a standardized tool that did not require personalization in this aspect however considering social and biological implications literature shows there may be impacts to health outcomes from those implications that are being attempted to be normalized or standardized. Hammarstrom et al., (2014) explore the concepts of sameness-difference and argue that “gender equality should be defined as absence of discrimination and gender equity as a meeting the [health] needs of women and men whether similar or different” (p.188). This then expands the conversation to look at meeting the health needs of men and women without discrimination.

One of the most surprising aspects was the response when I asked patients, particularly female patients, if they felt represented in the PE. I was met with a rather short or cryptic response by many patients indicating that they did feel represented, which I found surprising. I attempted to probe the patient responses with respect to the sex and gender inquiring about both diagrams and the language used in the PE. Despite my probing during interviews, female patients

in this study reported that they felt represented in the PE. As an interviewer and given the balance of empathy for the patient for where they were in recovery, and my desire to gather information from patients as a researcher, and not to bias the study results, I chose not to probe or lead the patients further. Compared with the responses from female participants, I found male patients in the study appeared to be more open and willing to speak about sex and gender implications and representation in the PE.

Reflecting on male and female patient responses, I began to consider communication styles of men and women to unpack how patients responded to sex and gender differences in PE. Most patients indicated they did not even think of sex and gender as an issue in PE and reported that it did not enter their minds. Male patients reported wanting more information that was pertinent to sex and gender implication. I began to ask myself why male patients were more willing to speak about sex and gender implications and why were they engaging with these questions compared to the female patients? Why were patients were not seeing gender? Why did they not notice the diagrams? Why does the language not resonate with the patient? What was at the heart of this complacency? If this surgical area did not forestall gender as something individuals noticed, then which surgical or medical area would? Patients were reporting their truth and realities what they perceived; perhaps sex and gender may not be an issue for patients in this study.

I had expected sex and gender as an area that female patients would comment and reflect upon. I was perplexed to find that there was no mention of this regarding sex and gender in PE or even an area that could have emerged when female patients spoke to the anxiety they felt around the surgical procedure or the ostomy bags. Another aspect that I felt connected with male and female communication styles was that male patients reported their female caregivers (their wives



in this study) were the ones who took the PE instructions and read them. They reported their caregivers were very instrumental in the use of the PE and their care. In contrast, female patients reported being well taken care of by their partners but that they were the main consumers of the PE, not their significant caregivers, and they (female patients) were the ones to relate the information to their caregivers. This aspect also intrigued me as an area important to focus on in further research.

Reflecting on the dominant discourses in society particularly how does the construction of society and our socialization within these structures become the dominant ways of being and knowing ultimately being viewed as free of value and thus normalized? Dominant discourse and how we use language reflect the norms of society as well as where we socially construct our sense of self which is also recognized as our subjectivity (Weedon, 1996; Cassidy, Goldberg & Aston, 2016). This was not only true of the patients, but most HCPs in this study also reported that sex and gender was a non-issue and something they did not notice. Upon probing HCPs in this regard, they did mention that they do slightly change their approach if the patient is male or female and with one HCP (HCP8) explicitly changing the approach and PE offered to patients based on their sex. Another area that warrants exploration is the interactions between the male/female HCP and the male/female patient; what could the sex and gender of the HCP and the patient tell us about how patients respond to or interact with clinical instructions?

It is evident that there exists biological (sex) and gender implications in colorectal disease however ERAS PE does not consider these aspects fully; thus, there may be an opportunity to address these gaps.

**Key Finding #2: Standardized male experiences may be used as pseudo for the female experience in research, practice and PE**

This study has illuminated that standardized PE may not be reflective of both male and female patient experiences. Sex and gender implications in bowel disease have been shown to exist, yet this is not reflected or addressed in the ERAS PE (GI Society, 2020; Chen et al., 2011). Research has historically been conducted on the male patient and the outcomes of this research have informed practice and subsequently PE (Hamburg, 2008; Rabin, 2013; U.S. Food and Drug Administration, 2017; Coles et al., 2011; Eichler et al., 1992; Klinge, 2010; Kuhlmann & Annandale, 2010). These aspects may still be maintaining the male patriarchy in medicine and contributing to the sex and gender disconnect. In the attempt to standardize or normalize sex and gender the distinctions both biologically and socially female experiences may be ignored, or the male experience is used as a pseudo when we consider:

What we accept as reasonable, normal modes of being, thinking, feeling as a woman, a mother, or a healthcare practitioner, or a patient, is constituted via various practices.

Reason then becomes embodied in healthcare evidence, protocols, procedures, assessments, evaluations and everyday practice, it becomes its own practice; health-related actions and techniques come together with power to discipline and govern unruly bodies, behaviours gestures and action, even whole communities and nations (Aranda, 2018, p. 31).

