A STRATEGIC PLAN FOR THE DEVELOPMENT OF A MODEL OF CARE FOR POST OPERATIVE BARIATRIC PATIENTS IN RURAL UTAH

A Scholarly Project Submitted to the

Faculty of Liberty University

In partial fulfillment of

The requirement for the degree

of Doctor of Nursing Practice

By

Cris R Chamberlain

Liberty University

Lynchburg, VA

March 2024

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Scholarly Project Chair Approval

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Abstract

The delivery of health care for postoperative bariatric patients remains a challenge in rural settings, often leading to varied patient outcomes and inefficient resource allocation. This study aims to develop and implement a strategic model of care for postoperative bariatric patients at Castleview Hospital in Rural Utah. Grounded in the Iowa Model of Evidence-Based Practice, this initiative focuses on creating a cohesive and comprehensive postoperative care pathway, tailored to the unique patient demographics and facility constraints of a 39-bed hospital serving 35-45 bariatric patients annually. Methodology includes ethical considerations, secured through CITI training and pending IRB approval, robust data collection protocols, and clinically measurable outcomes. The model leverages a multidisciplinary team involving approximately 25 nurses and encompassing evaluation metrics like patient satisfaction, complication rates, and hospital readmission rates. Preliminary data points towards the effectiveness and scalability of the model, proposing an enhancement in the quality of patient care and hospital resource management. This strategic plan serves as a catalyst for improving bariatric postoperative care in rural healthcare settings, offering valuable insights for policy changes and nursing practice.

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List of Abbreviations

Castleview Hospital (CVH)

Collaborative Institutional Training Initiative (CITI)

Institutional Review Board (IRB)

Medical Surgical (med-surg)

A Strategic Plan for the Development of a Model of Care for Post Operative Bariatric Patients in Rural Utah

SECTION ONE: INTRODUCTION

Background

Rural healthcare settings, such as the one in Utah where this project is focused, often grapple with many challenges. These challenges range from resource limitations and reduced medical workforce to the geographical constraints that can make patient care all the more complicated (Bauman et al., 2021). Within this complex backdrop, our facility operates without a specialized bariatric postoperative unit. Instead, it relies on a general Medical Surgical (Med-Surg) unit to provide postoperative care for bariatric patients. The staffing dedicated to bariatric care is equally limited, consisting of just one bariatric surgeon and a nurse practitioner trained in the specialty. This sparse staffing framework further compounds the challenges of delivering highly specialized, evidence-based postoperative care tailored to the diverse needs of bariatric patients.

Adding to the complexity is the absence of a well-defined, tiered system for postoperative care. There is a pressing need for a dual pathway approach that differentiates patients who can benefit from a “fast track” recovery process and those who require a more traditional, extended postoperative stay (Ngo et al., 2023). The fast-track model aims to reduce admission time, not only to cut costs but also to minimize the risk of complications that come with longer hospital stays. In contrast, a traditional care path is crucial for patients who might have complex medical histories or are at higher risk for postoperative complications, requiring longer periods of monitoring and intervention.

Problem Statement

In rural Utah, the care of post-operative bariatric patients presents a unique challenge, marked by a notable lack of specialized, evidence-based care models tailored to the distinct needs of this demographic (Stenberg et al., 2022). The existing one-size-fits-all approach fails to address the individualized recovery pathways necessary for these patients, leading to varied outcomes and often suboptimal patient satisfaction. This gap in specialized care, especially in a rural setting with limited resources like Castleview Hospital, highlights the urgent need to develop a strategic, patient-centric model of care (Torensma et al., 2022). Prioritizing this issue is crucial not only to enhance the quality of post-operative recovery for bariatric patients but also to optimize the use of hospital resources and improve the overall treatment efficacy in these rural healthcare settings.

Purpose of the Project

The purpose of this project is to design, implement, and evaluate an evidence-based model of care specifically for post-operative bariatric patients in a rural health care setting. The project aims to address the currently elevated rates of postoperative complications and lower patient satisfaction scores observed in our rural Utah facility, which currently lacks a specialized unit for bariatric postoperative care. Utilizing an approach that encompasses staff training, patient education, and systematic operational changes, the initiative strives to improve patient outcomes, enhance staff competency, and reduce healthcare costs (Stenberg et al., 2022). The project seeks to bridge the gap between current practices and evidence-based standards, improving the quality of bariatric care to meet national benchmarks, even with the constraints of a rural healthcare environment.

Clinical Question

In post operative bariatric patients at a rural Utah facility, how does the implementation of an evidence-based care model compared to the current standard of care in improving patient outcomes and satisfaction over a five-month period of time?

SECTION TWO: LITERATURE REVIEW

Search Strategy

In an effort to search for current evidence for this project, multiple databases were consulted. These included PubMed, National Guideline Clearinghouse, Cochrane Database of Systematic Reviews, CINAHL, and Ebsco. Search were conducted in English and limited to articles published within the past five years. Keywords included “bariatric care,” “post-operative models,” “rural healthcare,” “healthcare delivery,” and “patient satisfaction.” These keywords were occasionally paired or used in different combinations to yield the most relevant results. A total of 510 articles were initially identified. After applying inclusion criteria, such as direct relevance to postoperative bariatric care in rural settings my study type (randomized control trials, observational studies, qualitative research), the final number was narrowed down to 15 primary source articles. A hand search of article bibliographies yielded an additional five studies, which were included due to their relevance to the project’s objectives.

Critical Appraisal

A total of 20 articles were included in the critical appraisal to assess their relevance to the project. These twenty articles form the backbone of this project's evidence base. According to Melnyk’s levels of evidence one article stood out as a level I (Marshall et al., 2020). This study was a well-designed meta-analysis focused on postoperative care and bariatric surgery,

representing the highest level of evidence available. It provided strong statistical evidence in support of specialized care models for postoperative bariatric patients. There are 4 level II studies (Barrea et al., 2023; Ngo et al., 2023; Pouchucq et al., 2022; Soroceanu et al., 2023). These studies were randomized control trials that evaluated various models of postoperative bariatric care. Although some had limitations like small sample sizes or short follow-up periods. There were 2 level III studies (Voglino et al., 2022; Yuce et al., 2019). These were controlled trials without randomization. They offered valuable insight into postoperative care but lacked the rigorous design of randomized trials. Additionally, 5 level IV studies met the criteria (Auge et al., 2022; Bauman et al., 2021; Carmichael et al., 2018; Corsello et al., 2022; Kearns et al., 2021). These cohort or case control studies provided A wealth of observational data. They were particularly useful for understanding the real-world applicability of different postoperative care models. There were 4 level V studies (Meleo-Erwin et al., 2018; Parretti et al., 2018; Torensma et al., 2022; Wilkinson et al., 2019). These were systematic reviews of descriptive or qualitative studies. They contributed to the understanding of patient experiences and satisfaction, which were vital components of any care model. There was 1 level VI study (Conceição et al., 2019). This study offered a deep dive into a specific case of post operative bariatric care period well its findings cannot be generalized, they offer compelling insights that merit further investigation. Finally, 3 level VII studies were included (Goretti et al., 2020; Mechanick et al., 2019; Stenberg et al., 2022). These were expert opinions, case reports, and clinical anecdotes. While they provide the lowest level of evidence, they offer practical perspectives that are beneficial for building a comprehensive understanding of the issue.

The studies were critically appraised for their methods, sample sizes, outcomes, and limitations. Strengths commonly include strong statistical methodologies and a clear focus on

outcomes that are directly relevant to this project. However, limitations were also noted, including but not limited to small sample sizes, location, and occasional biases in the study design or reporting. This carefully chosen blend of high to low level studies provides a large view of the current state of postoperative bariatric care. The compiled table of evidence provided in Appendix A, offers an organized overview of these critical appraisals, facilitating an evidence-based approach to solving the health care dilemma at hand.

Synthesis

The synthesis of the selected 20 studies offers a comprehensive view that addresses many aspects of postoperative bariatric care, particularly in a rural setting. Although the level one meta-analysis and level 2 randomized control trials provide a strong backbone for the efficacy of specialized care models, the qualitative and observational study supplement these findings by bringing the human experience and practical challenges into these settings. The blend of evidence supports the need for a specialized approach that not only emphasizes clinical effectiveness but also addresses patient satisfaction and adaptability to the rural health care context (Bauman et al., 2021).

