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Natalie E. Fisher

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**Enriching the Perioperative Enhanced Recovery After Surgery (ERAS) Program
for Patients Undergoing Whipple Procedure for Pancreatic Cancer**

UNIVERSITY OF SAN DIEGO
Hahn School of Nursing and Health Science
Beyster Institute of Nursing

DOCTOR OF NURSING PRACTICE PORTFOLIO

by

Natalie E. Fisher

A portfolio presented to the

FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE
UNIVERSITY OF SAN DIEGO

In partial fulfillment of the
requirements for the degree

DOCTOR OF NURSING PRACTICE

May 2022

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Acknowledgments

I would like to gratefully thank my parents. Mom and Dad, I would not be where I am today without the support and assistance to get me through all the way to the end. My endless cheerleaders who always talked me through my fears, my doubts, and my insecurities. I dedicate my biggest accomplishment, this doctoral degree, to you. I guess now you will have to really listen to me when I tell you to do something related to your health, it will be a “Doctor’s order.” I love you both so very much.

I would also like to express my gratitude to a friend and colleague, Caroline Rubin NP, who worked with me for the last few years to complete this project from start to finish. She was always available to bridge the gap between other medical professionals and myself who were involved in the project. Caroline has always been an inspiration of mine and a great supporter of my ideas related to Surgical Oncology, especially when it comes to pancreatic cancer.

Finally, I would also like to thank Dr. Maxwell, my faculty advisor. As soon as I took advanced pathophysiology the first year of the program, I knew I wanted you to guide me throughout this project.

My project is also dedicated to the memory of two patients I have had the greatest of pleasure working with during my time as a RN, and I will never forget the impression you both made on me. I will remember you always, Toni and Pamela.

Documentation of Mastery of DNP Program Outcomes

Final Manuscript

**Enriching the Perioperative Enhanced Recovery After Surgery (ERAS) Program
for Patients Undergoing Whipple Procedure for Pancreatic Cancer**

Natalie E. Fisher

Dr. Kevin Maxwell, PhD, DNP, FNP-BC, Faculty Advisor

University of San Diego

Abstract

Pancreatic cancer remains one of the most complex and lethal diseases worldwide with surgical resection as a major treatment choice. Although surgery may be one of the only options for advanced pancreatic cancer, it is not without a lengthy hospital stay, a long list of possible postoperative complications, and an increased risk for readmission after discharge. Enhanced recovery after surgery (ERAS) programs have been implemented for years in other surgical services for cancer care. These programs have now been extended and researched to include patients undergoing surgery for pancreatic cancer. These programs are designed to assist patients and their families throughout the entirety of the perioperative period. This includes providing information preoperatively to educate patients on the expectations during their hospital stay to empower them to reach postoperative milestones sooner. These programs are evidence based and incorporate a multimodal approach to improve perioperative treatment. Reaching postoperative milestones in line with a structured and standardized program specifically designed to a specific surgical procedure helps to increase knowledge and decrease inpatient length of stay.

Keywords: pancreaticoduodenectomy, enhanced recovery after surgery, perioperative education, length of stay, knowledge, evidence-based practice

Enriching the Perioperative Enhanced Recovery After Surgery (ERAS) Program for Patients Undergoing Whipple Procedure for Pancreatic Cancer

Background and Significance

Pancreaticoduodenectomy, also known as the Whipple procedure, remains the standard surgical treatment for pancreatic cancer. The Whipple procedure involves removal of the head of the pancreas, the duodenum, a portion of the common bile duct, the gallbladder, and sometimes part of the stomach (Alkattan, 2018). Due to the complexity of the Whipple procedure, there are a multitude of complications that arise in the perioperative period that can cause a delayed and lengthy hospitalization. Major postoperative complications include: pancreatic leak or fistula, intra-abdominal abscess or infections, bile leak, bleeding, delayed gastric emptying, and surgical site infections (Karim et al., 2018).

Enhanced recovery after surgery (ERAS) programs were developed to standardize surgical pathways and guide patient care safely and effectively without compromising patient outcomes. ERAS programs or protocols are multimodal, evidence based, and address key factors that have been reported to increase a patient's hospital stay after surgery (Tezber et al., 2018). These programs include a focus on perioperative patient education, preoperative carbohydrate loading, reducing stress, optimizing pain management, initiating the reintroduction of nutrition earlier, discharge planning, and extensive physical therapy (Sibbern et al., 2017).

Although there will always be a need for individualization of patient care, ERAS programs have been found to be extremely valuable and effective in high-risk populations, including pancreatic surgery patients (Morgan et al., 2016). Allowing

patients to be involved in and at the center of their care empowers them to take an active role in their recovery, thus improving outcomes and quality of life.

Purpose and Aims

The purpose of this evidence-based practice project was to evaluate the effects of a standardized preoperative education plan with the use of ERAS guidelines for patients having pancreaticoduodenectomy surgery, also known as the Whipple procedure, compared to the current practice. Current practice involves no formal educational medium for patients requiring the Whipple procedure for pancreatic cancer. A change to practice was the introduction of an educational booklet with in-person teaching that was specific to the surgical procedure and expected hospital course during the preoperative stage prior to hospitalization. The intended goals were to increase patient knowledge of the surgical procedure and perioperative care and to assess for concomitant reduction in hospital length of stay (LOS).

Evidence-Based Practice Model

To implement the ERAS protocol into clinical practice, the use of the Iowa model of evidence-based practice to promote quality care was most fitting. The Iowa model helps to guide nursing staff and other supportive clinicians to make decisions about clinical and administrative practices that affect patient outcomes; the model is widely used throughout healthcare systems due to its applicability and ease of use by multidisciplinary teams (Melnik & Fineout-Overholt, 2019). This project required the cooperation of multiple interdisciplinary team members, including physicians, advanced practice providers, nurses, dietitians, and ancillary staff at the outpatient clinic. The

success relied heavily on the collaboration of all members on every aspect of patient care across the continuum of preoperative to postoperative treatment.

Literature Review and Evidence of the Problem

An extensive literature review was conducted utilizing the electronic databases of CINAHL, MEDLINE, and PubMed. Areas of focus included length of hospital stay, patient education, and knowledge assessment alongside the implementation of standardized ERAS programs for pancreatic cancer. Key search terms included combinations of the following: adenocarcinoma, education, enhanced recovery after surgery, ERAS programs, length of hospital stay, pancreatic cancer, pancreaticoduodenectomy, patient knowledge, preoperative, postoperative, perioperative, surgery, Whipple.

Morgan et al. (2016) completed a retrospective review of pancreatic surgery at a single institution over a period of 3 years and included a total of 378 patients. They found patients undergoing surgery for neoplastic disease, such as pancreatic cancer, are more likely to achieve a measurable benefit from the ERAS protocol measures, which will reduce stress, limit perioperative organ dysfunction, and minimize complications. This study also assessed the effect of ERAS programs on decreasing hospital length of stay for Whipple procedures. The LOS for patients undergoing surgical procedures for cancer was found to be 6.6 days versus 8.7 days, which was a statistically significant finding ($p < .03$). Therefore, focusing on patient-centered care and incorporating the patient and their family as a part of the healthcare team with the use of ERAS programs can be extremely beneficial to achieving positive outcomes.

Pandit et al. (2019) concluded the ERAS principle is based on the fact that it is the system that includes the multidisciplinary team—not solely the individual surgeon—who drives the success of surgical outcomes. This retrospective review included 25 patients over a 3-year span. Postoperative LOS in pancreatic surgery varies from 7 days to 13 days. This study found that with 70% compliance of ERAS elements and a dedicated single surgeon performing the procedures, the mean LOS was 10.8 days (Pandit et al., 2019). The standardized process of the ERAS program limits human errors and is critical to the success of these pathways. Several systemic reviews and meta-analyses have demonstrated the use of ERAS programs with shortened postoperative hospital stays (Pandit et al., 2019).

A quality improvement project completed on a comparable surgical unit in a North Carolina hospital found when an ERAS program was implemented on a specialized hepatobiliary unit, within 1 year, the mean LOS for Whipple patients had decreased from 12.8 days to 9 days (Tezber et al., 2018). Patients and their families attended an educational class preoperatively and were given a web-based survey before and after the class to assess understanding of educational material. Tezber et al. (2018) determined a knowledge increase from 60% to 80.5% after patients attended the ERAS educational class.

The literature has also demonstrated postoperative surgical outcomes and patient knowledge are closely tied to the quality of the education given in the perioperative setting: “Whether patient instructions are Internet-based, print, or one-on-one before or after the surgical procedure, the most effective teaching for patients is multidimensional” (Seeman, 2019, p. 99). Patients will be better prepared to care for themselves

postoperatively by ensuring applicable and comprehensive perioperative education plans. Effective and continuous interaction by members of the healthcare team are critical determinants in patient satisfaction, hospital stay, and recovery.