Regitz-Zagrosek (2012) states that an attempt to try to rectify this can be met with resistance but insists that making gender medicine a priority can improve health outcomes for both men and women as

there are obviously obstacles against the promotion of gender medicine. It has been mistaken for feminism, attacked as 'biologistic' and assumed to generate higher costs by doubling the amount of animal work and increasing the number of patients needed for clinical studies without adequate payback. None of these arguments is true—gender medicine aims to improve the health of women and men; it considers sociological aspects and biological facts (p. 602).

It appears in this study the interplay and implications that discourse and language may hold normalized/standardized ways of being with respect to biological sex and gender in ERAS PE which may be skewed more to males.

**Key Finding #3: Hierarchy in medicine may also be represented in the ERAS IPC and therefore in the development of ERAS PE potentially limiting sex and gender implications**

Drawing upon FPS perspective, dominant discourse in recognition remains within the frame of “neoliberal assumptions universal rationality and objectivity” (Aranda & Jones, 2010, p. 249). This also connects further with the neoliberal and hegemonic forces existing in medicine when we consider the positioning and the sexes of the roles of HCPs in the hierarchy of medicine. In this study, the IPC ERAS Interprofessional Care Team (IPC) is made up of various disciplines and during the HCP interviews all HCPs were asked who developed the PE. Most HCPs were aware that surgeons were at the forefront of the PE development. In this study male HCPs held in the positions of surgeons and female HCPs were nurses. The process of the development of the PE may also be reflective of hegemonic forces that still exist and play out under the guise of the IPC. Aranda & Jones (2010) further stated

This in turn rests upon assumptions of a political and philosophical subject considered to be abstracted, individuated and depoliticized. As such these policy approaches or practice

initiatives remain decontextualized and silent over important difference of gender, race, ethnicity, class, sexuality, age and disability.” (p. 249)

Indicative of this study, I believe this is an area requires to be delved into deeper, particularly with respect to context and subjectivity and how this reflects in the concept of hierarchical and hegemonic forces still being present in the ERA PE. It may also be useful to conduct research inclusive of female surgeons and male nurses to explore if/how dominant/normalized views and assumptions may or not be different with the dynamic of participants. Unfortunately, in this study, I was unsuccessful in recruiting these demographics as part of the data collection process.

Furthermore, it was evident in this study, the role of nurse as the primary educator is not utilized fully to inform for sex and gender patient feedback/preferences. Although many HCPs were not aware of who produced the PE and they were not involved in the development of the ERAS PE; however, most nurses disseminated the ERAS PE on a daily basis to patients. Some HCPs reported that they produced their own PE independent of ERAS at times to address gaps (HCP1, HCP 6, hpc8 and hc9). In this study, patients reported that they spent most of their time and received most of their instruction and PE from nurses. This discourse about multidisciplinary teams can be looked upon as “both a prominent formative feature and an outcome of subjectivity’s precarious and often contradictory constitution....” (Anthony, 2011, p. 202). Because as stated earlier discourse develops from power and knowledge and how it is carried out in its forms of subjectivity this has both a “cause and effect” for nurses and may be attributed to the “professional subjectivity [which] stems from continued unconscious acceptance of hegemonic historic, socially constructed discourses” (Anthony, 2011, p. 203). The position of nurses within the hierarchy of medicine and their subjectivity may be explained by Hancock

(2007) cited by Anthony (2011) as put together from intersectionality of the “socio-historic, hegemonic discourses of gender and women as nurse” stating that nursing being a discipline that is predominately female yet exists within a space that was created and by and predominantly male (medicine) (Anthony, 2011). This can further be exasperated with the “continued unconscious acceptance of hegemonic historic, socially constructed discourses” that nurses may be internalizing” (Anthony, 2011, p. 203).

Discourse is not just linguistic in nature despite language being an important factor, but it brings together both power and knowledge to create reality not only descriptive but performative (Aranda, 2018). Zeeman et al. (2014) as cited in Aranda (2018) states knowledge that professional expertise is based upon knowledge becoming power; resulting in what would be considered normal. This knowledge then becomes what we normalize as healthcare within all its facets, how hierarchies within healthcare are constructed and how this gender is impacted and implicated.

These tensions exist in medicine and potentially within the contexts of ERAS IPC teams and as exhibited in this study, can be reflective of imbalances of power as members of these teams are not being utilized or included in various areas. Hoving et al., (2010) consider changes to medical practices such as the inclusion of nurse practitioners who have been educated with a greater focus on how to educate or counsel a patient. In this study, nurses may also be unconsciously playing out these roles in the hierarchy of the IPC, despite being the HCP who has the most contact with patients and freedom from these potential constraints could allow for the PE resources to be informed by nurses and to be more reflective of patient feedback.

