



Surgical Patient Prehabilitation

A TOOLKIT FOR IMPLEMENTING
PREHABILITATION PROGRAMS

Surgical Patient Optimization Collaborative/
Perioperative Clinical Action Network

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SSC
SPECIALIST SERVICES
COMMITTEE



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BACKGROUND AND GOALS OF THIS TOOLKIT

The Surgical Patient Prehabilitation Collaborative (SPOC) was an initiative of the Specialist Services Committee, with additional support from the Shared Care Committee and the Family Practice Services Committee. These three Joint Collaborative Committees represent a partnership between Doctors of BC and the BC Ministry of Health.

SPOC operated as a prehabilitation initiative from 2018 to 2023. This collaborative promoted multidisciplinary, structured, and personalized prehabilitation programs to improve patients' surgical outcomes and experiences throughout the province. During its course, SPOC facilitated two prehabilitation cycles, and supported the implementation of projects at 27 sites across BC. This manual outlines the key steps involved in creating and executing those prehabilitation programs. It also integrates insight and lessons learned from the successes and challenges highlighted during SPOC. We strongly encourage you to incorporate these strategies when developing your own program.

Following the conclusion of SPOC in May 2023, the Perioperative Clinical Action Network (PCAN) was established to further advance and facilitate the spread of surgical improvements. Similar to SPOC, PCAN is an initiative of the Specialist Services Committee and supported by the Shared Care Committee and the Family Practice Services Committee.

PCAN aims to facilitate and promote the spread of quality improvement initiatives designed to optimize surgical services. This network acts as a critical hub for multidisciplinary members of surgical teams across the province and it supports the implementation of surgical priorities and quality improvement efforts. Throughout this guide, we will refer to PCAN as the central organization that supports your prehabilitation efforts and serves as the primary point of contact for your project.



ACKNOWLEDGEMENTS

The Perioperative Clinical Action Network (PCAN) would like to express gratitude towards the members of the Surgical Patient Prehabilitation Collaborative (SPOC) and to the Specialist Services Committee for generously contributing and providing revisions towards the creation of this manual.

PCAN would also like to thank the clinical teams and patients who participated in the initial surgical prehabilitation programs through SPOC. The information and experiences shared from those programs were critical in shaping the content of this document.

Land Acknowledgement

PCAN, as a part of the Specialist Services Committee, acknowledge that we work on the traditional, ancestral, and unceded territories of many different Indigenous Nations throughout British Columbia. We recognize our duty and desire to support the provision of culturally safe care to First Nations, Inuit, and Métis people in BC.

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WELCOME TO SURGICAL PREHABILITATION



Thank you for your interest in implementing a surgical prehabilitation program at your site!

Your program will be joining a provincial movement to optimize and coordinate preoperative care to maximize patients' resilience against the stress of surgery. Surgical prehabilitation is a multidisciplinary, structured, and personalized approach designed to assist patients in preparing for surgery. It encompasses both physical and psychological prehabilitation. The goal is to improve patient health, surgical outcomes, reduce health care costs, and increase patient and caregiver satisfaction across BC. This toolkit has been made to support the implementation of your prehabilitation project and connect you to important resources along the way.

WHY IS PREOPERATIVE PREHABILITATION IMPORTANT?



Surgical procedures put a significant amount of physical and psychological stress on patients.

In addition, surgical complications occur in 10-20% of patients undergoing elective surgery. There are many known risk factors for complications, patient transfer to the intensive care unit, prolonged length of hospital stay, higher postoperative pain scores and mortality. These risk factors include but are not limited to the following:

- ⦿ Reduced exercise capacity
- ⦿ Malnutrition
- ⦿ Frailty
- ⦿ Smoking
- ⦿ Excessive alcohol intake
- ⦿ Poor glycemic control
- ⦿ Anemia
- ⦿ Obstructive sleep apnea
- ⦿ Obesity
- ⦿ Anxiety
- ⦿ Pain catastrophizing
- ⦿ Lack of social support

Improving these modifiable risk factors in the preoperative period has the potential to improve postoperative outcomes. There is a growing body of evidence to support this process across many different surgical specialties. Prehabilitation can also reduce the financial burden of complications on the health care system. There exists many successful prehabilitation initiatives internationally including in Canada, the Netherlands, the United Kingdom, the United States, and Australia.

Our goal is that, throughout your surgical prehabilitation initiative, the following outcomes can be achieved:

- ⦿ Create new or refine current processes for preoperative patient prehabilitation using a multimodal approach.
- ⦿ Empower health care providers to support and implement program change.
- ⦿ Empower patients to improve readiness for surgery.
- ⦿ Implement a structured prehabilitation program with interventions that target select clinical components.
- ⦿ Ensure provider buy-in and satisfaction throughout the patient prehabilitation process.
- ⦿ Improve patient outcomes and experience for elective surgeries.