Design and Methods

This project was implemented on a specialized surgical oncology unit within the organization of the University of California San Diego Health (UCSD). The educational material was developed from information currently provided to patients from online sources and handouts created by Regents of The University of California (2021). The educational booklet (see Appendix E) created for this project was then peer and patient reviewed prior to achieving permission from the patient education committee for use at the organization.

After a comprehensive literature review, the principal investigator of this project generated an 11-question survey to assess patients' knowledge of the surgical procedure, the ERAS program, and thoughts on the educational materials presented. This was conducted with the use of Qualtrics, an online survey tool. The survey questions used a 5-point Likert scale and are outlined in Table 1. The 5-point Likert scale asked survey participants to rank their agreeance of the question on a scale of "strongly disagree," "somewhat disagree," "neutral," "somewhat agree," and "strongly agree."

Patients were selected from a list of those with upcoming Whipple procedures from the outpatient clinic database. Patients were contacted via phone or email and asked to agree or decline participation. Once they agreed to participate in the study, they were sent the pre-education survey link via email to assess baseline data. The pre-education survey yielded a 100% response rate with 4 responses.

With constraints related to the Coronavirus pandemic, patients involved in this study were not able to be met in person prior to their surgical procedures. They were sent their educational booklet in a PDF version via email and provided the preoperative education over the phone. The patients would then receive their hard copy of the educational booklet in person after their arrival to the specialized surgical oncology unit for use and reference during their hospital stay.

Follow-up surveys were given to the patients after they received their educational booklet and were near their discharge date. The follow-up survey was identical to the first survey to assess increases in knowledge and patients' thoughts on the educational material. The post education survey yielded a 100% response rate with 4 responses.

Table 1

Survey Questions

Question 1	I understand what the pancreas does in the body.
Question 2	I have a good understanding of the Whipple surgical procedure.
Question 3	I know my role in the Enhanced Recovery After Surgery (ERAS) program during my hospital stay.
Question 4	I understand the importance of nutrition before I have surgery.
Question 5	I know what foods I should eat after surgery.
Question 6	I understand the role of pancreatic enzymes in food digestion.
Question 7	I know what medications I will be taking after surgery.
Question 8	I know what drains I may expect to have after surgery.
Question 9	The information presented in the booklet was explained in a way I could understand.
Question 10	With the information presented in the booklet, I feel more prepared to have surgery.
Question 11	I would recommend the booklet to other people with pancreatic cancer as a way to learn about the Whipple surgery.

Ethical Considerations

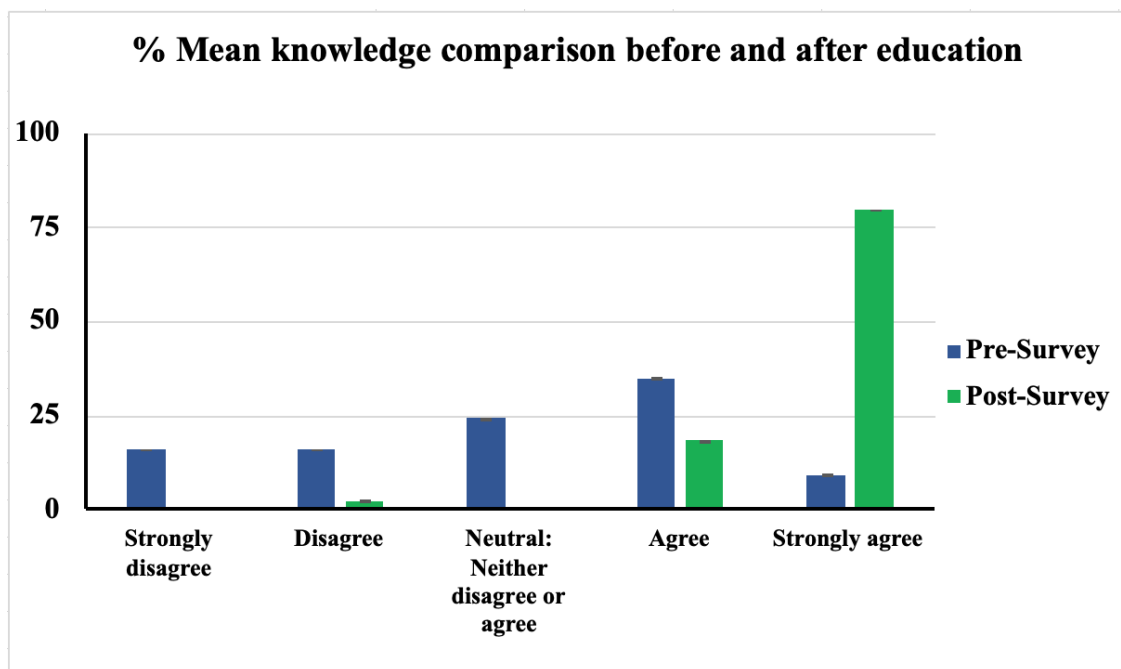
This study was approved by the Institutional Review Board of the University of San Diego, Hahn School of Nursing (IRB-2022-110). The study was also approved by

the UCSD ACQUIRE (Aligning and Coordinating Quality Improvement, Research, and Evaluation) Committee (Project # 240). Letters of approval can be found in Appendix A and B, respectively. As mentioned, educational materials were approved by the patient education committee at UCSD as well.

Results

For the presurvey, regarding baseline data assessment, 15.9% of patients selected “strongly disagree,” 15.9% selected “disagree,” and 24.2% were “neutral” to questions related to their knowledge and understanding of pancreatic cancer, the ERAS program, the Whipple procedure, and the postoperative plan. After the education was presented, 0% of patients selected “strongly disagree,” 2.3% selected “disagree,” and 0% selected “neutral.” A Kruskal-Wallis test was performed on this data, which showed statistical significance between the surveys, with $p < 0.05$.

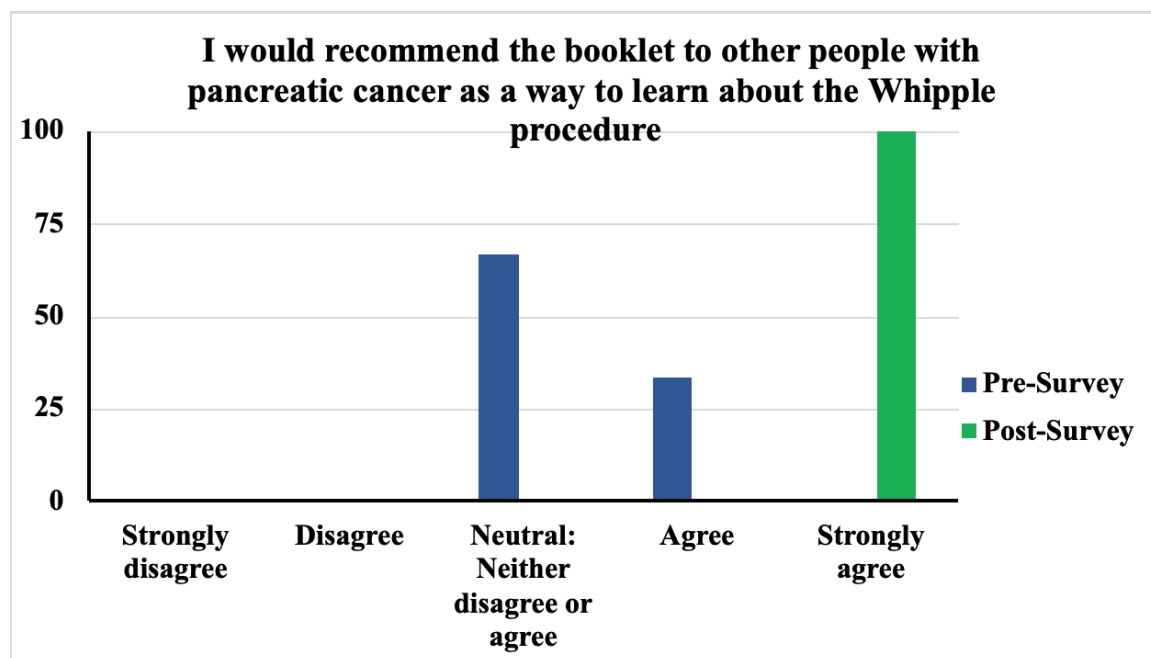
Conversely, only 9.1% participants selected they “strongly agree” to the knowledge assessment questions presented in the presurvey. This percentage changed drastically with the postsurvey results, and 79.5% of participants had then selected “strongly agree” regarding the knowledge assessment questions presented. This indicates there was 70.4% increase in patient knowledge related to the educational material with a 95% confidence interval ± 0.26 . Figure 1 illustrates the mean knowledge comparison between the presurvey and postsurvey. These data suggest the education given to patients during this study was found to be valuable in increasing patients’ knowledge and understanding to prepare for their upcoming hospitalization.