Also, the studies together suggest a need for standardization of postoperative protocols that can cater to both fast track patients and those requiring a more traditional approach. These protocols need to be flexible enough to adapt to a rural setting with limited resources but strong enough to maintain a high standard of care. Several studies also highlighted the importance of technology and inter-professional collaboration, indicating that these elements are not only needed but vital to a successful postoperative care model (Marshall et al., 2020).

Conceptual Framework

For this project, the Iowa Model of Evidence-Based Practice serves as the guiding conceptual framework. This model was specifically chosen because it offers a systematic approach to implementing change in healthcare settings by focusing on problem solving and evidence-based decision making (Buckwalter et al., 2017). The Iowa Model provides a step-by-step guide for identifying issues, forming teams, and implementing and sustaining practice changes. These elements are highly relevant to our aim of developing A strategic plan for postoperative bariatric care in rural Utah facilities.

The model emphasizes the importance of asking relevant clinical questions, which aligns well with the objective of creating a specialized, evidence-based model of care. It encourages collaboration among healthcare professionals, which is essential in the context where resources are limited, and the setting is specialized with only one bariatric surgeon and a nurse practitioner trained in bariatrics. The Iowa Model supports the continuous evaluation of outcomes, urging improvements in the care model based on real world feedback and emerging evidence (Buckwalter et al., 2017). By applying the Iowa Model, the team can systematically address the challenges of providing high-quality, efficient post-operative care in a rural setting. It allows for examining the existing gaps in care, evaluating the most effective interventions available, and implementing them in a structured manner. This model offers both a structured approach to problem-solving and the flexibility to adapt solutions to the specific need of rural healthcare. Permission to use the mode has been granted by University of Iowa Hospitals and Clinics and will be available in appendix C.

Summary

The literature review has furnished key aspects related to the delivery of post-operative bariatric care in rural settings, specifically in rural Utah. Several important findings have emerged, including the unique challenges faced by rural healthcare systems such as limited resources and specialized care offerings. It is evident that there is a need for established evidence-based models designed specifically for postoperative bariatric care in rural environments (Bauman et al., 2021). This gap in literature and in practice underlines the urgency and significance of this project. Also, there is conflicting evidence about the efficacy of fast-track options versus traditional postoperative care pathways, making it crucial to develop a model that can accommodate different post operative needs. With the integration of technology and healthcare delivery, especially in resource limited settings, has been identified as both an opportunity and a challenge. These findings align closely with the project's purpose, which is to develop a strategic plan for implementing an evidence-based model for postoperative bariatric care in a rural Utah facility.

The literature review fortifies the rationale for this scholarly project. It sets the stage for utilizing the Iowa Model of Evidence-Based Practice to guide the project’s implementation, aiming to improve the quality and efficiency of bariatric care in rural healthcare settings (Buckwalter et al., 2017). The urgent need for this work, the opportunity for impactful change, and the potential for far-reaching implications in healthcare delivery are highlighted through the synthesis of existing literature.

SECTION THREE: METHODOLOGY

Design

In light of the facilities scale and structure, the project has adopted a single group, pretest and posttest design to assess the efficacy of the new model of postoperative care for bariatric patients. All postoperative bariatric patients in the rural Utah hospital have been included in this study, acknowledging that the facilities med-surge unit treats all bariatric cases due to the absence of a specialized bariatric postoperative unit. Baseline data was collected for a period of one month prior to the implementation of the new care model. Variables of interest in this pretest phase included patient satisfaction, frequency of postoperative complications, length of hospital stay, and readmission rates related specifically to postoperative bariatric care (Torensma et al., 2022).

Upon securing the baseline data, the new postoperative care model was rolled out for all bariatric patients. The model has been developed and implemented by a multidisciplinary team including the sole bariatric surgeon, the nurse practitioner, and the med-surge nursing staff. Implementation involved standardizing evidence based postoperative care protocols, along with staff training sessions to ensure effective implementation. Post-intervention data is being collected at three distinct intervals: one month, three months, and five months following the model's implementation. This will allow for the assessment of immediate as well as long-term outcomes.

The single group design, featuring both pre-and post-intervention measures, aimed to provide a robust evaluation of the new care models impact over time period by systematically gathering data before and after intervention, and doing so at various time points post intervention, this design ensures A comprehensive understanding of how the new model effects

patient outcome and hospital efficiency. This will thereby contribute valuable insight for future efforts to refine and possibly scale the model.

Measurable Outcomes

The success of this project hinges on several measurable outcomes, designed to provide a comprehensive evaluation of the new model of post-operative care for bariatric patients. One major objective is to elevate the overall patient satisfaction scores by at least 20% within six months after implementing the new care model. The aim will be evaluated using standardized questionnaires before and after the project's intervention. In terms of post-operative complications, such as surgical site infection and deep vein thrombosis, the plan strives for a 15% reduction within the first three months following the model's introduction. Another focal point is the duration of hospital stays. The intent is to optimize care protocols in such a way as to trim at least one full day from the current average length of hospitalization for these patients, without sacrificing the quality of outcomes (Conceição et al., 2019).

The project also targets a 10% reduction in readmission rates tied to complications from bariatric surgery. This reduction is expected to be evident within five months after the model is in place. From a financial standpoint, the new model has proven cost-effective. To quantify this, a cost-benefit analysis is being conducted with the aim of identifying at least a 5% decrease in expenses related to post-operative care over a five-month period. To evaluate the project's impact on healthcare providers, anonymous surveys will be used. The goal is to either maintain the existing levels of staff satisfaction or witness an improvement.

For post-operative care to be effective, patients must adhere to their discharge instructions. To gauge this, follow-up assessments will aim to demonstrate a 90% or higher rate of compliance with these instructions. Lastly, the model aims to positively influence patients'

quality of life post-surgery. By employing validated tools, the project assesses the quality of life at one, three, and five months after surgery, with an aim to notice a 15% improvement in overall scores. Each outcome is critical in its own right for assessing the success of this new care model, and collectively, provide a comprehensive picture of its effectiveness and areas for future improvement.

Setting

The setting for this project is Castleview Hospital, a medical facility located in rural Utah. This 39-bed hospital not only offers inpatient and outpatient services but also holds several noteworthy designations and accolades that affirm its commitment to quality care period it proudly carries a Gold Seal of Approval from The Joint Commission, which signifies its adherence to high health care standards. Additionally, Castleview is an Accredited Chest Pain Center, underlying its capability in treating cardiac emergencies. The hospital is also recognized as a Stroke designated facility, adding another layer of specialty care that it provides period to top it off, the hospital has received both the Top 100 and Top 20 awards as a rural and Community Hospital multiple times, reflecting its sustained excellence in healthcare delivery. These recognitions indicate that Castleview is not just a rural hospital but a center of medical excellence that plays a crucial role in its community. Permission for this project has been granted by Castleview hospital and will be in appendix D and E.

Population

The population targeted in this project comprises two main groups within Castleview Hospital. First, the nursing staff dedicated to bariatric care, numbering around 25, will be a crucial part of this study. They are essential because their practices and attitudes directly affect patient outcomes (Corsello et al., 2022). Second, the bariatric patients themselves constitute the

other segment of the population. Castleview hospital sees an annual influx of approximately 35 to 45 individuals requiring bariatric and postoperative care. This relatively modest but impactful patient volume ensures that each case can be managed with the attention and specialized care it deserves. Together, the nurses and patients create a focused and manageable population for implementing and assessing the new model of bariatric postoperative care.

Ethical Considerations

To ensure the highest ethical standards, the project leader has completed Collaborative Institutional Training Initiative (CITI) training offered by Liberty University. This training is recognized nationally and sets the foundation for ethical practices in research, particularly in human subjects' protection. It provides in-depth understanding and practical skills in recognizing and managing potential ethical dilemmas that may arise during the research process. This training will be reflected in appendix A.

In addition to CITI and training, formal permission for the project has been sought from the Institutional Review Board (IRB) it's no secret at Liberty University. This has been approved by the IRB and reflected in appendix B. The aim is to ensure both the nursing staff and the bariatric patients involved in the study are treated with dignity, respect, and full compliance with ethical guidelines (Auge et al., 2022). The Liberty University IRB serves as an independent ethics review board, ensuring that research activities adhere to ethical standards, particularly those involving human subjects. By incorporating these ethical safeguards, the project aims to uphold the integrity and quality of the research, benefiting both the hospital staff and the patients.