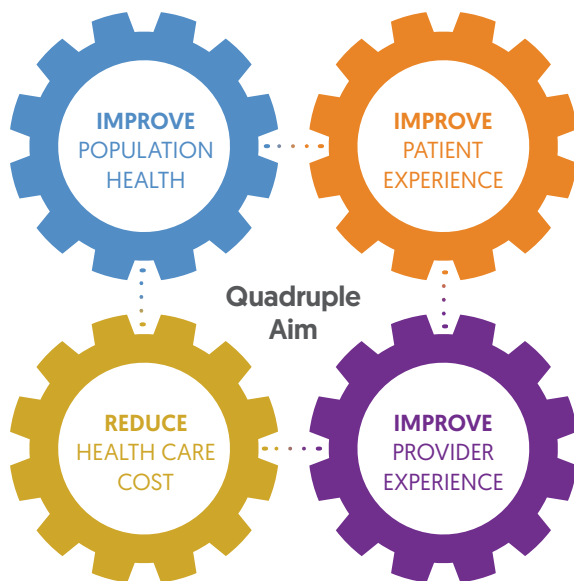
Drawing on multidisciplinary team input, patient engagement, and willingness to change, it is our hope that continuous improvement in surgical care can be achieved through individual programs like yours.

PRINCIPLES OF SURGICAL PATIENT PREHABILITATION

To implement a change process and improve patients' readiness for surgery, we strongly recommend adopting the following principles that are central to surgical patient prehabilitation:

- Prehabilitation will not be the responsibility of solely one care provider; it will be provided by a multidisciplinary team with an emphasis on communication between providers and between patients and providers.
- Centres undertaking efforts to optimize their patients for surgery will identify and leverage available community resources and outsource their patients to these resources where possible.
- Prehabilitation activities will promote the concept of patient activation, providing patients with the knowledge, skills, and confidence to manage their own health and health care.
- Collaborative teams will work with new and existing Primary Care Networks to build a sustainable program.
- Collaborative teams should work towards the Institute for Healthcare Improvement (IHI) Quadruple Aim. [Fig. 1]

Figure 1.
Quadruple Aim
based on
IHI's Triple Aim.



QUALITY IMPROVEMENT INITIATIVE



As part of a quality improvement (QI) initiative, your team should aim to continuously examine the processes and outcomes of your project to ensure that the highest quality of care is delivered.

There are many theories, frameworks, and approaches to QI that you can adopt or combine in the pursuit of your prehabilitation project. This guide will draw on the IHI's Model for Improvement which utilizes Plan-Do-Study-Act (PDSA) cycles. PDSA cycles, which are discussed in more detail in section 17, are frequently used to implement health care interventions.

While there is no need to be an expert in quality improvement to carry out a surgical prehabilitation project, we do encourage you to keep a QI perspective as it can offer benefits like the demonstration of small-scale positive impacts which can help build confidence in patients, team members, and stakeholders.

PROJECT CHECKLIST



Below is a Project Checklist that can be referred to as you are going through the process of creating your project.

Surgical Patient Prehabilitation Project Checklist

- ☐ Readiness Assessment
- ☐ Recruit and finalize your multidisciplinary team
- ☐ Create a roles and responsibility document for your team
- ☐ Select clinical components & patient populations
- ☐ Develop an Aim with your team
- ☐ Apply for funding through the PCAN Innovation Fund
- ☐ Create a Process Map
- ☐ Create and submit your Work Plan
- ☐ Get started with your first PDSA cycle!

READINESS ASSESSMENT



Why Now?

One of the first steps to any change process is reflecting on whether your site is well-prepared to adopt a new process.

At this point, you likely already have an idea of which preoperative prehabilitation aspects you wish to address within your own surgical site. Is your surgical program able to manage increased work inputs? Will your leadership group support your prehabilitation program? Do you have allied health professionals that are keen to join your project? These are only a few considerations before you get started.

It is not expected that you have the answers to these questions yet; in fact, most health care systems and facilities do not have up to date readiness assessments. A readiness assessment is a review before project initiation that evaluates the facility's overall readiness or capacity to begin and identifies areas that need more attention. Readiness precedes the project but does not guarantee successful change.

PCAN has a Readiness Assessment Scale [Appendix 1] that was created based off the Agency for Healthcare Research and Quality [AHRQ] which can help gauge the readiness of your site. This looks at the defined need, readiness for change, time, resources, personnel, and sustainment of change. Your site must score at least 6/8 to proceed with your prehabilitation project.