**Key Finding #4: Power and Knowledge in medicine can exclude patient involvement**

The concepts of power and knowledge held quite an evident place throughout this study as they were expressed both explicitly and implicitly in all six themes that emerged in Chapter five. Power and knowledge in medicine and its hierarchies are evident in its structure, discourse and language; solidifying itself among these areas. It was particularly evident when patients spoke about their lack of agency and then subsequently in their surrender to the HCPs, in their perceived gaps in the PE, in the omission of ageing and may have been an undercurrent in their lack of seeing a difference between men and women in the PE. Cassidy, Goldberg & Aston (2016) refer to power in the FPS framework as something that is not forced upon people, but something that people experience through being part of negotiations and that power is experienced in several ways. Connecting this concept to this study, the structure of healthcare exists as something patients and HCPs experience and thus experience the power structures that interplay within the structure of healthcare.

It was important in this study to gain some insight into how power and knowledge operate in health care; how it has been created and then how it is exercised. Hancock (2018) narrows the focus of power and knowledge in medicine by drawing on Foucault's concept of the "medical gaze" and Foucault's metaphor of "carceral archipelago" (p.442). This metaphor of a group of islands being interrelated shines a light on numerous areas where medical expertise and knowledge are enacted causing this power to be woven throughout the structure of medicine and society (Hancock, 2018). Explicitly tying this study to the concepts of knowledge and power and their interplay, a key insight emerged "Modern medicine deployed a specific way of seeing, a "medical gaze" which could penetrate illusion and see the hidden reality, the hidden truth of the body that could only be understood by the medical expert." The lack of agency and surrender by

patients in this study reflected the “expertise of the HCPs and their knowledge wisdom of the doctor” thus offering them power in these interactions (Hancock, 2018, p. 442).

Clinical knowledge in medicine has been placed on a pedestal; the HCP is the holder of the expert knowledge and the patient is often the passive and silent receiver thus offering power to one party over the other in this dynamic. This sentiment played out in multiple interviews throughout this study for both patients (undercurrents emerged in the interviews that suggested patients were not the ones with the power because they lacked medical knowledge and know how) and HCPs (undercurrents emerged that they were the ones with the medical knowledge and expertise and through the sentiment that following and adhering to the PE patients may be able to improve their outcomes). This is not to say that people should not adhere to the instructions in the PE or from their HCPs. Rather, it is outlaid here to illuminate awareness to the hierarchical aspect of power that knowledge, more specifically that clinical knowledge and wisdom which supersedes and may even negate the patient’s knowledge of their body. This sentiment came across in this study through the interviews most evident in a patient reflection; on a male patient being dismissed by their family physician despite repeatedly complaining about symptoms that were eventually diagnosed as cancer (MP2).

Ultimately this brings into question where does knowledge exist? Within the patient’s body or with the healthcare system? The fact that within healthcare and how society has been structured the clinical expertise has offered the HCP hierarchy in this binary. The assumption is that knowledge in healthcare sits with the HCP and not with the patient. Aranda (2018) speaks to the “relations of self and others” that shape our “social and collective lives” (p 5). She elaborates with the underlying importance of associations which in “healthcare often becomes characterized as the privileged and powerful practitioner” when we look at the patient as the “excluded other”

(p.5). Even patients address this by statements referring to relying on HCPs or stating they complied with instructions completely acknowledging this power structure. It was also addressed with patient comments that they sourced resources when they did not feel what they were given sufficiently addressed their needs. Having said this by no means am I suggesting that HCPs do not hold valuable knowledge that patients require and do not have, moreover this is to say that patient involvement may help provide a better foundation from which decisions are made for better patient experience and outcomes.

When power and knowledge combine they create discourses, “ways of thinking, speaking and doing” that produces what for example healthcare/health/medicine, however this power has “no single source or axis” it is “non-possessive” and interwoven in all relations (Aranda, 2018, p. 31). Judith Butler elaborates on this notion of power in all relations as “selves are always coming into being” through social interactions; the performative notion of subjectivity (p. 31). Power is not something forced upon us, but encompasses our daily interactions with others and the world and these discourses shape the world we live in. That is not to say that power does not have structure or “dominant forms”, such as the medical clinic and that these ‘modes of discipline’ lead to an internalization of modes of discipline’ where no force is needed, we in fact “learn to discipline ourselves” (p, 31). Burr (2003) as cited in Aranda (2018) states that because of the lack of force appears to us as “choice or freedom between different forms of subjectivity ...we are caught between being subjected to dominate norms of medicine...and subject positions, such as how we feel or view our identity and self” (p. 31). In this study, patients expressed this subjectivity as both male and female patients reported to have complied with the PE and HCP instructions, went to appointments and followed ERAS guidelines and yet this was not forced on them overtly.