Data Collection

Data collection for this project is multifaceted and will be employed to ensure accuracy and comprehensiveness. The first phase involves the gathering of quantitative data from patient medical records, specifically focusing on indicators such as postoperative complication rates, length of hospital stays, and patient reported pain scores (Ngo et al., 2023). These will be sourced through the hospital's electronic health record system, following de-identification procedures to maintain patient confidentiality. The second phase of data collection will comprise structured interviews and surveys among the nursing staff. The interviews will be designed to assess the nurse's perception of the newly implemented and postoperative care model, their control level and executing the care plan, and any suggestions they might have for further improvement. Surveys will include Likert scale questions as well as open-ended questions to collect a range of data.

Before initiating data collection, all the instruments and procedures will undergo a pilot testing phase to identify any ambiguous issues that may affect the quality of data. Pilot testing will involve a small subset of nursing set and a review of a limited number of patient records to ensure that the instruments procedures are fit for the purpose. In summary, the data collection plan is meticulous and thorough, aiming at capture both quantitative and qualitative data as to present a well-rounded view of the impact of the newly implemented postoperative care model for bariatric patients.

Tools

Data collection tools are strategically tailored to meet the projects' specific needs and outcomes. The primary tool for collecting quantitative data on the patient's outcomes is a simplified in-house checklist that captures key post operative indicators such as pain levels, readmission rates, and time to ambulation. The checklist is embedded into the existing electronic

health record system at Castleview Hospital, making it convenient for healthcare providers to fill out. In terms of qualitative data, semi structured interviews with the nursing staff, conducted using a predetermined set of questions to assess the perceptions and experiences related to two bariatric patient care (Kearns et al., 2021). The questions are designed to probe into areas that have been highlighted as critical in the literature, such as comfort level and managing postoperative symptoms and suggestions for improvement in patient care.

For survey data from patients and staff, we are using a secure, web-based survey platform like SurveyMonkey. This allows for an anonymous collection of responses which can be important in gathering honest feedback. These surveys are designed to capture both original data, such as satisfaction levels, and nominal data, like types of complications if any. For the qualitative data garnered from semi structured interviews with the nursing staff, manual coding will be conducted to identify recurring themes and patterns. The approach offers a more human centric understanding of the nuances and the data, as it allows the research team to actively engage with the responses and adapt the framework as needed. The objective is to abstract actionable insights that can directly inform and enhance the new model of care for postoperative bariatric patients at Castleview Hospital.

Intervention

The intervention for this project involves implementation of a evidence based model of care specifically designed for postoperative bariatric patients at Castleview Hospital. The new model incorporates standardized clinical pathways, encompassing both a fast-track option for post op day one patients and a more traditional pathway for post op day two patients. Healthcare professionals, particularly the hospital specialized bariatric surgeon and the nurse practitioner trained in bariatrics, collaborate to adapt the model to fit the unique needs of rural healthcare

delivery. Staff training sessions were conducted to familiarize all caregivers with the new model, and informational materials have been created for both staff and patients (Kearns et al., 2021).

A pivotal part of the intervention is the integration of real time patient data monitoring to assess the effectiveness of pain management, wound healing, and other postoperative complications. This dynamic data collection allows for immediate adjustment to individual patient care plans, thereby prompting a more patient centered approach. The intervention will span a period of five months, after which a comprehensive evaluation will be undertaken to assess its impact on patient outcomes such as reduced readmission rates, decreased postoperative complications, and enhanced patient satisfaction. A survey questionnaire has been created for the nursing staff to sit down with the patient and fill out either the evening of post op day zero or early morning on postop day one to help determine if the patient is a candidate for the fast-track option or traditional protocols. This is reflected in appendix E.

Data Analysis

In the data analysis phase, a careful approach will be employed to evaluate the effectiveness of the implemented model of care period utilizing both quantitative and qualitative metrics, the analysis will focus on key performance indicators such as reduced hospital readmissions, decreased frequency of postoperative complications, and increased patient satisfaction scores (Corsello et al., 2022). Additionally, qualitative data gathered from patient interviews and caregiver feedback is being systematically reviewed to identify themes and patterns related to patient experiences and care quality.

To ensure a comprehensive understanding, descriptive statistics will be generated to summarize general trends, and inferential statistics will be applied to draw conclusions regarding the effectiveness of the intervention. This multifaceted analytical approach aims to provide an in-

depth understanding of the project's impact, thereby guiding future improvements and policy changes at Castleview hospital.

SECTION FOUR: RESULTS

Preliminary Analysis

The initial phase of the analysis involved reviewing the medical records of 10 patients who had undergone laparoscopic sleeve gastrectomy. Among these, 7 fit the criteria for our “fast track protocol.” The exclusion of two patients was due to complications related to oxygen saturation levels postoperatively, which were directly linked to uncontrolled pain and the subsequent need for narcotics. These individuals either required extended oxygen support or were discharged supplemental oxygen. Following this preliminary analysis, the project expanded to include an additional cohort of 10 patients. Two of these were excluded due to undergoing Roux-en-Y gastric bypass surgery, a procedure not compatible with the fast-track protocol. Of the 8 remaining patients eligible for the protocol, one failed to meet the fast-track criteria due to difficulties weaning off PCA narcotics, necessitating an additional hospital day and eventual discharge with oxygen. All other patients successfully met the early discharge criteria. Our sample demographic, reported in aggregate, included eighteen patients, with the majority following within the 30-50 age range, and an equal gender distribution.

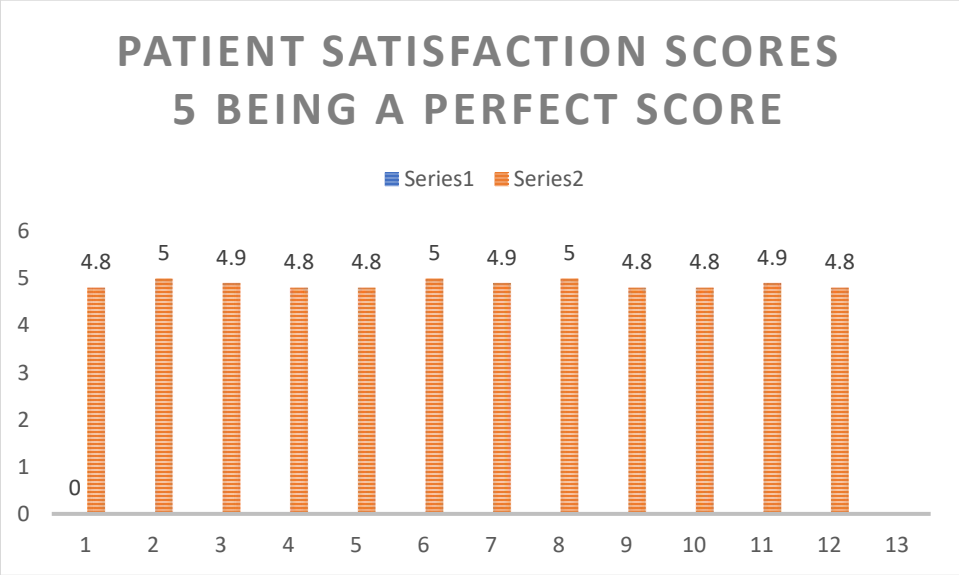
Descriptive Statistics

The descriptive analysis focused on quantifying the project outcomes. These statistics include the response rates from patients and staff surveys, which were 100% and 90% respectively, indicating high engagement levels with the project. The average length of stay for patients adhering to the fast-track protocol was one day, compared to an average of two days for those who required additional care.

Measurable Outcome 1: Patient Satisfaction

Patient satisfaction, as measured through post discharge surveys, indicates a high level of contentment with pain management, dietary guidelines, and overall experience of the fast-track protocol. Specifically, patients on the fast-track protocol reported an average satisfaction score of 4.8 out of 5.

Table 1



Measurable Outcome 2: Oxygen Saturation Levels

Post operative oxygen saturation levels were closely monitored as an indicator of patient well-being. For patients in the fast-track group, average oxygen saturation levels remained within the normal range, with no significant deviations reported post discharge.