PATIENT ACTIVATION & SHARED DECISION-MAKING



Patient engagement and activation are fundamental aspects of health care delivery and are equally important in prehabilitation programs.

This approach recognizes that patients are vital partners in achieving better health outcomes rather than passive recipients of health care. Furthermore, patients are motivated to change their health behaviours during the preoperative period given the prospect of improving their surgical outcomes. Participation in prehabilitation fosters patient empowerment and serves as an opportunity for patients to take ownership of their health, and actively participate in their prehabilitation journey.

Shared Decision-Making (SDM) is a patient-centred and collaborative approach in which patients and health care providers work together to make informed decisions about care plans. Like patient activation, it recognizes that patients' personal values and goals are valued and crucial to their care plans. SDM is another essential aspect of prehabilitation.

We encourage you to consider the following steps to foster patient engagement, activation, and incorporate shared decision-making into your program:

1. Assess patients' levels of activation.
 - Measure your patients' current health literacy levels using a validated scale such as the "REALM-SF" test (BC Surgical Prehabilitation Toolkit – Appendix B).
 - Assess your patients' level of activation using a validated scale such as the "Patient Activation Measure" (BC Surgical Prehabilitation Toolkit – Appendix C).

2. Assist patients to engage in actions that support their health and health care.
 - ⚙ This may include education, motivational interviewing, goal setting, patient access to health portals, or encouraging the use of SPOC's Patient Passport (Resource B).
3. Implement a Shared Decision-Making process with patients.
 - ⚙ Provide patient education using easy-to-understand information about the clinical component(s) that will be targeted for prehabilitation.
 - ⚙ Create an open and non-judgmental environment for discussions and ask open-ended questions.
 - ⚙ Clarify the patients' values and goals.
 - ⚙ Use the SHARE approach, a model for SDM, for you and your patients (BC Surgical Prehabilitation Toolkit – Appendix E).

Please refer to the BC Surgical Prehabilitation Toolkit (Resource A) for further information and suggestions on patient activation and shared decision-making.

FUNDING



The Specialist Services Committee offers financial support through the PCAN Innovation Fund.

To receive this funding for the support of your implementation project, the Physician Lead must apply through:

<https://checkbox.doctorsofbc.ca/ssc-surgical-innovation-intake-form>.

An overview of the funding process is depicted in Figure 2.

Depending on each site's need, funding may be approved for different uses including for physician's sessional time and the support of other essential roles such as a project manager/nurse navigator, data collector, allied health professionals, etc. You will have to submit a budget as part of your funding application.

Please reach out to PCAN Portfolio Liaison for information on the PCAN Innovation Fund Guide. Working through this guide will help gather most of the information needed for the application.

Figure 2.
PCAN Innovation
Fund Process
Overview.






TEAM ASSEMBLY & RESPONSIBILITIES



Recruitment

Building your project team can be an exciting yet daunting step. There are a few strategies and considerations for when you are creating your team:

-  Successful teams are often multidisciplinary. Look to different departments, specialties, and professional groups to recruit team members. Some groups that are essential to surgical prehabilitation include:
 - Surgery
 - Anesthesia
 - Nursing
 - Allied Health Care Providers
 - Clinical Experts
 - Hospital Administration
 - Quality Improvement Leads
 - Patient Representatives
-  You will need a project manager or a nurse navigator.
 - Depending on site volume, the creation of a nurse navigator position may be beneficial to support the project. This role can be financially supported by the local health authority and PCAN. Further details below.
-  Consider which clinical components you will target for prehabilitation and include relevant experts.
 - Ex. If you will optimize nutrition, work to recruit a dietitian.
 - Ex. If you will optimize glycemic control, work to recruit a diabetes educator.

Other considerations for building your team:

- Brainstorm previous QI projects completed at your facility (i.e., patient journey mapping, ERAS collaborative, and Physician Quality Improvement initiative).
 - Who was integral in getting those projects up and running?
 - Who has experience creating sustainable change?
 - Is there anyone passionate about quality improvement that you would want on your team?
- People who understand the scope of the problem you seek to address, share a common vision, or retain a high level of cultural capital with staff, may be important team members for your project.

Expectations for teams include:

- Deciding internally on the division of responsibilities across the project team and leadership.
- Developing your own project infrastructure (i.e., project sponsor, steering committee, multidisciplinary team, etc.).
- Supporting physician leadership to champion implementation at the site level.
- Assigning a data collector to manage monthly data submission.

It takes a team!

Who should be involved? All team members involved in the surgical care of patients, including:

PATIENTS

SURGEONS

ANESTHESIOLOGISTS

NURSES

OPERATIONAL LEADERS

FAMILY PHYSICIAN

OTHER SPECIALISTS

ALLIED HEALTH PROFESSIONALS

IMPROVEMENT LEADERS

OTHERS

Role Descriptions

The following offers guidance on role descriptions. The written descriptions are to help with accountability and assessment of equal workload among team members but will vary among sites.