Figure 1*Mean Knowledge Comparison Before and After Education*

As there was no existing conventional educational plan for patients undergoing the Whipple procedure, the feedback on the newly implemented educational material presented was profoundly positive. Comments were received from both interdisciplinary staff involved in the development of this project and patients involved in the study. Patients and their families mentioned how the educational booklet would be beneficial for other patients undergoing surgery for pancreatic cancer at other organizations. A few patients asked for additional copies of the educational booklet so they could give them to others they knew who planned to undergo the Whipple procedure at other organizations. Figure 2 outlines patient support for continued use of the educational material for other patients with pancreatic cancer and a need for the Whipple procedure.

Figure 2

Patient Recommendations of the Educational Booklet to Others with Pancreatic Cancer



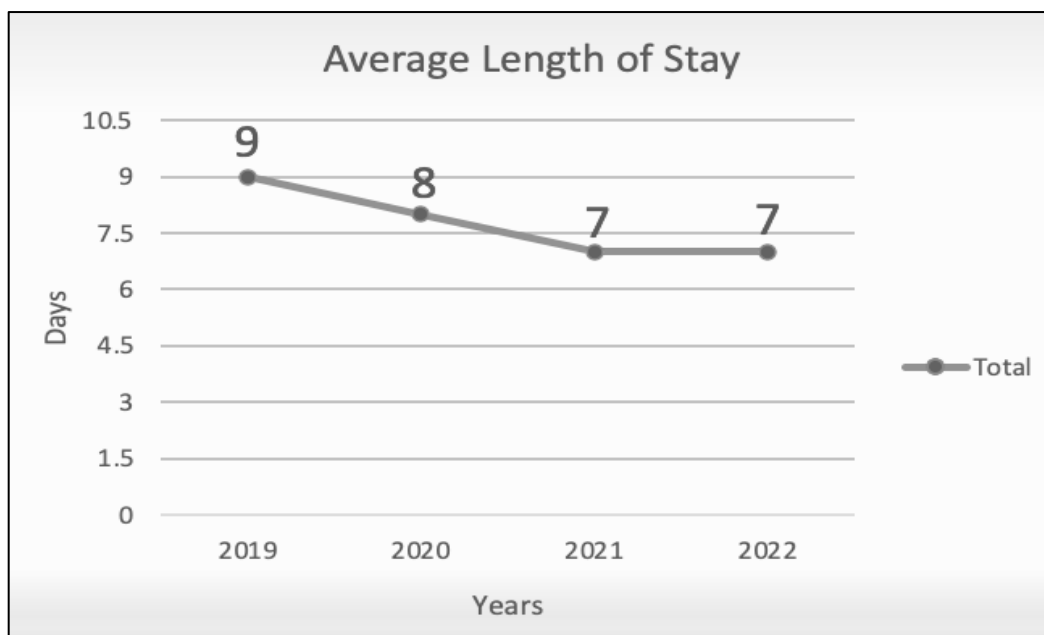
The ERAS program was originally implemented at the organization in 2019. An important factor of this project was the setting of a specialized surgical oncology inpatient unit. As current employees of a high-volume center, the nursing staff were familiar with the standardized ERAS program and guidelines, which assisted with consistent information given to patients during their stay. By following the set guidelines of the ERAS program and the added assistance of the education materials in the preoperative period, an environment for the patient and their family to feel prepared and secure was created.

Prior to the implementation of the ERAS program at UCSD, the average length of stay for the Whipple procedure was a total of 9 days. Figure 3 demonstrates the gradual decline of inpatient length of stay averages from 2019 to 2022, which is consistent with

continued utilization of the ERAS program. The patients in this study had an average LOS of 7 days.

Figure 3

Average LOS



Study Limitations

A major limitation of this study was a small sample size as this retrospective review had a total of 4 patients with the implementation of the educational program from the end of November 2021 to February 2022. Although considered a high-volume center for the Whipple procedure, variability of the number of patients can differ greatly during set time frames. This study was conducted toward the end of the year without factoring in potential changes related to holidays, surgeon availability or time off, patient preference, and the impact of the Coronavirus pandemic. Further studies should be prospective, focus on a larger sample size, and have a longer duration of post implementation data collection.

Discussion

Overall, ERAS programs are essential aspects for standardizing surgical pathways and improving patient outcomes. These programs have been shown to work with other various surgical services at UCSD including colorectal, urological, and solid organ transplants; they should continue to include patients undergoing the Whipple procedure for pancreatic cancer. The addition of a standardized preoperative educational booklet compared to the current practice was found to be beneficial. Not only has the implementation of an ERAS program been shown to decrease duration of stay in the hospital, but also it allows the patient to be at the center of their own care and increase their understanding of what is expected of them during their stay. Based on pre and post survey results, patients to feel more secure and in control of their situation, patients are more apt to follow the expected postoperative milestones required of them during their stay, which in turn improves their surgical outcomes and quality of life.

Conclusions

ERAS programs require collaboration between a complex interdisciplinary team involved in many aspects of patient care to be successful. Perioperative education has been shown to assist with increased patient and family knowledge and participation throughout the inpatient hospital stay. Researchers have studied ERAS and indicated:

Patient education is of paramount importance when speaking of ERAS, in fact, the best surgical outcomes are possible only when patients take ownership and responsibility for their role; only by doing this the patients can fully understand the different items of the protocol and adhere to them in the best way. (Taurchini et al., 2018, p. 3).

Further implementation of ERAS programs that have been shown to improve outcomes and decrease hospital LOS will incrementally improve patient care while empowering patients to take a more participative role in the process. Advancing the standard of care while reinforcing the utility of a multidisciplinary team with patients undergoing complex medical procedures may lead to an improved collaborative environment with ripple effects extending far beyond the post-surgical period.

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<https://doi.org/10.1097/nna.0000000000000619>

Appendix A

IRB Approval



Oct 22, 2021 10:52:23 AM PDT

Natalie Fisher
Hahn School of Nursing & Health Science

Re: Exempt - Initial - IRB-2022-110, Enriching the perioperative enhanced recovery after surgery (ERAS) program for patients undergoing Whipple procedure for pancreatic cancer.

Dear Natalie Fisher:

The Institutional Review Board has rendered the decision below for IRB-2022-110, Enriching the perioperative enhanced recovery after surgery (ERAS) program for patients undergoing Whipple procedure for pancreatic cancer. .

Decision: Rely on External IRB

Selected Category:

Findings:

Research Notes:

Internal Notes:

*The USD IRB requires annual renewal of all active studies reviewed and approved by the IRB. Please submit an application for renewal prior to the annual anniversary date of initial study approval.
If an application for renewal is not received, the study will be administratively closed.*

Note: We send IRB correspondence regarding student research to the faculty advisor, who bears the ultimate responsibility for the conduct of the research. We request that the faculty advisor share this correspondence with the student researcher.

The next deadline for submitting project proposals to the Provost's Office for full review is N/A. You may submit a project proposal for expedited or exempt review at any time.

Sincerely,

Eileen K. Fry-Bowers, PhD, JD
Administrator, Institutional Review Board

Office of the Vice President and Provost
Hughes Administration Center, Room 214
5998 Alcalá Park, San Diego, CA 92110-2492
Phone (619) 260-4553 • Fax (619) 260-2210 • www.sandiego.edu

Appendix B

Letter of Support from Clinical Site

Date: 10/8/2021

To: Natalie Fisher

Re: Project # 240
Enriching the perioperative enhanced recovery after surgery (ERAS) program for patients undergoing Whipple procedure for pancreatic cancer

Dear Natalie,

Your project has been reviewed by the UCSD ACQUIRE (Aligning and Coordinating Quality Improvement, Research, and Evaluation) Committee. The ACQUIRE Committee approval of this project included a determination that the project is not regulated as research involving human subjects as defined in 45 CFR 46 or 21 CFR 56 and does not require Institutional Review Board review or approval. Consistent with UCSD policy and federal regulations, the UCSD Human Research Protections Program (HRPP) has delegated authority to the ACQUIRE Committee to make such determinations. The Director and/or Medical Director of the HRPP are members of the ACQUIRE Committee.

Though certified as not human subjects research, the project leader should ensure that the activities associated with the project are conducted in compliance with applicable UCSD and Rady Children's Hospital-San Diego policies and ethical standards as well as local, state, and federal regulations.

In addition, this approval is based on the intended work and scope of activities outlined in the proposal that was submitted. If the nature or scope of this activity changes substantially, then a re-evaluation by the ACQUIRE Committee would be necessary.

Also, the project reviewers provided the following suggestions for your consideration:

Sounds like you're connected to the Patient Education Committee. Please reach out to Ayelet Ruppin-Pham, Patient Education Specialist if you need any other support or expertise. Outcomes of LOS and patient satisfaction make sense. What about surgical site infection rate as well? Also, for Patient Satisfaction, you might be able to use benchmarked NRC data (Managed by the Experience Transformation Dept), which would make your outcomes stronger as well.