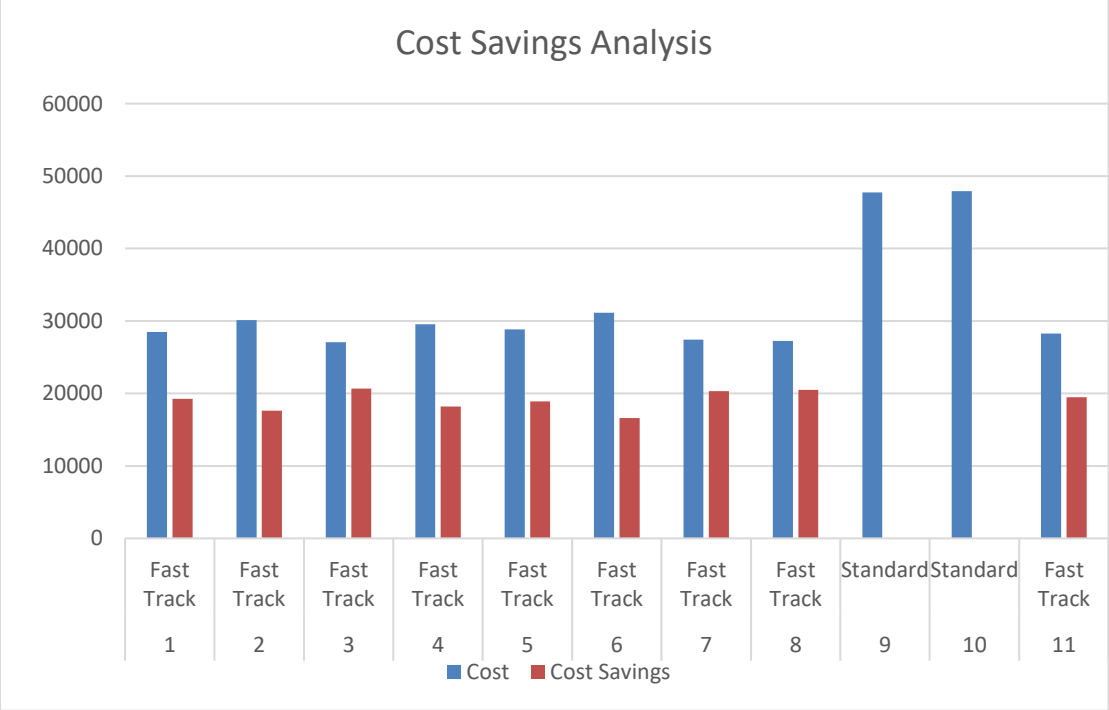
Measurable Outcome 3: Readmission Rates

Readmission rates served as a critical measure of the protocol's effectiveness. In the observed period, there was a 0% readmission rate among patients who completed the fast-track protocol, underscoring the potential for positive outcomes with this approach.

Measurable Outcome 4: Cost Analysis

The average length of stay for patients adhering to the fast-track protocol was one day, compared to an average of two days for those who required additional care and remained on the standard protocol. As you can see in the cost savings analysis the average savings for the fast-track protocol to the patient is $15,598 dollars, vs an average for the standard protocol costing the patient $47,750. This is a huge difference in healthcare costs associated with the procedure and potential savings to not only the patient but insurance companies also.

Table 2



SECTION FIVE: DISCUSSION

Implication for Practice

The project focuses on the development of a fast-track protocol for postoperative bariatric patients in Rural Utah presents notable clinical and practical implications. It underscores the potential for tailored postoperative care protocols to enhance patient outcomes, particularly in settings that face unique challenges like rural hospitals. The introduction of a Fast-track Protocol at Castleview Hospital demonstrates a significant stride towards improving patient satisfaction, reducing hospital stay durations, and potentially decreasing readmission rates. The high satisfaction scores and 0 readmission rates observed among patients who underwent the fast-track protocol highlight its importance not only to the organization but also the broader patient population seeking bariatric surgery in rural settings. However, this project is not without its limitations or potential biases. The small sample size and the focus on a single hospital setting may limit the generalizability of the findings. Additionally, patient self-selection or physician referral bias might have influenced the outcomes observed. Alternative explanations for the project findings could include the inherent motivation of patients opting for bariatric surgery, which might predispose them to better postoperative compliance and outcomes, independent of the care protocol used.

Sustainability

Sustainability of the Fast-Track Protocol hinges on several factors within the healthcare environment, including ongoing evaluation and adaptation based on patient outcomes and feedback. Lessons learned during the pilot phase -- such as the importance of rigorous patient monitoring for oxygen saturation levels and pain management -- informed adjustments to the protocol to enhance its feasibility and effectiveness. The sustainability of the practice change will also depend on its alignment with health care priorities, such as cost reduction and quality

improvement. Dissemination of results through clinical conferences, publications, and policy briefs to stakeholders can further support the integration and sustainability of the protocol within and beyond Castleview Hospital. Continuous education and training for staff are crucial for maintaining the quality of care delivered under this protocol.

Dissemination Plan

The dissemination of the project findings and the sustainable practice change it advocates will follow a multifaceted approach. Firstly, results will be presented at relevant healthcare conferences, offering a platform for sharing insight with professionals who can drive similar change in their organizations. Secondly, a manuscript detailing the project methodology, outcomes, and implications for practice will be submitted to a peer reviewed journal specializing in bariatric care or rural healthcare. Additionally, findings will be shared with healthcare policymakers and stakeholders through workshops and seminars, emphasizing the project's contribution to improving post-operative care in rural settings. Engaging with online forums and professional networks will further expand the reach of the project's insights, fostering a community of practice dedicated to advancing bariatric patient care.

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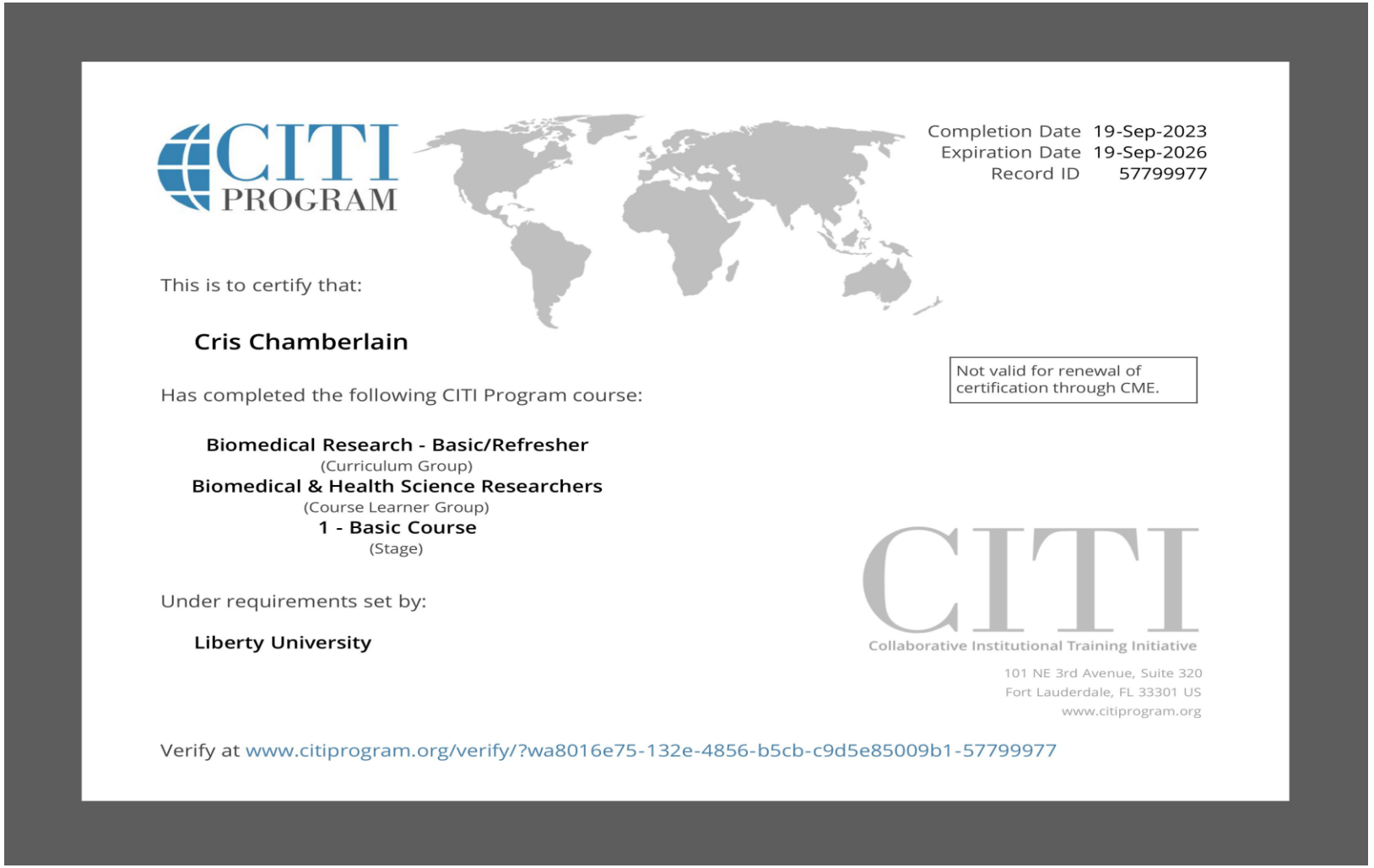
Appendix A