**Key Finding #5: PE may help male and female patients engage as partners in healthcare, gain agency and help improve patient outcomes/experiences through increased personalization**

Both male and female patients in this study expressed surrender primarily due to the lack of agency and a desire for agency they experienced in respect to placing their health and lives in the hands of the HCPs and the healthcare system however some forms of agency were also expressed. For example, all patients self-reported that they complied to both the PE and HCP instructions and some patients independently looked up relevant information when it was not provided by their HCP or engaged with other HCPs that could answer questions or fill gaps. Hancock (2018) addresses this as a reciprocal exchange of medical power, as patients become increasingly engaged in the decisions that impact their health and “to open the possibility of forging new health/medical subjectivities and self-understandings within the constraints of a medicalized society.” (p. 443).

Evidenced by the results in this study, I concede with Aston (2016) who suggests that enhanced agency may be more achievable by implementing a “user-centered design approach” to resource development and evaluation as it “requires the participants to be reflective and critique how their subjectivity is influenced by systemic structures” (Richardson et al., 2018, p. 4230). Pomey et al. (2015) addressed three areas of patient engagement practices: learning, assessment and adaptation; proactively including the patients in a care partnership. In respect to this study, patients suggested they would want to engage and contribute to the development of PE and some suggested some aspects that could have made their experiences better such as pairing patients up with patients that had recovered as a way to gain learn from previous patient experiences and have someone to discuss and walk them through some non-clinical components.

There also seemed to emerge a disconnect with what the HCPs and patients anticipated as requirements for PE. HCPs reported the objectives of PE being primarily to inform and educate the patient for the pre and peri surgical periods (although some comments were made about patients not be prepared to attend to aspects of aftercare at home and that this was an area that could be attended to). ERAS PE was predominantly focused on preparing for surgery and the hospital stay with little post discharge information. Patients agreed and felt that the pre and peri care periods were addressed quite well, however felt a considerable gap in the post care period.

It may be very beneficial to include patients in the process of the development of ERAS PE to fill in perceived gaps and provide more inclusion PE.

### **Limitations of Study**

Limitations for this study were addressed in Chapter three and I address them again here as well as a reflection of my study that I could have not foreseen prior to data collection.

Restricted sample size: This was a qualitative study and I wanted to delve into the experiences of participants, however, there was a small number of male and female patients and HCPs interviewed for this study; particularly female patients who I found more difficult to recruit in this study. In respect to the sample size of HCPs, I would have also like to recruit female surgeons and male nurses; this demographic was not included in this study and this may add another perspective. This sample size may not be representative of the larger patient and HCP population group. It would have been interesting to look at a study like this with larger numbers of participants to see if there are similar or different results.

Two urban hospitals: This study was done in two urban hospitals in the same city and this urban center may or may not be representative of other centers in terms of investigating SGS

ERAS PE. It would also be interesting and broaden the perspective if rural hospitals were also included into the study.

Restricted sample selection: Given the bounded system approached in this case study, I focused on only one surgical type; colorectal surgery due to the 50/50 prevalence for men and women. The findings from this study may not be representative of the whole ERAS surgical groups (with the various surgeries offered in this protocol) or patient populations for other diseases and illnesses. It would be interesting to see if results are the same or change given a change in the surgical type to investigate if a biological sex or gender approach would result in similar findings as well as if there were clinical implications that differed between males and females.

Restricted binary of male and female: For the purpose of this study I limited participants to the binary of male and female, however this study could be expanded to be inclusive of a gender spectrum.

Timing of interviews: Another limitation was that some patients could not recall all the PE immediately as they were interviewed up to 18 months post-surgery; upon reflection, perhaps interviewing patients 6-12 months after discharge would have been conducive for the increased recall of the PE.

Researcher bias: Throughout data collection and analysis, I attempted to address my own biases from being a patient and having been exposed to various types of PE as well as someone who works in the realm of equity, diversity and inclusion through my work and research. I made conscious attempts to objectively put my experiences in the background and foreground those of the patient participants. Despite these precautions and awareness of my own biases, I may have overlooked or included my bias in interpretation and analysis.

Research questions: I used semi-structured interviews in this study as the main form of data collection. Upon reflection, I wonder if I had probed more particularly about the sex and gender implications when participants stated they did not see any differences whether I may or may not have uncovered more detail or expressions about sex and gender. Upon reflection, I would alter the questions in a future study to go further in-depth or add more probing questions in this area.