Should you have any questions, please contact the Robert El-Kareh at relkareh@health.ucsd.edu.

Sincerely,



Robert El-Kareh, MD, MS, MPH
Chair, ACQUIRE Committee
relkareh@health.ucsd.edu

Appendix C

Poster Abstract

ENRICHING THE PERIOPERATIVE ENHANCED RECOVERY AFTER SURGERY (ERAS) PROGRAM FOR PATIENTS UNDERGOING WHIPPLE PROCEDURE FOR PANCREATIC CANCER

Natalie Fisher, DNP Student, BSN, RN
Dr. Andrew Lowy, MD, FACS, Caroline Rubin, FNP-BC
Dr. Kevin Maxwell, PhD, DNP, FNP-BC, Faculty Advisor

Purpose: The purpose of this evidence-based practice Doctor of Nursing Practice (DNP) project was to evaluate the effects of standardized preoperative education with the use of Enhanced Recovery After Surgery (ERAS) guidelines for patients having pancreaticoduodenectomy surgery (Whipple procedure) as compared to the current practice.

Background: Pancreatic cancer is one of the most complex and lethal diseases worldwide with surgical resection as a major treatment choice. ERAS programs are influential in standardizing surgical pathways and improving patient outcomes by providing information preoperatively to educate patients on what to expect during their hospital stay. This empowers patients to reach post-operative milestones sooner. These programs are evidence based and incorporate a multimodal approach to improve perioperative treatment. Reaching postoperative milestones in line with a structured and standardized program specifically designed to a surgical procedure helps to increase knowledge and decrease inpatient length of stay (LOS).

Methods: The study used retrospective data from chart review for a total of four patients, with limitations due to COVID-19 constraints. Data were collected from the electronic medical record and surveys collected from patients pre and postoperatively. Research articles were compiled and categorized between November 2019 to February 2022.

Results: Post surveys clearly indicated there was 70.4% increase in patient knowledge with a 95% confidence interval ± 0.26 . LOS after implementation of this project remained at a 7-day average for this small sample size. Although not statistically significant, LOS is consistent with baseline data and over time this has shown continued improvement.

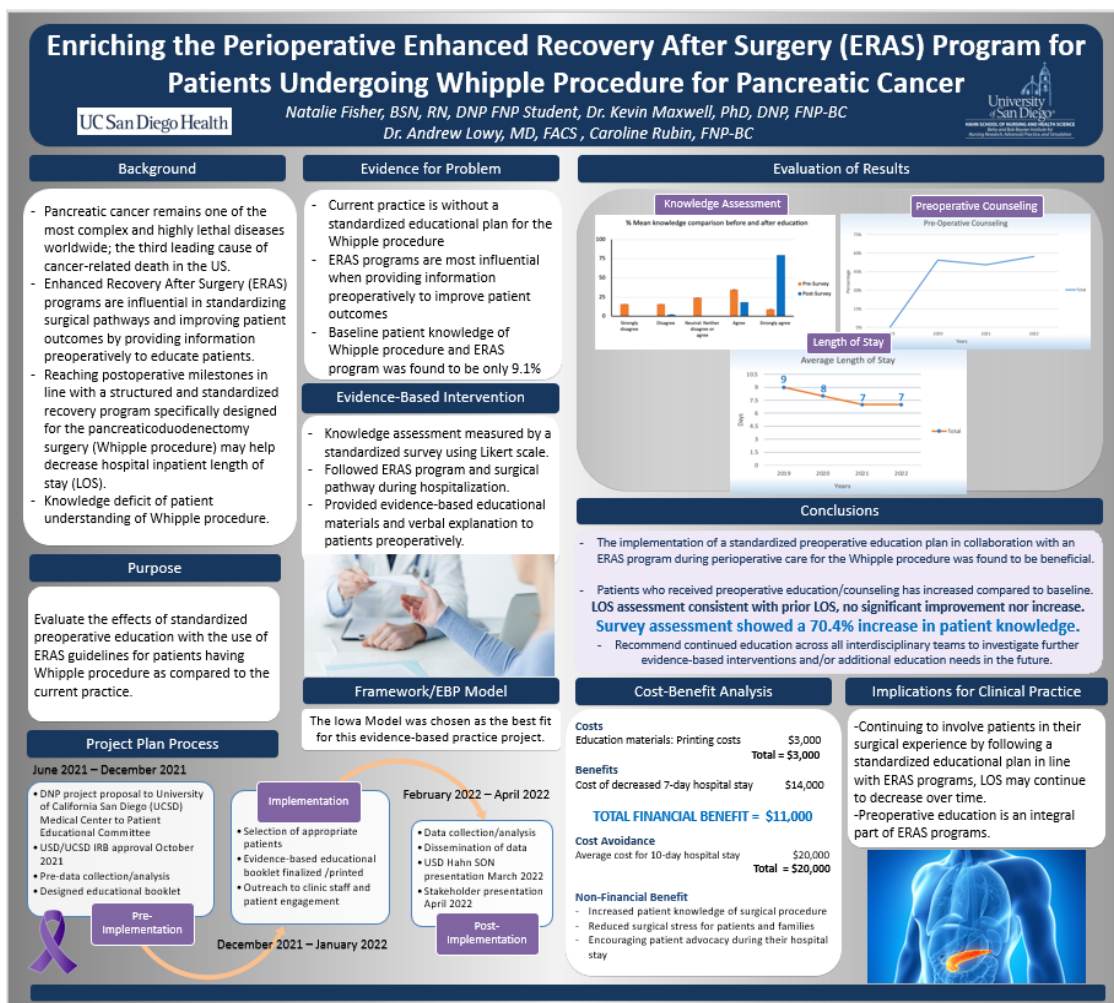
Evaluation: The implementation of a standardized preoperative education plan in collaboration with an ERAS program during perioperative care for the Whipple procedure was found to be beneficial.

Clinical Implications: Continuing to involve patients in their surgical experience by following a standardized educational plan in line with ERAS programs, LOS may continue to decrease over time. Preoperative education is an integral part of ERAS programs.

Keywords: pancreaticoduodenectomy, perioperative education, length of stay, knowledge, evidence-based practice

Appendix D

Poster



Appendix E
Educational Booklet



PANCREATIC CANCER

A Patient's Guide to
Whipple Surgery

Thank you for choosing UC San Diego Health

Our Pancreatic Cancer Team

Moore's Cancer Center at UC San Diego Health has been named a National Pancreatic Foundation Center by the National Pancreas Foundation.

This designation is for premier health facilities that focus on high-quality, team-based approaches to pancreatic disease.



Our team offers a compassionate, comprehensive approach to diagnosing and treating pancreatic cancer.

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- Where is the Pancreas? (pg. 4-5)
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- Taking an Active Role in Your Surgical Journey Before Surgery (pg. 6)
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The Role of the Pancreas in Your Body

The pancreas is an organ that also works as a gland to make substances the body needs. It has an important dual function: it makes substances (known as enzymes) for food digestion and hormones such as insulin and glucagon which balance the amount of sugar (also known as glucose) that is stored or used by the body.

The pancreas releases the enzymes during meals to help you digest food. The enzymes enter your intestine through tubes called ducts. The main pancreatic duct is at the head of the pancreas. It joins with the common bile duct and mixes with other substances that come from the liver and gallbladder.

The merged ducts open into the first part of the small intestine (also called the duodenum). In the duodenum, the enzymes help break down fats, sugars, and proteins from the food you eat.

The pancreas also makes hormones that are released into the blood, including insulin and glucagon, which control your blood sugar. These hormones help your body use and store the energy created from the food you eat.

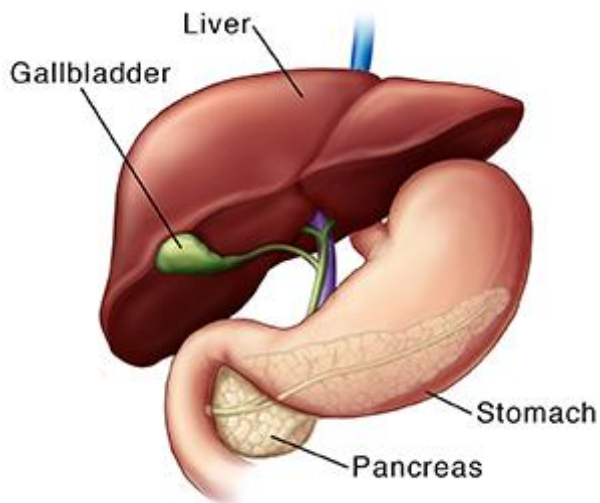
Where is the Pancreas?

The pancreas is located in the abdomen and is surrounded by the stomach, spleen, small intestine, gallbladder and liver. The pancreas is about 6 inches long.

The head of the pancreas is on the right side of the abdomen, behind where the stomach meets the duodenum (du-o-de-num), the first part of the small intestine.

The body of the pancreas is behind the stomach.