CITI Training



Appendix B

IRB Approval

Date: 1-20-2024

IRB #: IRB-FY23-24-810
Title: A Strategic Plan for the Development of a Model of Care for Post Operative Bariatric Patients in Rural Utah
Creation Date: 11-13-2023
End Date:
Status: Approved
Principal Investigator: Cris Chamberlain
Review Board: Research Ethics Office
Sponsor:

Study History

Submission Type Initial	**Review Type** Exempt	**Decision** No Human Subjects Research

Key Study Contacts

Member Kris Diggins	**Role** Co-Principal Investigator	**Contact** [redacted]
Member Cris Chamberlain	**Role** Principal Investigator	**Contact** [redacted]
Member Cris Chamberlain	**Role** Primary Contact	**Contact** [redacted]

Appendix C

Permission to use Iowa Model

[External] Permission to Use The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care

Kimberly Jordan - University of Iowa Hospitals and Clinics <survey-bounce@survey.uiowa.edu>
Thu 8/24/2023 12:18 PM
To:Chamberlain, Cris Ronald <crchamberlain@liberty.edu>

You don't often get email from survey-bounce@survey.uiowa.edu. Learn why this is important

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[EXTERNAL EMAIL: Do not click any links or open attachments unless you know the sender and trust the content.]

You have permission, as requested today, to review and/or reproduce *The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care.* Click the link below to open.

Iowa Model - 2015.pdf

Copyright is retained by University of Iowa Hospitals and Clinics. **Permission is not granted for placing on the internet.**

Reference: Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and validation. *Worldviews on Evidence-Based Nursing, 14(3), 175-182. doi:10.1111/wvn.12223*

In written material, please add the following statement:
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Please contact UIHCNursingResearchandEBP@uiowa.edu or 319-384-9098 with questions.

Appendix D

Hospital Approval Letter

Castleview HOSPITAL

[redacted]

09/29/2023

To: Kristene Diggins, DNP, MBA, FAANP
Liberty University, School of Nursing

From: [redacted]
Chief Nursing Officer for Castleview Hospital
[redacted]

Dear Dr. Diggins,

This letter confirms that Cris Chamberlain, MSN, who is a Nurse Practitioner here at Castleview Hospital, has received permission for his proposed project entitled: *A Strategic Plan for the Development of a Model of Care for Post-Operative Bariatric Patient in Rural Utah.*

Mr. Chamberlain and I have discussed the scope of this project and I will have oversight of the project until completion.

Additionally, Mr. Chamberlain has the required access to the necessary EHR information and data that he will require to complete this project successfully.

We are eager to work together with Mr. Chamberlain as we continually stive for quality improvement in all aspects of care we provide our patients. Thank you.

Sincerely,

[redacted]

[redacted]
Chief Nursing Officer
Castleview Hospital

Appendix E

Hospital Approval for Tools

Castleview HOSPITAL [redacted]

11/1/2023

To: Kristene Diggins, DNP, MBA, FAANP
Liberty University, School of Nursing

From: [redacted]
Chief Nursing Officer for Castleview Hospital
[redacted]

Dear Dr. Diggins,

This letter confirms that Cris Chamberlain, MSN has received permission to use any and all tools in the form of consents and patient surveys as appropriate for completion of this project entitled: *A Strategic Plan for the Development of a Model of Care for Post-Operative Bariatric Patient in Rural Utah.*

He and I have reviewed these tools and I have approved them.

Sincerely,

[redacted]
[redacted]
Chief Nursing Officer
Castleview Hospital

Appendix F

Fast-Track Protocol

Fast Track Protocol for Post-Operative Laparoscopic Sleeve Gastrectomy patients.

Plan Discharge on Post-op Day 1

Ultimate consideration for Fast-Track made by Surgeon.

Stage 1: Sips of Water, Ice Chips

Immediate Post-op starting in PACU

- 30 ML or one medicine cup of water per hour
- Monitor for GI symptoms (nausea, bloating, cramping)
- Ambulate on Med-Surg per orders, usually with assist within first 2 hours on unit.
- H&H 4 hours post-op. If in range, then initiate Lovenox and Toradol.
- Monitor pain closely. Notify Surgeon if not under control.
- Provide patients with incentive spirometer and give instructions to use every hour while awake.
- **Watch for tachycardia – could signify leak or GI bleed.**
- **Monitor urine output -- > 30ml/hr. Notify surgeon if <30ml/hr**

Stage 2: Bariatric Clear liquid diet

Begin at 1800 on day of surgery

- Increase liquids to 4 oz per hour as tolerated by patient.
- Remind patient to sip fluids, no gulping or straws.
- Continue to encourage incentive spirometer, begin to wean off O2.
- Continue monitoring for GI symptoms (increased nausea, bloating, cramping, pain/discomfort)
- If not tolerating increased fluids, slow down, can try a different liquid if needed.
- Wean PCA as tolerated.
- Watch for orders for morning labs and possible Swallow Study. Patient will need to be ready if study is ordered no later than 0800 the following morning.

Recommended Clear Liquids

- Water
- Clear broth or bouillon – chicken, beef, or vegetable
- Sugar-free popsicles (no pulp)
- 100% Real fruit juices (no added sugar) – 8oz max, no pulp
- Decaf tea
- Decaf coffee
- Sugar-free Protein water (Premier or Protien2o)
- Propel, Powerade Zero, G2/G0 Gatorade
- Sugar-free Kool-aid
- Crystal Light
- Any color clear liquid ok

Post-operative day 1

- If ordered have patient ready for swallow study by 0800

- D/C foley catheter early so patient has time to void prior to Discharge home.
- Watch for lab orders, usually CMP, and CBC
- Continue to wean O2 and ambulate frequently.
- Wean PCA if not already done.

Stage 3: Liquid, Low sugar Complete Nutritional Shakes.

- Have patient alternate 4oz of Protein shake and clear liquids every hour.
- Goal of 64oz of total liquid per day while on Stage 3
- Goal of 60 grams of Protein per day.
- Greater than 4oz is fine as long as patient is not forcing or having GI symptoms.
- If not tolerating shakes, then go back to **bariatric clear liquids** after 1 hour and try again in a few hours.
- Remember hydration is more important than calories. Not everyone can Fast-Track like this.
- Wean 02 and continue incentive spirometer.
- Continue to ambulate often.

If patient is tolerating the following, please notify surgeon that fast-track criteria has been met.

- Stable Vitals
- Tolerating clear liquids and nutritional supplements
- Ambulating frequently
- Swallow study if ordered
- Normal urine output (>30ml/hr), voiding after foley is removed
- No signs of tachycardia, leak, or GI bleed

Watch for Orders

- **D/C IV, start PO meds**
- **D/C O2**
- **Discharge to home**

Recommended complete nutritional supplements

- Ensure High Protein or Max Protein
- Premier Protein
- Carnation Essentials (mix with 1% or 2% milk)
- Glucerna
- Boost Glucose Control
- Orgain
- Atkins Advantage
- EAS AdvantEdge-Carb Control
- Muscle Milk Light
- Optisource
- Bariatric Advantage
- GNC Lean
- Other shakes are ok but should be low sugar, high protein with added vitamins and minerals.

Appendix G

Patient Consent Form

Fast-Track Protocol Patient Consent Form

Castleview Hospital

Department of Bariatric Surgery Patient Sticker OK here.

Patient Name: _____

Date of Birth: _____

Medical Record Number: _____

Purpose:

You are being asked to participate in the Fast-Track Protocol for post-operative bariatric surgery patients. The aim of this protocol is to provide you with the best possible care while aiming for a faster discharge, typically on Post-Operative Day 1.

Procedures:

In the Fast-Track Protocol, you will be expected to achieve specific milestones quicker than in the standard protocol. This will include:

Initial intake of water and ice chips

Gradual introduction of a clear liquid diet

Walking and mobility

Discontinuation of Foley catheter

Swallow study, CBC, CMP as ordered

Tolerating oral medications

Monitoring for any complications

Risks and Benefits:

The Fast-Track Protocol is designed to expedite your recovery and reduce hospital stay, which may reduce your risk for hospital-acquired complications. However, a quicker discharge may also present challenges in monitoring any post-operative complications. Your healthcare team will continuously assess your eligibility for this Fast-Track Protocol.