Participant reactivity: The responses received in this study were based on the self-reporting by patients on compliance and their surgical journey and experience. It is also important to note that the outcome of the patient's surgery may also have been reflective of how they responded; if the outcome was well they liked their HCP and the experience (as they may overlook certain aspects) vs if the outcome was not as good as they hoped they may be more inclined to report negatively. I also think it may be important to interview more HCPs from the ERAS ICP team that directly developed the PE to gain further insight into their clinical roles and their proximity to patients in respect to dissemination of PE, pre, peri and post-surgery. In this study I did not inquire about diagnosis; I recommend that in future studies that questions about diagnosis be asked as this may impact responses given sex and gender implications.

### **Implications to PE**

Sex and gender have multiple implications for patients, HCPs, healthcare bodies/organizations and research. The World Health Organization (WHO, 2020) cites:

Sex and gender are both important determinants of health. Biological sex and socially constructed gender interact to produce differential risks and vulnerability to ill health, and differences in health-seeking behavior and health outcomes for women and men. (1)

'Gender' describes those characteristics of women and men that are largely socially

created, while ‘sex’ encompasses those that are biologically determined. However, these terms are often mistakenly used interchangeably in scientific literature, health policy, and legislation.

Furthermore, granting agencies across Canada, the United States and Europe indicate sex and gender implications can have serious consequences to research outcomes if they are not appropriately accounted for in research (NSERC, 2020). For example, the recent Dimensions Pilot Project (NSERC, 2020) at the federal level in Canada aims to increase equity, diversity and inclusion in research as well as the Canadian Institute of Health Research’s (CIHR) and the Sex and Gender Based Analysis (SGBA) modules which integrate sex and gender into health research and must be completed before applying for grants. A primary intent of this study was to engage in the discourse of sex and gender implications in PE; which is impacted by research which informs practice and practice ultimately leads to the development of PE. This study illuminated the perspectives of patients and HCPs of standardization of PE, which resulted in participants not recognizing sex and gender as factors in this surgical intervention. Despite this lack of recognition, there is evidence in the literature directly connecting biological and gender implications in colorectal surgery to males and females. This study also highlighted the omission of sex and gender implications in PE which may have consequences to the individual patient. It will be increasingly important to continue to incorporate sex and gender into research and practice in healthcare.

### **Implications: Patients**

Understanding how a patient’s sex and gender can impact their health experiences and outcomes has significant importance both biologically and socially. Allowing patient voice in the process can offer insight into their surgical journeys and can help to inform more inclusive and

succinct PE, leading to better patient experience and hopefully better patient health outcomes. Furthermore, this study has explicitly shown that patients are overwhelmed with multiple factors and undergo varying degrees of anxiety upon diagnosis and during the surgical journey and if HCPs can offer more succinct PE, while sorting through information they are given and if something is missing, attempting to look up materials and resources to identify important information.

There may be an enhanced potential patient safety issue as they go out to look for information and implement actions toward their health without their HCP's approval. They may find information that may not be medically credible or safe. Improving PE to be more inclusive or SGS approaches that patients feel is important in partnership with their HCPs will continue to produce more inclusive and useful PE. This may help fill the gaps that were perceived in the PE in a medically sound manner while valuing the patient experience and viewing patients as partners in healthcare rather than passive participants. Additionally, it may better enable them to navigate their surgical journeys in ways that are more personalized and fit their unique situations.

My study results demonstrated that patients have experiences that can inform the development of PE and most importantly a desire to want to contribute to more inclusive PE. Patients reflected on the surrender they felt in the process. Factors that contributed to this were lack of agency, these experiences and how they found that they were surrendering to the HCPs and their knowledge. Patients helped to identify what they felt was working and what they found were challenges and areas of improvement. The desire to want to be included in the process was also something that patients expressed and felt would enrich the PE. Patients surrender to the knowledge and power of HCPs because they lack medical knowledge. In doing so, this can

negate the rich experience and knowledge they have of their bodies and experience and maintain the status quo of medicine.

Consideration of patients in the process and acknowledgement that not only the knowledge that is held by the HCP is the most valuable but also the knowledge and experience patients bring in respect to their bodies and states of mind is valid and important in the development of PE. This will result in PE that is more inclusive and limit patient risk by producing medically sound information and even aid in reducing some of the anxiety and stress patients feel during this time; in this study, the Educational classes may have offered some ability to aid in this aspect. Based on this study, it is important that patients engage and use their voice to be involved in aspects that can improve their outcomes and alternatively, HCPs offer and make space for this to happen.

### **Implications: Healthcare providers**

It is important for HCPs to provide PE that includes not only information they feel is clinically important as was reflected in this study through PE objectives; but also, that incorporates the information that patients want and need. In this study, it was apparent that PE had the objectives to provide clinical information for the pre, peri and post-surgical phases. Although patients reported the PE was done well in the pre and peri surgical phases, PE was lacking in the post-surgical phases for some. PE may need to be assessed and go beyond clinical objectives and offer more agency to patients through their process. HCPs can offer space and opportunity for patient engagement at various levels of development.