The tail of the pancreas is on the left side of the abdomen next to the spleen.



What is Pancreatic Cancer?

Organs, like the pancreas, are made up of cells which divide to form new cells as the body needs them. When cells get old, they die, and new cells take their place.

Sometimes this process does not follow the normal steps to create new cells.

New cells can form when the body does not need them, or old cells do not die. These extra cells may form a mass of tissue that is then called a tumor.

When pancreatic cancers (tumors) spread to other areas of the body, the cancer cells are now called metastatic and are still treated as pancreatic cancer. Pancreatic cancer often spreads to the liver, abdomen and lungs.

Surgery for Pancreatic Cancer

Pancreatic cancer can grow within the pancreas for a long time before it causes any symptoms.

Patients who are eligible for surgery have access to surgeons who are among the top performing cancer surgeons in the region with experience in this highly specialized type of

pancreatic surgery at UC San Diego Health.

The Whipple Procedure

The Whipple procedure, or pancreaticoduodenectomy (pan·cre·ati·co·duo·denec·to·my), is the most common surgery for removing tumors known as adenocarcinomas from the head of the pancreas. Adenocarcinoma is a term for cancer that starts in the glands that line the inside of one of your organs, like the pancreas.

This is a complex operation that involves removal of the pancreas head, duodenum (the first portion of the small bowel), the gallbladder, and part of the common bile duct. Sometimes the body of the pancreas, part of your stomach and nearby lymph nodes may be removed, as well.

After this surgery, bile from your liver, food from your stomach, and digestive juices from the remaining part of your pancreas all go right into your small intestine. You can still digest foods, but you may need to take pancreatic enzyme pills to help with this.

The surgery takes several hours because there are a number of blood vessels around the tumor. In addition, the reconstruction is extensive as your surgeon makes new connections between the small bowel, the pancreas and bile duct (so that bile can flow for proper food digestion). A new connection is also created between the small bowel and the stomach.

Patients generally have a stay in the hospital from 5-7 days if there are no complications.

Taking an active role in your surgical journey before surgery

Along with your surgical team, you should take an active role in preparing before and after your surgery to have the most positive outcome.

Your team will give you important details on how to prepare your body for surgery, including exercise, deep breathing, and alcohol and/or tobacco cessation.

On the day of surgery, you will wipe your body from neck down, front and back, swab your nose, and brush your teeth with a special solution to help decrease your risk of infection. This is called the “Nose-to-Toes” pre-operative bath.

It is especially important to wipe down your abdomen as instructed the day before and an additional time the morning of your surgery.

Before Surgery: A focus on nutrition

Nutrition Before Surgery

Good nutrition before and after surgery is a crucial component to your recovery. Having surgery is similar to running a marathon.

Your body will be put through a significant amount of stress, which can lead to weight loss, inflammation and complications. These guidelines can help you to prepare your body for the “big day” and a speedy recovery.



Nutrition Tips for Faster Recovery

- ❑ Increase your intake of nutrient-dense foods. Enrich your diet with whole grains, high quality protein and a variety of fruits and vegetables.
- ❑ Consider eating smaller meals throughout the day if you have a poor appetite. Try not to skip meals!
- ❑ Choose protein rich foods. Good choices include lean meats, poultry, eggs, fish, yogurt, nuts/nut butters, beans and protein shakes.
- ❑ Add protein shakes to your diet to increase your protein intake. Some suggestions are Boost, Ensure, Core Power 42, Carnation Instant Breakfast and Kate Farms. You can also make a homemade high energy protein shake by using ingredients like yogurt, avocado, nut butter or milk.
- ❑ Stay hydrated! Aim for a ½ ounce per pound of weight in water per day. Example: A 150 pound patient should aim for 75 ounces of water each day.

Carbohydrate Loading

“Carb loading” right before surgery has been shown in research to help reduce inflammation, insulin resistance, nausea/vomiting and length of stay in the hospital. As part of the ERAS protocol, you will be instructed to drink the ERAS Pre-Op carb loading drinks (Ensure Pre-Surgery). Please drink as directed: 2 bottles, 8-12 hours the day before surgery and 1 bottle, 4 hours before surgery. The pre-operative nurse will speak to you about what to do if you have diabetes.

What Else Can You Do?

You will meet with a Registered Dietician prior to surgery. Please notify your surgical team if you have not met with a dietician. They can help you with any questions or concerns you may have, especially if you are having trouble eating or are losing weight.

The ERAS Program:

Enhanced Recovery After Surgery

Enhanced Recovery After Surgery (ERAS) is a surgery protocol that streamlines patient processes before, during and after surgeries. The program aims to shorten the length of stay for patients and facilitate early mobility and recovery while improving outcomes and patients' overall experiences.

ERAS programs involve a multidisciplinary team that includes surgeons, anesthesiologists, nurses, pharmacists and dietitians.

This pathway helps you and your team work together to set expectations, and:

- ☐ Keep your hospital stay as short as it is safe for you to recover well
- ☐ Allow you to eat and drink as soon as it is safe for you
- ☐ Keep your pain level managed using several different medications
- ☐ Listen to your concerns and explain things clearly
- ☐ Help you get out of bed and walk early
- ☐ Make sure you are happy with your care at UC San Diego Health

After Surgery:

Tubes, Drains and Wound Care

You may come out of surgery with 1 or more of the tubes and drains listed below:

Foley Catheter

You may have a Foley catheter in your urethra going to your bladder. This tube drains urine from your bladder so your care team can keep track of how much urine you are making. Your Foley catheter is usually removed 2-3 days after your surgery.

Nasogastric Tube (NG tube)

You may have a nasogastric (NG) tube in your nose which goes into your stomach. This tube drains the fluid that naturally collects in your stomach. It will help keep you from vomiting. If you have a NG tube, it is usually removed 1-2 days after surgery.

Gastrointestinal Tube (G-tube) or Jejunostomy Tube (J-tube)

You may have a gastrointestinal (G-tube) tube that goes through your skin and into your

stomach to drain stomach fluid to keep you from having increased nausea or vomiting. You may have a Jejunostomy (J-tube) tube instead, which goes through your skin and into your small intestine (jejunum). These tubes usually stay in your stomach for approximately 1 week and are removed at a follow up appointment with your surgeon.

Jackson-Pratt Drain (JP drain)

You may have a drainage tube(s) with a bulb in your abdomen (a JP, or Jackson-Pratt drain) to remove fluid from the area around your surgery site.

If you have this drainage tube, it is usually removed a few days after surgery, but you may still have it when you are discharged from the hospital.

If you are discharged home with any drains, your nurses will teach you and your family how to care for them at home.



CHG Bathing

While in the hospital, you will be bathed daily with a no-rinse antiseptic soap called chlorhexidine gluconate, or CHG. The CHG bath will be in the form of several warmed wet wipes or a foam soap to use once you can shower.

Cleaning your body with CHG wipes before and after surgery reduces the number of bacteria on your skin and helps prevent infection.

After Surgery (Continued):

A focus on nutrition

Nutrition is very important after your surgery to help you heal faster.

During the hospital stay, you will be given sugar-free spearmint gum to chew three times a day to assist with return of bowel function and prevent constipation.

Whipple Procedure Nutrition Guidelines

The Whipple surgery involves the removal of part of the pancreas, small intestine, bile duct, stomach and all of the gallbladder. As a result, this may decrease your appetite and how much food you can eat at one time. These symptoms will improve with time!

The goal of this diet is to promote healing after surgery, decrease problems related to eating and prevent weight loss.

Common Symptoms Post-Whipple:

- ☐ Poor appetite
- ☐ Early fullness
- ☐ Nausea/vomiting
- ☐ Bloating
- ☐ Abdominal discomfort
- ☐ Diarrhea

General Tips After Whipple Surgery:

- ☐ Eat small, frequent meals (5 to 6 small meals per day). Delayed gastric emptying (gastroparesis) is a common side effect after the Whipple surgery. Eating smaller meals can help reduce the feeling of excessive fullness.
- ☐ Choose foods high in protein and calories to promote healing after surgery. Good sources of protein include tender meats, poultry, fish, eggs, milk, yogurt and nut butters.
- ☐ Avoid large amounts of fluid with meals, as this may affect how much food you can eat.
- ☐ Small sips with meals are OK. Drink water throughout the day to stay hydrated.
- ☐ Drink nutrition supplements such as Boost, Ensure, Core Power 42 or Carnation Instant Breakfast. This is very important to help you maintain your weight if you are struggling to eat enough.
- ☐ Eat slowly and chew your food well.
- ☐ Avoid eating concentrated refined/simple carbohydrates to prevent dumping syndrome. Dumping syndrome usually occurs within 2 hours after eating and includes flushed skin, dizziness/lightheadedness, weakness, abdominal pain, nausea, vomiting and diarrhea.
- ☐ Avoid eating high fat, fried and greasy foods as they are hard to digest.
- ☐ Try not to lose weight, because it can make you feel weaker and can delay healing.