Confidentiality:

Your medical information will remain confidential and will be used solely for the purpose of this protocol and any related research, with your consent.

Voluntary Participation:

Participation in this protocol is voluntary. You can withdraw at any time without affecting your medical care.

Consent

I have read the above information and had the opportunity to ask questions about the Fast-Track Protocol. I consent to participate in this protocol.

Patient Signature: _____Date: _____

Physician/Nurse Signature: _____Date: _____

Appendix H

Fast-Track Questionnaire

Postoperative Day Zero/Day one Questionnaire for Bariatric Patients

Castleview Hospital

To be filled out by the nursing staff with the patient.

Patient Information:

- Name: _____
- Date: _____ Patient Sticker ok here.
- Medical Record Number: _____

Health Status

1. How would you rate your current level of Pain?
    - __ No Pain
    - __ Mild Pain
    - __ Moderate Pain
    - __ Severe Pain
2. Do you feel Nauseous or have you vomited?
    - __ No
    - __ Mild Nausea
    - __ Vomited Once
    - __ Multiple Episodes of Vomiting
3. Have you been able to sit up and walk unassisted?
    - __ Yes
    - __ No
4. Can you take deep breaths without substantial pain?
    - __ Yes
    - __ No
5. Have you been able to consume clear liquids without discomfort?
    - __ Yes
    - __ No
6. How would you rate your current mental alertness?
    - __ Fully Alert
    - __ Somewhat Drowsy
    - __ Very Drowsy

- __ Disoriented

7. Is your bladder functioning normally (can you urinate)?
    - __ Yes
    - __ No

Previous Medical History

8. Do you have a history of pulmonary or cardiac issues?
    - __ Yes
    - __ No
9. Have you had any previous complications with anesthesia?
    - __ Yes
    - __ No
10. Do you have a history of obstructive sleep apnea?
    - __ Yes
    - __ No
11. Any history of gastrointestinal issues, like GERD or ulcers?
    - __ Yes
    - __ No
12. Any history of diabetes or insulin use?
    - __ Yes
    - __No

Lifestyle

13. Do you smoke or have a history of smoking?
    - __ Yes
    - __ No
14. Are you generally physically active?
    - __ Yes
    - __ No
15. Have you had previous surgery with fast-track recovery?
    - __ Yes
    - __ No

Final Comments:

- Nurse's Notes:

Nurse's Signature: _____ Date: _____

MD Notes:

MD Signature: _____ Date: _____

Scoring Guidelines:

- Patients scoring positively on health status questions (1-7) are likely candidates for fast-track protocols.
- Any negative history or existing complications in the "Previous Medical History" section (questions 8-12) should prompt consideration for standard protocol, pending physicians' assessment.
- Additional lifestyle questions (13-15) may also influence the decision.

Please review the patient's responses and consult the attending physician or nurse practitioner for final determination of the appropriate postoperative protocol.

Appendix I

Patient Feedback Questionnaire

Castleview Hospital Bariatric Surgery Patient Feedback Survey

Thank you for entrusting us with your care at Castleview Hospital. Your feedback is vital for us to improve our services. Please take a few moments to answer the following questions.

Part I: Pre-Operative Care

1. How would you rate the clarity of the pre-operative instructions?
    - __ Excellent
    - __ Good
    - __ Fair
    - __ Poor
2. Did you feel well-informed about dietary and lifestyle changes required before surgery?
    - __ Yes
    - __ No
3. Was the check-in process efficient?
    - __ Yes
    - __ No

Part II: Surgical Care

4. Did you feel that your privacy was respected during the preparation for surgery?
    - __ Yes
    - __ No
5. How would you rate the overall organization of the surgical team?
    - __ Excellent
    - __ Good
    - __ Fair
    - __ Poor
6. Were you satisfied with the anesthesia process and its effectiveness?
    - __ Yes
    - __ No

Part III: Post-Operative Care

7. Did the nursing staff check on you frequently enough after surgery?
    - __ Yes

- __ No

8. Were you adequately educated on pain management options?
    - __ Yes
    - __ No
9. Did you feel involved in decisions related to your post-operative care?
    - __ Yes
    - __ No

Part IV: Overall Satisfaction and Discharge

10. How well did the staff prepare you for the discharge process?
    - __ Excellent
    - __ Good
    - __ Fair
    - __ Poor
11. Were you discharged on Post-Operative Day 1 or Day 2?
    - __ Day 1
    - __ Day 2
12. Overall, how would you rate your entire experience at Castleview Hospital?
    - __ Very Satisfied
    - __ Satisfied
    - __ Neutral
    - __ Dissatisfied
    - __ Very Dissatisfied

Part V: Additional Comments

13. Do you have any suggestions for how we can improve our pre-operative procedures?
    - __ Yes (Please Specify) _____
    - __ No
14. Do you have any suggestions for how we can improve our post-operative care?
    - __ Yes (Please Specify) _____
    - __ No
15. Please provide any additional comments or suggestions to help us improve our care.

    _____
    _____
    _____
    _____
    _____
    _____
    _____

Appendix J

Literature Matrix – Strength of Evidence Table

ARTICLE CRITIQUE AND LEVELING MATRIX

Article Title, Author, etc. (Current APA Format)	**Study Purpose**	**Sample (Characteristics of the Sample: Demographics, etc.)**	**Methods**	**Study Results**	**Level of Evidence (Use Melnyk Framework)**	**Study Limitations**	**Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.**
Auge, M., Dejardin, O., Menahem, B., Lee Bion, A., Savey, V., Launoy, G., Bouvier, V., & Alves, A. (2022). Analysis of the lack of follow-up of bariatric surgery patients: Experience of a reference	Examine the prevalence of follow-up interruptions and irregularities among bariatric surgery patient.	1549 patients that underwent bariatric surgery	Retrospective and monocentric design from a single referral center	70% of patient experienced interruptions in their follow-up care according the the study definitions.	Level 4: observational, retrospective study from a single center	Single Center data, missing data points and does not account for TWL variable introducing bias.	No, too many limitations in the study to support an immediate change, more research would be needed.

Article Title, Author, etc. (Current APA Format)	**Study Purpose**	**Sample (Characteristics of the Sample: Demographics, etc.)**	**Methods**	**Study Results**	**Level of Evidence (Use Melnyk Framework)**	**Study Limitations**	**Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.**
center. *Journal of Clinical Medicine*, *11*(21), 6310. https://doi.org/10.3390/jcm11216310							
Barrea, L., Verde, L., Schiavo, L., Sarno, G., Camajani, E., Iannelli, A., Caprio, M., Pilone, V., Colao, A., & Muscogiuri, G. (2023). Very low-calorie ketogenic diet (vlckd) as pre-operative first-line dietary therapy in patients with obesity who are candidates for bariatric surgery. *Nutrients*, *15*(8), 1907. https://doi.org/10.3390/nu15081907	Assess the effectiveness and potential benefit of using ketogenic diets, for weight loss patient preparing for bariatric surgery.	32 participants who started a Very Low Energy Diet (VLED) for 12 weeks prior to surgery	Random controlled trials on which diets seem to provide the best preoperative outcomes	Patient who use Very low calorie ketogenic diets preop have been shown to have reduced liver volume	Level 2: RCT	Small sample size, lack of long-term follow-ip.	Yes: VLCD's pre op have been shown to improve surgical outcomes for weight loss surgery.