Another aspect for implications for HCPs is the explicit and more widespread inclusion of nurses in the creation of the PE as an opportunity for PE to be better informed; given they are the ones who are spending the most time educating and working on the frontlines with patients.

Nurses are in a unique position to ask for patient feedback on the PE and incorporate that into the implementation of PE can prove to be useful.

There was evidence from this study that nurses and HCPs may not be prepared to discuss SGS implications with their patients; a finding that is aligned with findings by Cassidy, Goldberg & Aston (2016). I agree with the authors in that the development of the appropriate skills, including communication and information specific to their patients and pertaining to the specific procedure, should be examined. This may also illuminate possible curriculum gaps that may exist in medical training regarding SGS medicine for student nurses and residents. Students may not fully understand how these concepts and how they are discussed may impact patients' care. Addressing these gaps in a multi-pronged approach, such as through curricula, role modelling by clinical educators and then with patient/clinical student interactions, may help close these knowledge gaps given the push for more of a personalized approach in medicine. It may also be important to intentionally invite and attend to challenging conversations in nursing and medical education. It may become essential to offer this understanding for patients to receive optimal care. I also acknowledge that this finding does not generalize beyond participants in this study.

### **Implications: Healthcare Bodies/Organizations**

This study illuminates' implications for Healthcare Bodies/Organizations with respect to all areas of PE from pre, peri and post-care. In the hospital, HCPs are under various constraints, such as time and resources making personalized care more and more difficult for the HCPs in the hospitals (Marcum et al., 2002; Butler et al., 2018). Over the decades, hospitals have been moving towards early discharge plans as they aid in reduction of cost and primarily impact the bottom line. In this study patients indicated a significant gap has to do with post-care/post-discharge from the hospital. As evident from the study earlier discharge from hospital means



patients are still recovering at home, placing or giving patients a role and an increased responsibility for self-care. Patients need more concise, relevant and inclusive information in order to be effective partners in their health outcomes. Healthcare bodies/organizations that push for the benefit of the hospital's bottom line must also be inclusive of patient voice.

### **Implications: Researchers**

There may be profound implications to researchers in the realm of sex and gender in healthcare research. As evidenced in the literature there has been a “preferential use of male animals in drug development, and the under-representation of women” and as a result “Sex and gender aspects must be considered in drug use—taking into account pharmacokinetic and pharmaco-dynamic aspects—in health care and in public health” (Regitz-Zagrosek, 2012, p. 602). The author further places a call for “immediate action as we cannot ethically afford to ignore these research-backed results” (p. 602). This study was not only informed by this discourse, but the findings and implications further add to it. This study illuminated the gender-neutral perspective of participants towards sex and gender however this standardization seemed to lean towards the male patient. This study may point to need to ensure both equality and equity in health outcomes for both men and women in the area of PE, and the findings suggested the omission of female implications in the PE. In further studies, and learning from the limitations of this study, I would suggest that more patients, specifically female patients be recruited to address the findings of this study.

### **Recommendations for future research**

These sex and gender aspects of PE expose the deep androcentrism of a neoliberal capitalistic society and are seen in the exclusion and inclusion of gender throughout healthcare interventions, including PE (Aranda, 2018). There is more to be learned about how SGS

approaches impact PE, and how this may impact patients, HCPs, healthcare bodies/organizations and how this may impact practice and patient outcomes. Research is lacking in the relationship between PE and gender. There are few studies that look at how men and women use and engage with PE.

Several potential areas have emerged as opportunities to build on this dissertation. Future studies may explore 1) How are sex and gender taken up in curricula in medical and nursing schools? 2) Could patient informed SGS PE benefit patient experience and outcomes? 3) Why do men and women not see sex or gender implications in PE? 4) Does early discharge from a hospital have sex and gender implications for patients? Another area of interest for me was an in-depth discourse analysis of sex and gender implications of PE materials. For the scope of this study, a superficial review was done on the PE materials. It would be interesting to delve deeper into this area to determine if there are better ways to address sex and gender implications and to address them in a specific manner.

I continue to regard PE as an area of inequity between men and women in healthcare. The standardization of PE is helpful and given the fact that it is difficult to address all personalization, I understand the challenges associated with that as well. However, developing more inclusive PE may help target biological sex and gender implications, alleviate some of the stress and anxiety, address gaps that patients perceive and feel during this very stressful period of their surgical journey, and in turn aid patients and HCPs achieve better outcomes and experiences. Developing what those personalization's are will require more pointed research. Finally, while this study scratched the surface and exposed some gaps that patients perceive in PE, more research into what and how these gaps affect patient outcomes is needed.