Your registered dietitian can help you with ideas for maintaining your weight if needed.

Pancreatic Enzymes

The pancreas normally makes enzymes that help digest protein, fats, and carbohydrates.

After the Whipple surgery, you may need to take pancreatic enzymes to help digest foods.

Signs that you need pancreatic enzymes include diarrhea, oily/frothy stools, bloating,

excessive gas and weight loss.

A low-fat diet is usually not needed if you are taking pancreatic enzymes. However, if your doctor advises a low-fat diet, be sure to get adequate calories in order to prevent weight loss.

Lipase: This enzyme works together with bile, which your liver produces, to break down fat in your diet. If you do not have enough lipase, your body will have trouble absorbing fat and the important fat-soluble vitamins (A, D, E, K). Symptoms of poor fat absorption include diarrhea and fatty bowel movements.

Protease: This enzyme breaks down proteins in your diet. It also helps protect you from germs that may live in your intestines, like certain bacteria and yeast.

Amylase: This enzyme helps break down starches into sugar, which your body can use for energy. If you do not have enough amylase, you may get diarrhea from undigested carbohydrates.

Foods we recommend you **do** eat during the first few weeks after surgery

Food Group	What to Eat
Dairy	Milk products as tolerated, lactose-free or lactose-reduced products, sugar-free yogurt, sugar-free pudding, cheese, sugar-free ice cream
Protein	Tender/easy to chew meat, poultry, beans, eggs, smooth peanut butter, cheese, cottage cheese
Grains	Crackers, pasta, plain breads and rolls, pretzels, rice, unsweetened cereals
Vegetables	Cooked vegetables, vegetable juice
Fruits	Soft fresh fruit, fruit canned in natural juice, unsweetened fruit juice
Desserts	Low-calorie gelatin, low-calorie popsicles, sugar-free desserts

Beverages	Non-carbonated/sugar-free or low sugar beverages, water, diluted fruit juice Oral supplements (No Added Sugar Carnation Instant Breakfast, Glucerna, Boost Glucose Control, Ensure, Boost, Core Power 42)
Condiments	Salt, pepper, mild-flavored sauces and gravies, other spices as tolerated, artificial sweeteners, low-calorie jelly

Foods we recommend you **do not** eat during first few weeks after surgery

Food Group	What Not to Eat
Dairy	Cocoa mixes, regular ice cream, chocolate milk, sweetened custard or pudding, regular yogurt, milkshakes
Protein	Fried meats, bologna, salami, sausage, hot dogs, bacon, lunch meats with spices, tough/stringy meats, nuts, chunky peanut butter
Vegetables	Raw vegetables or fried vegetables
Fruits	Tough fresh fruits, dried fruits, canned or frozen fruits in syrup
Sweets	Sugar-coated cereals, doughnuts, sweet rolls, regular popsicles, gelatin, high-sugar desserts, cake, pie, sherbet
Beverages	Carbonated beverages (even diet) due to gas formation, regular soft drinks, sugared drink mixes, sugar-containing fruit-flavored beverages, sweetened iced tea or similar drinks, alcohol, regular coffee
Condiments	Regular sugar, jam, jelly

Source: Academy of Nutrition and Dietetics, Nutrition Care Manual, Whipple Surgery Nutrition Therapy

Please consult your Registered Dietician with any questions you may have.

After Surgery: Medications

Pancreatic Enzymes

Your doctor may prescribe pancreatic enzyme replacement therapy for you to use after surgery that works by replacing the 3 pancreatic enzymes normally made by a healthy pancreas. Please take only as prescribed.

Pancrelipase (CREON) should be taken during meals or snacks, with sufficient fluid. If you eat more protein or fats, you may need more CREON.

CREON capsules and capsule contents should not be crushed or chewed. Capsules should be swallowed whole.

If you are unable to swallow intact capsules, the capsules may be carefully opened and the contents added to a small amount of acidic soft food, such as applesauce, at room temperature. The CREON-soft food mixture should be swallowed immediately without crushing or chewing and followed with water or juice to ensure complete ingestion. Care should be taken to ensure that no drug is retained in the mouth.

If you forget to take CREON, wait until your next meal and take your usual number of capsules. Take your next dose at your usual time. Do not make up for missed doses.

Let your team know if you have an allergy or dietary/spiritual restriction to pork products.

There are a few other drug names for Pancrelipase, however, CREON is most commonly used at our facility.

Enoxaparin (Lovenox)

Enoxaparin is an injection/shot that is used to help prevent blood clots or to keep harmful clots from getting bigger if you do have one.

Blood clots can develop in the legs (called deep vein thrombosis, or DVT), in the lungs (called pulmonary embolism, or PE) or in the brain (stroke). Blood clots are dangerous because they can block blood flow to major organs in your body.

You will be prescribed this medication for an additional 14 days after discharge.

If you were on anticoagulation (blood thinners) before surgery, your Surgeon will let you know when it will be safe to resume these medications.

Bowel Regimen

You will be placed on many different medications to help decrease your risk of constipation

during your hospital stay and at home. These medications include: Docusate Sodium (Colace), Senokot (Senna), and/or Polyethylene Glycol 3350 (Miralax). If you are having loose stools, discontinue use of these medications until your stools are more formed again.

Pain Medications

ERAS care plans are designed to minimize negative side effects from commonly used pain medications. Your surgical team will work closely with the Anesthesia team to develop an individualized plan of care based on which combinations of medications work best for you.

You may be prescribed opioid (narcotic) pain medication. Side effects of these medications can lead to excessive drowsiness, confusion, delayed return of bowel function and constipation.

As your pain gets better, you will need less pain medication. So, if you are not having pain, do not take it! Try increasing the time between doses to wean yourself off these medications. You can start to incorporate more Acetaminophen (Tylenol) as your pain levels decrease, use as directed in your discharge instructions.

Acetaminophen (Tylenol) will also likely be a part of your pain management as Non-steroidal anti-inflammatory drugs (NSAIDs) should be avoided as they can increase bleeding risk after surgery. Common NSAIDs include Ibuprofen (Advil, Motrin), Meloxicam, and Naproxen (Aleve).

Your discharge paperwork will include information on which medications you will be taking after leaving the hospital. Your nurse will discuss how to take them with you.

After Surgery:

Activity plan to prevent complications

As part of the ERAS care plan, it is extremely important for you to get out of bed, sit in a chair, and walk as soon as possible. Your nurse will help you get out of bed within 6 hours of arriving at your room on the unit.

Incentive Spirometer

An incentive spirometer is a device used to encourage you to keep your lungs healthy while you are healing. Use the incentive spirometer 10 times every hour. You can do this during each commercial break on TV.

After surgery, or if you have been hospitalized for an extended period of time, you may also

feel too weak to take deep breaths; when you do not breathe deeply enough, this can lead to pneumonia. By taking slow deep breaths and working to improve your volumes you can prevent pneumonia or other lung complications.

To ease discomfort you may need to hold a pillow tightly to your belly while breathing in. You may not be achieving the number marked for you, but don't get discouraged. This will improve with practice and as your body heals.

If you start to get dizzy or light-headed, slow down and take some normal breaths in between uses of the incentive spirometer.



Therapy Services

Your surgical team will also order Occupational and Physical therapy to assist you in recovery to regain strength and develop adapted ways to perform your normal daily activities including bathing and dressing during your hospital stay while you continue to heal from surgery.

Aligning with the ERAS surgery protocol, you should also be up in a chair for all meals. Your nurse and therapy staff will help you move around safely.

Recovering at Home

Once at home, follow the instructions you are given in your discharge paperwork.

Be sure to:

- ☐ Take all medications as directed. Take pain medicines on time as instructed. Do not wait until pain is bad to take them.
- ☐ Care for your incision as instructed. This includes keeping the incision clean while it heals. You may shower with soap and water, then pat your incision dry with a towel.
- ☐ Do not lift anything heavy or do strenuous activities, as directed.
- ☐ Walk at least a few times daily. Slowly increase your pace and distance, as you feel able. Keep in mind that recovery from major surgery takes time!
- ☐ Do not drive until your doctor says it is OK, especially if you are taking opioid (narcotic) pain medication.

Notes/Questions

[illegible]

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Appendix F

Certifications

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

COMPLETION REPORT - PART 1 OF 2 COURSEWORK REQUIREMENTS*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Natalie Fisher (ID: 8399016)
- **Institution Affiliation:** University of San Diego (ID: 1652)
- **Institution Email:** nfisher@san Diego.edu
- **Institution Unit:** Doctor of Nursing Practice Student

- **Curriculum Group:** Biomedical Research - Basic/Refresher
- **Course Learner Group:** Same as Curriculum Group
- **Stage:** Stage 1 - Basic Course
- **Description:** Choose this group to satisfy CITI training requirements for Investigators and staff involved primarily in biomedical research with human subjects.