Article Title, Author, etc. (Current APA Format)	**Study Purpose**	**Sample (Characteristics of the Sample: Demographics, etc.)**	**Methods**	**Study Results**	**Level of Evidence (Use Melnyk Framework)**	**Study Limitations**	**Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.**
				and improved metabolic parameters.			
Conceição, E. M., Fernandes, M., de Lourdes, M., Pinto-Bastos, A., Vaz, A. R., & Ramalho, S. (2019). Perceived social support before and after bariatric surgery: Association with depression, problematic	To investigate the role of social support, particularly from family, in the weight outcomes of patient who have undergone bariatric surgery	130 patients with self-reported social support, eating disorder, and depression.	Cross sectional design to investigate the relationship between perceived social suppose and weight outcomes in bariatric surgery patient.	Significant role of perceived family support in weight outcomes, specifically in relation to weigh regain following bariatric surgery	Level 6: cross-sectional study	Cross sectional doesn't allow for tracking changes over time. Bias as the support is self reported	No, more research is needed

Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
eating behaviors, and weight outcomes. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, *25*(3), 679–692. https://doi.org/10.1007/s40519-019-00671-2							
Goretti, G., Marinari, G. M., Vanni, E., & Ferrari, C. (2020). Value-based healthcare and enhanced recovery after surgery	To implement and evaluate the Value-	2122 MOP who underwent	Multifaceted approach to improve the care	Remarkable improvements, with a	Level 7: Guideline	No limitations are noted.	Potential for change as ERAS is

Article Title, Author, etc. (Current APA Format)	**Study Purpose**	**Sample (Characteristics of the Sample: Demographics, etc.)**	**Methods**	**Study Results**	**Level of Evidence (Use Melnyk Framework)**	**Study Limitations**	**Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.**
implementation in a high-volume bariatric center in italy. *Obesity Surgery*, *30*(7), 2519–2527. https://doi.org/10.1007/s11695-020-04464-w	Based Healthcare approach in elective bariatric surgery	bariatric surgery	and outcomes of MOP undergoing elective bariatric surgery	74.05% excess weight loss at 1 year by enacting ERAS			a newer guideline
Kearns, E. C., Fearon, N. M., O'Reilly, P., Lawton, C., McMackin, T., Walsh, A. M., Geogheghan, J., & Heneghan, H. M. (2021). Enhanced recovery after bariatric surgery:	To assess the effectiveness of feasibility of implementing an Enhanced Recovery After Bariatric Surgery	300 bariatric procedures performed. All had ERABS protocol. 57.5 received LSG 33.2 were Lap one anastomosis GB and 9.3	Perspective cohort design to investigate the effectiveness and safety of the ERABS	The study determined that implementing the ERABS protocol was both feasible and effective.	Level 4: cohort study	Small sample size, geographical scope, and biases in the patient selection.	Yes, ERAS protocol cut length of stay and lowered rates of morbidity and mortality.

Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
Feasibility and outcomes in a national bariatric centre. *Obesity Surgery*, *31*(5), 2097–2104. https://doi.org/10.1007/s11695-020-05220-w		were LRYGB					
Marshall, S., Mackay, H., Matthews, C., Maimone, I. R., & Isenring, E. (2020). Does intensive multidisciplinary intervention for adults who elect bariatric surgery improve post-operative weight loss, co-morbidities, and quality of life? a	Conduct a systematic review and meta-analysis to evaluate the effects of intensive	1533 participants with r different interventions.	Systematic review and meta-analysis to evaluate the impact of MDT	MDT both pre and post op led to significant improvements in mental	Level 1: for systematic review and meta-analysis	None of the intervention's studies including in the review aimed to	NO, more research is needed.

Article Title, Author, etc. (Current APA Format)	**Study Purpose**	**Sample (Characteristics of the Sample: Demographics, etc.)**	**Methods**	**Study Results**	**Level of Evidence (Use Melnyk Framework)**	**Study Limitations**	**Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.**
systematic review and meta-analysis. *Obesity Reviews*, *21*(7). https://doi.org/10.1111/obr.13012	Multidisciplinary Team MDT			health parameters such as anxiety and depression, as well as in quality of life and certain CV measures.		identify the ideal provision of MDT, not clear on collaborative care.	
Parretti, H. M., Hughes, C. A., & Jones, L. L. (2018). 'the rollercoaster of follow-up care' after bariatric surgery: A rapid review	Provide a qualitative synthesis of patients' experiences during long-term follow-up care after bariatric surgery.	No specifics just surgical patients that meet criteria for bariatric surgery, BMI > 40 or 35-40 with comorbidities.	Qualitative synthesis approach to explore the long-term experiences of patient following bariatric surgery.	Need for extended, specialized support, including psychological counseling and behavior	Level 5: qualitative synthesis of patient experiences of longer-term follow-up post-	This is a rapid review with limited number of databases. Also some patient were less than 12	No, despite some long term suppose for patients more research is needed

Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
and qualitative synthesis. *Obesity Reviews*, *20*(1), 88–107. https://doi.org/10.1111/obr.12764				change strategies	bariatric surgery	months out creating bias.	to change practice.
Pouchucq, C., Menahem, B., Le Roux, Y., Bouvier, V., Gardy, J., Meunier, H., Thomas, F., Launoy, G., Dejardin, O., & Alves, A. (2022). Are geographical health accessibility and socioeconomic deprivation associated with outcomes following bariatric surgery? a retrospective study in a high-volume referral bariatric	Explore the factors influencing post-operative outcome, particularly morbidity and mortality rates,	1599 patients who underwent LSG and LRYGB between 2005 and 2017	Retrospective analysis using various statistical models such as age, gender, socioecono	Main point is there is a significant association between socioeconomic deprivation and poor post-	Level 2: cohort study designed to observe outcomes of differed groups over time.	Focus on a single hospital system. Observational in nature, and a small sample size.	No, the results are compelling and suggest a potential benefit, due to the observational

Article Title, Author, etc. (Current APA Format)	Study Purpose	Sample (Characteristics of the Sample: Demographics, etc.)	Methods	Study Results	Level of Evidence (Use Melnyk Framework)	Study Limitations	Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.
surgical center. *Obesity Surgery*, *32*(5), 1486–1497. https://doi.org/10.1007/s11695-022-05937-w	following bariatric surgery.		mic deprivation, and distance from healthcare facilities.	operative outcomes following bariatric surgery.			nature more research is needed to make a change.
Soroceanu, R., Timofte, D., Maxim, M., Platon, R., Vlasceanu, V., Ciuntu, B., Pinzariu, A., Clim, A., Soroceanu, A., Silistraru, I., & Azoicai, D. (2023). Twelve-month outcomes in patients with obesity following bariatric surgery—a single centre experience. *Nutrients*, *15*(5), 1134. https://doi.org/10.3390/nu15051134	Evaluate the outcome of various bariatric surgical procedures on a diverse patient population, focusing on weight loss and improvement	488 patients in Romania who are severely obese and meet the criteria for surgery.	Longitudinal design, where patients who underwent surgery were followed up on for at least 12months.	All surgeries performed were effective in achieving weight loss and improving related comorbidities.	Level 2: Cohort study that examines the outcomes of bariatric surgery on patient over a 12-month period	Incomplete data due to non-compliant patient, also many patients did not live in the immediate area making it difficult to include	No, not enough evidence to support a practice change, more research is needed.

Article Title, Author, etc. (Current APA Format)	**Study Purpose**	**Sample (Characteristics of the Sample: Demographics, etc.)**	**Methods**	**Study Results**	**Level of Evidence (Use Melnyk Framework)**	**Study Limitations**	**Would Use as Evidence to Support a Change? (Yes or No) Provide Rationale.**
	of comorbid conditions.					results for them.	
Voglino, C., Badalucco, S., Tirone, A., Ciuoli, C., Cantara, S., Benenati, N., Bufano, A., Formichi, C., Croce, F., Gaggelli, I., Vuolo, M., & Vuolo, G. (2022). Follow-up after bariatric surgery: Is it time to tailor it? analysis of	Investigate the factors that may influence the success or failure of bariatric surgery for weight loss.	443 patient wo underwent BS with a 3 year follow-up	Retrospective study focusing on analyzing various factors that could influence the outcomes of bariatric surgery.	The study noted that the type of surgery may reflect success or failure of bariatric surgery in terms of weight loss and other outcomes.	Level 3: retrospective cohort study.	Focus on 1 geographic region. Single center study, no specifics on comorbidities.	No, the article does point out some good evidence but more research is needed before a change can be made.