## Summary

The purpose of this qualitative study was to gain an understanding of how men and women approach PE and how this impacts their patient experience. This study built upon existing literature to inform the development of PE by including patient voice and addressing perceived gaps in the PE to offer a better patient experience. Data was collected from a basic qualitative approach (Merriam, 2009; 2014), using semi-structured interviews, informal observations and a high-level review of the PE.

Six themes emerged from the interpretive data analysis in chapter five: 1) the recognition of surrender by patients, 2) the desire for patient involvement/agency in the process, 3) personalization of PE, 4) sameness and difference in the sexes, 5) the omission of ageing in the PE, and 6) the role/position of nurses in the healthcare hierarchy.

With respect to research and gender, the World Health Organization considers sex and gender as an important health determinant. Granting agencies in the Canada, US and Europe have all implemented sex and gender implications into granting guidelines/protocols/stipulations for studies such as the CIHR Sex and Gender Based Analysis Modules which must be completed by researchers before they can submit for a grant. This emphasis on sex and gender implications in research suggests that research has lacked this focus and due to this there has been a deficit in research outcomes focusing more on one gender. As research informs practice this has resulted in many drugs being removed from the market and potential harm to patients. Being inclusive of SGS implications in PE will aid in not only contributing to better outcomes and satisfaction for all patients but better outcomes for HCPs and healthcare bodies/organizations. These implications have impact at the micro level at the interplays of sex and gender on the individual within cultural and societal structures as we strive as a society for equality while being aware of

our differences. At the macro level through the lens of FPS, we can illuminate how societal structures and institutions of power such as medicine and healthcare implicate/perpetuate inequities through the use of hierarchies and knowledge which manifests as power allowing for dominant structures being maintained.

### **Researcher Reflection: “Transformative Journey”**

*As I conclude this study, I reflect on my role as both an educator and researcher. Beginning this doctoral journey, I wanted to contribute new insights and knowledge to an area that could produce a pragmatic benefit to the lives of patients through education. I wanted to explore how men and women approached PE, was it in similar or different manners, and could PE impact their experience? Being a patient at one time undergoing a surgical procedure, I danced around the nuances of this without being able to articulate this gap for myself. I knew I was emotionally and logically connected to the journey; that both the information I had was empowering in some areas and yet I was left with many questions. Based on the findings from this study, I recalled also finding myself ‘normalizing’ and accepting the aspects in the PE as they were presented as sufficient and complete. I also am forced to recall that these aspects in the moment are overshadowed by the potentially life altering surgical events that as a patient you feel you are facing. It was not only until after the surgery was complete and I had some space and resolution with my health that I could make space for considering these aspects.*

*Through this study, I learned how emotional and overwhelming this surgical journey can be for patients through their expression of anxiety and its intrusion into many factors and stages along the many phases an individual goes through during a health event (suggests one time) or experiences (suggests ongoing). My participation in exploring the world of a patients and their engagement with educational resources along with how impactful they can be as patients cling to*

*them when there are facing uncertainty, solidified their importance. I have learned far more than I set out to through the course of this study and have been humbled by how much more there will always be to learn.*

*As an educator, I have become even more aware of the importance of how we educate in terms not only the information we present, whose knowledge and experience is included, but also how attentive we are to the human aspects that people are facing in their lives. How can we find the balance between education for the sake of informing people and empathy for the sake of seeing them for the individuals with their contexts? How can we balance the healthcare systems need to improve patient outcomes via shorter hospital stays and better recovery rates for patients, and keeping open space for empathy and human connection? I will take this experience with me as an educator into the creation of curriculum, education as well as the classroom and into further research opportunities in this area.*

*As a researcher I was honored to be able to gain insight into the experiences of the patients; into their vulnerabilities as they faced uncertainties with their health and how that impacted their surgical experiences, health, families and caregivers. Their surrender, their lack of agency and their desire to be involved in the development of PE resonated with me in ways that I had understood to a degree in my own experience and potentially as a way to inform and this experience better for others.*

*I was forever changed by the patient's challenges, the strength they exuded and determination they had to do what they could to try to get the best outcomes for their health. This was also my feelings towards the HCPs in general and those in this study, who despite all their challenges they face on a daily basis were also determined to help and provide their patients*

*with the best of themselves and given what we are facing today with the Covid19 crisis are not only heroes today, but have always been our selfless heroes and lifesavers.*

*I engaged in conversation, reflection, frustration as I sifted through the data as to how I would present the experiences of these participants to illuminate the areas that would aid in making a positive change in PE to improve patient experience.*

*As I conclude this study, I have even more questions and want to delve deeper into aspects that emerged in this study. Although we reside in a world full of hierarchy, we do possess the desire of equity and equality that values our experiences and knowledge. I am transformed by this journey and look forward to other research that will aid in pragmatically improving the lives of people and creating a world of inclusion.*