- **Record ID:** 33253666
- **Completion Date:** 10-Sep-2019
- **Expiration Date:** 09-Sep-2022
- **Minimum Passing:** 80
- **Reported Score*:** 90

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Belmont Report and Its Principles (ID: 1127)	10-Sep-2019	3/3 (100%)
History and Ethics of Human Subjects Research (ID: 498)	10-Sep-2019	5/5 (100%)
Basic Institutional Review Board (IRB) Regulations and Review Process (ID: 2)	10-Sep-2019	5/5 (100%)
Informed Consent (ID: 3)	10-Sep-2019	5/5 (100%)
Records-Based Research (ID: 5)	10-Sep-2019	1/3 (33%)

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: www.citiprogram.org/verify/?k23e5cac9-d34d-4d05-aae3-9441f5406305-33253666

Collaborative Institutional Training Initiative (CITI Program)

Email: support@citiprogram.org

Phone: 888-529-5929

Web: <https://www.citiprogram.org>

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

COMPLETION REPORT - PART 2 OF 2 COURSEWORK TRANSCRIPT**

** NOTE: Scores on this Transcript Report reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

- **Name:** Natalie Fisher (ID: 8399016)
- **Institution Affiliation:** University of San Diego (ID: 1652)
- **Institution Email:** nfisher@san Diego.edu
- **Institution Unit:** Doctor of Nursing Practice Student

- **Curriculum Group:** Biomedical Research - Basic/Refresher
- **Course Learner Group:** Same as Curriculum Group
- **Stage:** Stage 1 - Basic Course
- **Description:** Choose this group to satisfy CITI training requirements for Investigators and staff involved primarily in biomedical research with human subjects.

- **Record ID:** 33253666
- **Report Date:** 10-Sep-2019
- **Current Score**:** 95

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES	MOST RECENT	SCORE
Basic Institutional Review Board (IRB) Regulations and Review Process (ID: 2)	10-Sep-2019	5/5 (100%)
Informed Consent (ID: 3)	10-Sep-2019	5/5 (100%)
Belmont Report and Its Principles (ID: 1127)	10-Sep-2019	3/3 (100%)
Records-Based Research (ID: 5)	10-Sep-2019	2/3 (67%)
History and Ethics of Human Subjects Research (ID: 498)	10-Sep-2019	5/5 (100%)

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

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COMPLETION REPORT - PART 1 OF 2 COURSEWORK REQUIREMENTS*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Natalie Fisher (ID: 8399016)
- **Institution Affiliation:** University of San Diego (ID: 1652)
- **Institution Email:** nfisher@sandiego.edu
- **Institution Unit:** Doctor of Nursing Practice Student

- **Curriculum Group:** Social & Behavioral Research - Basic/Refresher
- **Course Learner Group:** Same as Curriculum Group
- **Stage:** Stage 1 - Basic Course
- **Description:** Choose this group to satisfy CITI training requirements for Investigators and staff involved primarily in Social/Behavioral Research with human subjects.

- **Record ID:** 33113354
- **Completion Date:** 12-Sep-2019
- **Expiration Date:** 11-Sep-2022
- **Minimum Passing:** 80
- **Reported Score*:** 82

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Belmont Report and Its Principles (ID: 1127)	10-Sep-2019	3/3 (100%)
Conflicts of Interest in Human Subjects Research (ID: 17464)	10-Sep-2019	4/5 (80%)
Students in Research (ID: 1321)	10-Sep-2019	4/5 (80%)
History and Ethics of Human Subjects Research (ID: 498)	10-Sep-2019	5/5 (100%)
Defining Research with Human Subjects - SBE (ID: 491)	12-Sep-2019	4/5 (80%)
Informed Consent - SBE (ID: 504)	12-Sep-2019	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	12-Sep-2019	2/5 (40%)

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

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COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

COMPLETION REPORT - PART 2 OF 2 COURSEWORK TRANSCRIPT**

** NOTE: Scores on this Transcript Report reflect the most current quiz completions, including quizzes on optional (supplemental) elements of the course. See list below for details. See separate Requirements Report for the reported scores at the time all requirements for the course were met.

- **Name:** Natalie Fisher (ID: 8399016)
- **Institution Affiliation:** University of San Diego (ID: 1652)
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- **Course Learner Group:** Same as Curriculum Group
- **Stage:** Stage 1 - Basic Course
- **Description:** Choose this group to satisfy CITI training requirements for Investigators and staff involved primarily in Social/Behavioral Research with human subjects.

- **Record ID:** 33113354
- **Report Date:** 12-Sep-2019
- **Current Score**:** 91

REQUIRED, ELECTIVE, AND SUPPLEMENTAL MODULES	MOST RECENT	SCORE
Basic Institutional Review Board (IRB) Regulations and Review Process (ID: 2)	10-Sep-2019	5/5 (100%)
Students in Research (ID: 1321)	10-Sep-2019	4/5 (80%)
Informed Consent (ID: 3)	10-Sep-2019	5/5 (100%)
Defining Research with Human Subjects - SBE (ID: 491)	12-Sep-2019	4/5 (80%)
Belmont Report and Its Principles (ID: 1127)	10-Sep-2019	3/3 (100%)
Records-Based Research (ID: 5)	12-Sep-2019	2/3 (67%)
Informed Consent - SBE (ID: 504)	12-Sep-2019	5/5 (100%)
Privacy and Confidentiality - SBE (ID: 505)	12-Sep-2019	5/5 (100%)
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Appendix G**AACN DNP Essentials****NONPF Competencies****USD DNP Program Outcomes Exemplars**

(See pages 44-51)

AACN DNP Essentials and NONPF Competencies	USD DNP Program Objectives	Exemplars
<p>DNP Essential I: Scientific Underpinnings for Practice</p> <p>NONPF: Scientific Foundation Competencies</p> <p><i>The scientific foundation of nursing practice has expanded and includes a focus on both the natural and social sciences including human biology, genomics, science of therapeutics, psychosocial sciences, as well as the science of complex organizational structures. In addition, philosophical, ethical, and historical issues inherent in the development of science create a context for the application of the natural and social sciences.</i></p>	<p>2. Synthesize nursing and other scientific and ethical theories and concepts to create a foundation for advanced nursing practice.</p>	<p>Fall 2019</p> <ul style="list-style-type: none"> • Used IOWA Model to guide PICO question in Methods of Translational Science (DNPC 611) • Participated in group project on primary care prevention screening for women's health (DNPC 611) <p>Fall 2020</p> <ul style="list-style-type: none"> • Developed a greater understanding of the pathogenetic and pathogenesis components for common clinical problems encountered in the primary care setting. Knowledge gained on medications impact on individuals based on their underlying health conditions and genetics (DNPC 622) • Developed family pedigree with components of dominant/recessive genetic traits (DNPC 622) <p>Spring 2022</p> <ul style="list-style-type: none"> • My final manuscript developed an educational booklet for patient use surrounding perioperative care for Whipple surgery for Pancreatic Cancer. Found benefit for utilizing and disseminating EBP to patients and families (DNPC 630)