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early predictive factors of 3-year weight loss predictors of unsuccess in bariatric patients. *Updates in Surgery*, *74*(4), 1389–1398. https://doi.org/10.1007/s13304-022-01314-5							

Bauman, V., Apostolopoulos, A. N., Hasse, G., Parkman, T. J., & Ross, K. M. (2021). Rural/urban weight-loss outcomes following bariatric surgery. *Obesity Science & Practice*, *7*(6), 797–802. https://doi.org/10.1002/osp4.515	To compare the demographic characteristics of patients undergoing bariatric surgery from rural and urban areas and to ecplore potential differences in outcomes between these two groups.	170 adult patients underwent bariatric surgery at a large university medical center. Majority of the sample were non-Hispanic white, and all had health insurance.	Retrospective chart review to evaluate differences in demographic characteristics and weight-loss outcomes between patients from rural and urban counties.	Patients in both rural and urban areas achieved significant weigh loss at 3 and 6 months.	Level 4-5: retrospective review	Primarily non-Hispanic White patients with health insurance. Missing some chart weights. Short duration	Provides valuable insight for decision making but unlikely to change practice.
Carmichael, S. P., Veasey, E. C., Davenport, D. L., Jay, K., & Bernard, A. C. (2018). *patient-surgeon relationship influences outcomes in bariatric patients*. *The American Surgeon*, *84*(12), 1850–1855. https://doi.org/10.1177/000313481808401227	To investigate the influence of the patient-surgeon relationship on adherence to follow-up and surgical outcomes in bariatric	320 patients who underwent bariatric surgery	Survey-based approach to collect data on the patient-surgeon relationship, adherence to follow-	Supports the role of a positive patient-surgeon relationship in achieving long-term follow-up and adherence	Level 4-5: Retrospective review	Selection bias relied on voluntary participation. Collected data retrospectively, lacked objective measures	Unlikely will change practice, however, provides excellent information to improve on.

	surgery patients.		up, and outcomes.	and reduced complications.			
Corsello, J., Gerola, R., Babatope, M., Munie, S., & Nease, D. (2022). Do bariatric patient's in rural areas achieve comparative weight loss as national average? single center experience in appalachia west virginia. *Surgical Endoscopy*, *36*(11), 8515–8519. https://doi.org/10.1007/s00464-022-09541-y	To evaluate the weight loss outcomes of bariatric surgery in rural areas. Assess whether patients with limited societal support and resources could achieve comparable loss to national standards.	270 patients who underwent bariatric surgery in West Virginia. Mostly female Caucasian with an average age of 45.	Retrospective review designed to evaluate weight loss outcomes of bariatric surgery patients in a rural area.	Patients undergoing bariatric surgery in rural areas can achieve weight loss outcomes comparable to or exceed the national average 6 months, 1 year, and 2 years post op.	Level 4-5: Retrospective review	Lack of Comparison group, selection bias, single center experience.	Unlikely will change practice but excellent information to build on.

Mechanick, J. I., Apovian, C., Brethauer, S., Garvey, W., Joffe, A. M., Kim, J., Kushner, R. F., Richard Lindquist, Pessah-Pollack, R., Seger, J., Urman, R. D., Adams, S., Cleek, J. B., Correa, R., Figaro, M., Flanders, K., Grams, J., Hurley, D. L., Kothari, S.,...Still, C. D. (2019). Clinical practice guidelines for the perioperative nutrition, metabolic, and nonsurgical support of patients undergoing bariatric procedures – 2019 update: Cosponsored by american association of clinical endocrinologists/american college of endocrinology, the obesity society, american society for metabolic & bariatric surgery, obesity medicine association, and american society of anesthesiologists. *Endocrine Practice*, *25*, 1–75. https://doi.org/10.4158/gl-2019-0406	To present a collection of research findings, guidelines, and retrospective studies related to various aspects of bariatric surgery.	No specific samples or characteristic only guidelines	Current guidelines are presented in the article	More current guidelines presented	Level 7: Guidelines and expert opinion from ASMBS and The Obesity Society	No limitations discussed.	Yes this will change practice at it is the current guidelines from leading organizations driving treatments.
Meleo-Erwin, Z. C. (2018). ‘no one is as invested in your continued good health as	Investigate and examine the post-surgical relationships between bariatric	Weight loss surgery patients participating from	Qualitative thematic analysis of the information gathered	Varying satisfaction with home bariatric clinics. More	Level 5: Qualitative thematic analysis	No sample size, or specific analytical techniques used.	Definitely could influence home bariatric clinics to develop

you should be:' an exploration of the post-surgical relationships between weight-loss surgery patients and their home bariatric clinics. *Sociology of Health & Illness*, *41*(2), 285–302. https://doi.org/10.1111/1467-9566.12823	patients and their home clinics.	online forums		found with clinics that provide organized follow up protocols, quality care, information, and ongoing commitment to patients.			protocols and provide better information to bariatric patients.
Ngo, F., Urman, R. D., English, W., Kothari, S., DeMaria, E., & Wadhwa, A. (2023). An analysis of enhanced recovery pathways for bariatric surgery—preoperative fasting, carbohydrate loading, and aspiration risk: A position statement from the international society for the perioperative care of patients with obesity. *Surgery for Obesity and Related Diseases*, *19*(3), 171–177.	Provide a position statement and analysis on the perioperative care of patients with obesity, specifically focusing on the issues of	Generalization for patients that are severely obese undergoing non-bariatric surgical procedures.	Various RCT's and large prospective studies on obese patients undergoing non-bariatric procedures.	Little consensus on standard of care however notes that obesity may have slightly increased gastric	Level 2: Discusses several RCT's still ongoing.	Limited data reporting for each of the symptoms. Several recommendations made.	Yes, will help with preoperative care in obese patients will likely change treatment.

https://doi.org/10.1016/j.soard.2022.12.030	preoperative fasting, carbohydrate loading, and the risk of aspiration.			volume and could benefit from premedication with a H2 blocker prophylaxis.			
Stenberg, E., dos Reis Falcão, L., O'Kane, M., Liem, R., Pournaras, D. J., Salminen, P., Urman, R. D., Wadhwa, A., Gustafsson, U. O., & Thorell, A. (2022). Guidelines for perioperative care in bariatric surgery: Enhanced recovery after surgery (eras) society recommendations: A 2021 update. *World Journal of Surgery*, *46*(4), 729–751. https://doi.org/10.1007/s00268-021-06394-9	Provide updated guidelines for the ERAS approach in bariatric surgery.	Patients undergoing any type of bariatric surgery.	Not really a method of research but does offer updated guidelines for post operative care.	Improved outcomes for bariatric surgery by following these updated guidelines.	Level 7: Guideline for post operative care.	No limitations discussed.	Yes, will definitely result in a practice change as these are updated clinical guidelines for bariatric patients.
Torensma, B., Hisham, M., Eldawlatly, A. A., & Hany, M. (2022). Differences between the 2016 and 2022 editions of the enhanced	To analyze two sets of guidelines related to bariatric surgery. Also propose recommendations for improving	Patients undergoing any type of bariatric surgery.	Comparing or review analysis of two different guidelines G16 and G22	Combining the two guidelines into a standard of care	Level 5: systematic review of G16 and G22 guidelines.	How to implement the changes. Stakeholders buy in. intercultural and intercontinental differences.	More study needed but yes if a global consortium could establish guidelines change

recovery after bariatric surgery (erabs) guidelines: Call to action of fair data and the creation of a global consortium of bariatric care and research. *Obesity Surgery*, *32*(8), 2753–2763. https://doi.org/10.1007/s11695-022-06132-7	research quality and reduce bias in bariatric care research.						would improve outcomes.
Wilkinson, K., Helm, M., Lak, K., Higgins, R. M., Gould, J. C., & Kindel, T. L. (2019). The risk of post-operative complications in super-super obesity compared to	Compare the 30 day perioperative complication rates between patients with super-super obesity and super-obesity undergoing laparoscopic	SSO with a BMI between 60-69 and SO with a BMI between 50-59. Sample size is 1816 LRYGB	Retrospective analysis of a large database	Patients with SSO had a higher complication rate to those with only SO. Additionally SSO patients had many	Level 5: Retrospective review of SSO and SO patients.	The article mentions coding errors, information only from accredited bariatric center, and limited long-term	No, more research is needed to determine long term outcomes before making permanent changes.

super obesity in accredited bariatric surgery centers. *Obesity Surgery*, *29*(9), 2964–2971. https://doi.org/10.1007/s11695-019-03942-0	bariatric surgery.	and 3907 LSG.		more pre op co-morbidities.		outcomes are recorded.	
Yuce, T. K., Khorfan, R., Soper, N. J., Hungness, E. S., Nagle, A. P., Teitelbaum, E. N., Bilimoria, K. Y., & Odell, D. D. (2019). Post-operative complications and readmissions associated with smoking following bariatric surgery. *Journal of Gastrointestinal Surgery*, *24*(3), 525–530. https://doi.org/10.1007/s11605-019-04488-3	Investigate the association between smoking and postoperative outcomes in patients undergoing bariatric surgery.	133,417 patients who underwent bariatric surgery, 12,424 self-reported as smokers.	Retrospective cohort design utilizing data from the ACS database.	Smokers had higher rates of complications, Death was 3.8% higher, also would complications were higher. Readmission rates were 4.9 higher in smokers.	Level 3: retrospective cohort design and utilizing a national database.	No specific limitations mention, however Data could be biased as it is reported from only participating hospitals, self-reporting smoking was only for the last year.	Well known that smoking and surgery of any kind enhances complications, but it is unlikely that this study would merit a practice change. More research is needed.