*This study highlights that patients can contribute to knowledge in the medical world and find a place within this hierarchy which has largely excluded them, as passive participants. Their experiences can promote better more inclusive PE and hopefully better patient outcomes and experiences. I hope that this will inspire and inform research and education to incorporate and engage patients in the development of tools that impact their health outcomes.*

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## **Appendix A**

### Interview Guide for Individual Interviews

#### **Potential questions for patient group**

1. What kind of patient education tools did you receive and when?
2. What information or resources from health providers were most helpful in how you were prepared for surgery or in your interactions with them?
3. Are there aspects of yourself that you felt were not considered in how you were informed verbally or with education materials about surgery?
4. How was communication of ERAS relayed; do you feel you were represented in the ERAS educational tools provided. Why or why not?
5. Did you adhere and comply to the directions in the patient education?
6. What would you improve or omit from the educational tools?
7. Do you feel the role you play in your household affected your care when you were discharged from the hospital; why or why not?
8. Do you think a technical tool like an app would be useful? If so, how?
9. Would you have benefitted from a more personalized approach in terms of the educational tools you received?
10. What would your ideal patient education tool look like?

#### **Potential questions for clinician group**

1. When and how do you offer educational tools to patients?
2. Who creates these resources?
3. What are the objectives or the important aspects you want to relay to the patient through these tools?

4. Do you feel your patients adhere and comply to the recommendations and instructions in the tools?
5. Do you feel there are better patient outcomes and satisfaction for those who adhere to the educational tools?
6. Do you find you personalize or change your approach or instructions for your patients depending on their gender?
7. Do you feel personalized educational tools would be beneficial to patients?
8. Describe some feedback you have received from your patients regarding the educational tools you have given them. Do you agree with the feedback? Why or why not?

## Appendix B

### Selected Sample from ERAS Patient Education package: ERAS-Your Bowel

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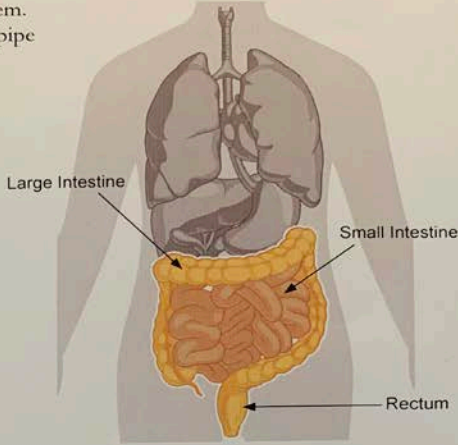
## ERAS - Your Bowel

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The bowel (intestines) is part of your digestive system. When you swallow food, it passes down your food pipe (esophagus) and into your stomach. From there it passes into your small bowel (intestine).

Your small bowel absorbs nutrients from the food. What's left goes to the large bowel.

The large bowel is about 6 feet (2 metres) long. This is where the fluid that comes from the small bowel is absorbed. Once the fluid is absorbed, the stool goes to the rectum. When you have a bowel movement, the stool passes from the rectum through the anus.




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## During Bowel Surgery

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The diseased or unhealthy piece of bowel is taken out. This can be done two ways: laparoscopic or open method.

1. Laparoscopic (Closed Method): Between 4 and 6 small cuts (incisions) are made in your belly (abdomen). A camera and instruments are used to take out the unhealthy bowel. The healthy ends of bowel are then sewn together.
2. Open Method: One cut, 4 to 8 inches (10 to 20 cm) long, is made in your abdomen. The unhealthy bowel is taken out and the healthy ends are sewn together.



**Alberta Health  
Services**

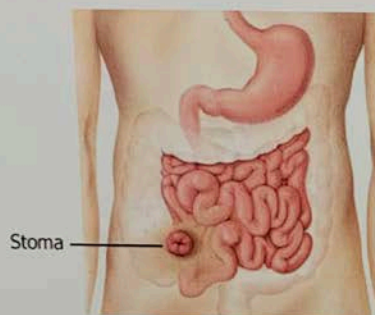
**ERAS**Alberta

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## Ostomy

If you need an ostomy after the unhealthy bowel is taken out, one end of bowel will be brought up to the surface of your skin (called a stoma) and stitched into place. Your bowel movement will pass into the pouch or small bag that covers the stoma. The stoma or bowel opening may be on either side of the belly.

Your surgeon will tell you if you will or may need an ostomy. In this case, you'll also see an ET (Enterostomal Therapy) nurse sometime after your surgery to learn about the ostomy and how to care for it. You'll learn how to empty and change your ostomy before you go home.



Ileostomy (right side)



Colostomy (left side)