<p>DNP Essential II: Organizational and System Leadership for Quality Improvement and Systems Thinking</p> <p>NONPF: Leadership Competencies/Health Delivery System Competencies</p> <p><i>Advanced nursing practice includes an organizational and systems leadership component that emphasizes practice, ongoing improvement of health outcomes, and ensuring patient safety. Nurses should be prepared with sophisticated expertise in assessing organizations, identifying system's issues, and facilitating organization-wide changes in practice delivery. This also requires political skills, systems thinking, and the business and financial acumen needed for the analysis of practice quality and costs.</i></p>	<p>5. Design, implement, and evaluate ethical healthcare delivery systems and information systems that meet societal needs and ensure accountability for quality outcomes.</p>	<p>Spring 2020</p> <ul style="list-style-type: none"> Analyzed and disseminated information found in SWOT Analysis presentation for chosen healthcare organization (DNPC 626) Participated in group presentation discussing a Root-Cause Analysis case study (DNPC 626) <p>Summer 2020</p> <ul style="list-style-type: none"> Financial Management Business Plan for implementation of safe patient handling system (DNPC 653) DNPC 653 provided the opportunity to create a business proposal to incorporate the use of a safe patient handling transfer device in an inpatient hospital setting at UCSD. A SWOT analysis was utilized to determine the impact the clinic would have in the community. A financial plan was created to identify expenses, cash flow operating margin and the cost per unit for one year. Executive Summary named 'Appropriate Use of the Patient Transfer Jack, Saves Your Back!' - to show cost/benefit of using transfer devices to cut down on worker's compensation cases related to injuries sustained with patient transferring.
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<p>DNP Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice</p> <p>NONPF: Quality Competencies/Practice Inquiry Competencies</p> <p><i>Scholarship and research are the hallmarks of doctoral education. Although basic research is viewed as the first and most essential form of scholarly activity, an enlarged perspective of scholarship has emerged through alternative paradigms that involve more than discovery of new knowledge. These paradigms recognize: (a) the scholarship of discovery and integration “reflects the investigative and synthesizing traditions of academic life,” (b) scholars give meaning to isolated facts and make connections across disciplines through the scholarship of integration, and (c) the scholar applies knowledge to solve a problem via the scholarship of application that involves the translation of research into practice and dissemination and integration of new knowledge.</i></p>	<p>4. Incorporate research into practice through critical appraisal of existing evidence, evaluating practice outcomes, and developing evidence-based practice guidelines.</p>	<p>Fall 2019</p> <ul style="list-style-type: none"> • Synthesized, critiqued evidence in evidence-based paper “Impact of Enhanced Recovery Pathway Programs in Pancreatic Surgery” to start building evidence to use in EBP project (DPNC 611) • Discussed pathophysiology of and included evidence-based research in Ground Rounds Assignment – ‘Breast carcinoma ductal in situ’ (APNC 520) • Developed secondary prevention screening program during partner project on “Autosomal Dominant Polycystic Kidney Disease” (DNPC 625) <p>Fall 2020</p> <ul style="list-style-type: none"> • Evaluated current practice guidelines and diagnosis for Marfan Syndrome. San Diego currently does not have a specific clinic for screening or care Information needed to expand community knowledge related to this genetic disease (DNPC 622) <p>Spring 2020</p> <ul style="list-style-type: none"> • Synthesized and disseminated evidence-based research in Complementary and Alternative Presentation: Acai (APNC 523) <p>Summer 2020</p> <ul style="list-style-type: none"> • Created final project movie to depict glossary term “Mindfulness” as learned in course (DNPC 610) <p>Spring 2022</p> <ul style="list-style-type: none"> • Final doctoral project involved critical appraisal of current literature to identify current EBP pitfalls and barriers to implementation (DNPC 630)
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<p>DNP Essential IV: Information Systems/Technology and Patient Care Technology for Improvement and Transformation of Healthcare</p> <p>NONPF: Technology and Information Literacy Competencies</p> <p><i>DNP graduates are distinguished by their abilities to use information systems/technology to support and improve patient care and healthcare systems and provide leadership within healthcare systems and/or academic settings. Knowledge and skills related to information systems/technology and patient care technology prepare the DNP graduates apply new knowledge, manage individual and aggregate level information, and assess the efficacy of patient care technology appropriate to a specialized area of practice along with the design, selection, and use of information systems/technology to evaluate programs of care, outcomes of care, and care systems. Information systems/technology provide a mechanism to apply budget and productivity tools, practice information systems and decision supports, and web-based learning or intervention tools to support and improve patient care.</i></p>	<p>7. Incorporate ethical, regulatory, and legal guidelines in the delivery of healthcare and the selection, use, and evaluation of information systems and patient care technology.</p>	<p>Fall 2019</p> <ul style="list-style-type: none"> • Obtained Biomedical Research Human Certification – Basic/Refresher Course through CITI (DPNC 625) • Obtained Social & Behavioral Research – Basic/Refresher course through CITI (DPNC 625) <p>Spring 2020</p> <ul style="list-style-type: none"> • Evaluated the history, use of electronic health records and technological advancements in the healthcare delivery system surrounding patient care in term paper “Electronic Health Records and Their Use” (HCIN 540) • Developed and created a work-flow map for the prevention of pressure-related injuries and flow for interdisciplinary team involvement (HCIN 540) • My final manuscript demonstrated my knowledge in analyzing data learned in HCIN 540 by ensuring appealing visual graphs and charts to interpret the data into an easy to comprehend summary.
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<p>DNP Essential V: Healthcare Policy for Advocacy in Healthcare</p> <p>NONPF: Policy Competencies</p> <p><i>Healthcare policy, whether created through governmental actions, institutional decision-making, or organizational standards, creates a framework that can facilitate or impede the delivery of healthcare services or the ability of the provider to engage in practice to address healthcare needs. Engagement in the process of policy development is central to creating a healthcare system that meets the needs of its constituents. Political activism and a commitment to policy development are central elements of DNP practice.</i></p>	<p>3. Demonstrate leadership in collaborative efforts to develop and implement policies to improve healthcare delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).</p>	<p>Spring 2020</p> <ul style="list-style-type: none"> • Developed a policy brief on The Opioid Crisis Accountability Act of 2019, and a Senator Brief on Mitt Romney who was involved with the fight against the Opioid epidemic (DPNC 648) • Developed health policy analysis scholarly paper utilizing Ruth Malone's questions/framework for assessing the policy environment titled "The Opioid Crisis Accountability Act of 2019" (DPNC 648) • Synthesized presentation on agency support/opposition of the physician assisted euthanasia law of California in partner presentation "End of Life Option: Death with Dignity or Murder?" (DNPC 648)
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<p>DNP Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes</p> <p>NONPF: Leadership Competencies</p> <p><i>Today's complex, multi-tiered healthcare environment depends on the contributions of highly skilled and knowledgeable individuals from multiple professions. To accomplish the IOM mandate for safe, timely, effective, efficient, equitable, and patient-centered care in this environment, healthcare professionals must function as highly collaborative teams. DNPs have advanced preparation in the interprofessional dimension of healthcare that enable them to facilitate collaborative team functioning and overcome impediments to interprofessional practice. DNP graduates have preparation in methods of effective team leadership and are prepared to play a central role in establishing interprofessional teams, participating in the work of the team, and assuming leadership of the team when appropriate.</i></p>	<p>1. Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidenced based, culturally competent therapeutic interventions for individuals or aggregates.</p> <p>3. Demonstrate leadership in collaborative efforts to develop and implement policies to improve healthcare delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).</p>	<p>Spring 2022</p> <ul style="list-style-type: none"> Literature review for final manuscript identified that a collaborative approach amongst multidisciplinary professions is the best way to incorporate EBP (DNPC 630) <p>Fall 2020-Spring 2022</p> <ul style="list-style-type: none"> Over 1080 clinical hours provided the opportunity to provide care to patients from pediatrics to geriatrics and collaborate with the interdisciplinary team including: physicians, nurse practitioners, psychiatrists, social workers, and other specialties (NPTC 602, 604, 605, 608, 609)
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<p>DNP Essential VII: Clinical Prevention and Population Health for Improving Nation's Health</p> <p>NONPF: Leadership Competencies</p> <p><i>Consistent with national calls for action and with the longstanding focus on health promotion and disease prevention in nursing, the DNP graduate has a foundation in clinical prevention and population health. This foundation enables DNP graduates to analyze epidemiological, biostatistical, occupational, and environmental data in the development, implementation, and evaluation of clinical prevention and population.</i></p>	<p>6. Employ a population health focus in the design, implementation, and evaluation of healthcare delivery systems that address primary, secondary, and tertiary levels of prevention.</p>	<p>Fall 2019</p> <ul style="list-style-type: none"> • Developed secondary prevention screening program during partner project on “Autosomal Dominant Polycystic Kidney Disease” (DNPC 625) • Synthesized and disseminated evidence-based research along with healthcare gaps in diagnosis in partner presentation on “Autosomal Dominant Polycystic Kidney Disease” (DNPC 625) <p>Fall 2020-Spring 2022</p> <ul style="list-style-type: none"> • Provided education to patients focusing on primary, secondary, and tertiary levels of prevention during clinical practice (NPTC 602, 604, 605, 608, 609)
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<p>DNP Essential VIII: Advanced Nursing Practice</p> <p>NONPF: Independent Practice/Ethics Competencies</p> <p><i>The increased knowledge and sophistication of healthcare has resulted in the growth of specialization in nursing to ensure competence in these highly complex areas of practice. The reality of the growth of specialization in nursing practice is that no individual can master all advanced roles and the requisite knowledge for enacting these roles. DNP programs provide preparation within distinct specialties that require expertise, advanced knowledge, and mastery in one area of nursing practice. A DNP graduate is prepared to practice in an area of specialization within the larger domain of nursing.</i></p>	<p>1. Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidence-based, culturally competent therapeutic interventions for individuals or aggregates.</p>	<p>Summer 2020</p> <ul style="list-style-type: none"> Philosophy of Reflective Practice (DNPC 610) provided the opportunity to learn culturally competent interventions and approaches to healthcare. Required reading of <i>Mother, Heal Myself: Intergenerational Healing Journey Between Two Worlds</i> and <i>Heal Thy Self: Lessons on Mindfulness in Medicine</i> and reflective writing provided insights in cultures outside of typical western medicine. <p>Fall 2020</p> <ul style="list-style-type: none"> Distinguished deviations from common normal variations characteristic of various developmental, cultural, and ethnic groups (APNC 521) <p>Fall 2021</p> <ul style="list-style-type: none"> IRB approval required for final EBP project ensured ethical and legal parameters were identified and considered (DNPC 630) Provided evidence based, culturally competent care to patients during clinical hours (NPTC 602, 604, 605, 608, 609). (DNPC 630)
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