Physician lead or non-physician lead

- ✿ Initiates the project, guides, and coordinates the team, and liaises with PCAN, surgeons, physicians, allied health, and other stakeholders.
- ✿ Participates in the monitoring and evaluation of the group's progress, assesses the impact of implemented interventions on patient outcomes and health care quality, and engages with other health care professionals, institutions, and organizations to build collaborative partnerships and garner support for the group's project.
- ✿ Must provide project financial signing, document monthly expenses incurred on a physician expense claim with itemized receipt[s] and maintain an hourly log on the sessional excel form to accurately record project work.
- ✿ Physician lead must be licensed to practice in BC.

Project manager/ Nurse navigator

- ✿ Ensures project remains on track with respect to goals, timeline, and budget.
- ✿ Along with the project lead, can help liaise with PCAN, surgeons, physicians, allied health, and other stakeholders.
- ✿ Coordinates team meetings and ensures strong communication and collaboration among team members as well as with stakeholders.
- ✿ If volume site necessitates a nurse navigator, this position involves optimizing the flow of patients' prehabilitation journey from screening to intervention. This includes establishing appropriate interventions for each targeted component.

Health authority sponsor

- ⚙ Provides strategic guidance, secures necessary resources, and champions the program's objectives within the health authority.
- ⚙ Facilitates communication between the prehabilitation team and leadership, aligns the program with organizational goals, and advocates for the necessary structural and cultural changes.

Family physician

- ⚙ Help engage patients and coordinate prehabilitation interventions in the community when necessary.
- ⚙ Provide valuable insight and representation from the community's primary care perspective.

Clinical, QI expert

- ⚙ Expertise and action from clinical specialists to optimize specific patient health factors.
- ⚙ Expertise and action from QI experts to design and support project initiatives.

Data manager

- ⚙ Responsible for creating databases, data collection, identifying and resolving data issues, creating outcomes reports, survey distribution, etc.
- ⚙ May also oversee items such as a system for feedback and compliance with project design.

Allied health care professional

- ⚙ Offers expertise and are involved in the prehabilitation of related clinical components.

Patient partner

- ⚙ Provides valuable insight and feedback of the patient's perspective based on lived experience with their own pre-surgical prehabilitation journey to continuously optimize the program.

Nurse Navigator Role

If sites anticipate a high volume of patients undergoing prehabilitation, they may wish to create a nurse navigator position. The nurse navigator would be the project manager, who works to create an optimal pathway for patients. From the moment of patient engagement for prehabilitation, the nurse navigator would ensure tools are in place for efficient screening, and importantly, for appropriate interventions. If there are existing resources, the nurse navigator can coordinate patients to be optimized through those resources. If there are no resources in place for prehabilitation, the nurse navigator can work with the team to establish the necessary interventions. For instance, if many patients will be needing diabetes education and prehabilitation, the nurse navigator can recruit willing diabetes educators and/or physicians to help manage this aspect of prehabilitation for patients. Once these pathways are established, they can be expanded to presurgical screening to ensure efficiency and success of patients' prehabilitation journey.

This role of nurse navigator can be supported in part by PCAN. The network will fund up to a 0.5 FTE position, which must be matched by the health authority for the sustainability of the position. For more information of the nurse navigator role, please contact the PCAN Portfolio Liaison.

Family Physician Involvement

The support of primary care physicians is extremely valuable. Prehabilitation interventions can mirror some of those provided by a family physician on a regular basis. To avoid duplication in care, promote your new surgical program in the community, and improve consistency, it is important engage and discuss your plans with local family physicians.

It must be considered, however, that many patients will not have access to a family physician and that many family physicians are already working at over-capacity. To ensure there is not an overload on any one group, a collaborative approach must be taken where allied health professionals as well as community partners are included to support prehabilitation.

There are shared care and other avenues of patient prehabilitation that can be utilized as well (i.e., alcohol and drug services, internal medicine and perioperative medicine clinics and providers, mental health resources, pain specialists, and diabetes educators).

Fostering Long-term Engagement

Prehabilitation requires sustained efforts for successful program implementation and achieving the desired outcomes. Long-term engagement and buy-in from team members will help maintain momentum, reduce resistance to change, and ultimately support the success and sustainability of the project. This is an active and ongoing process, and we have included some strategies to foster long-term engagement and team member buy-in:

- ⚙️ Involve and engage team members early.
- ⚙️ Communicate a clear purpose with a well-developed aim statement.
- ⚙️ Demonstrate leadership support.
- ⚙️ Explain the expected benefits of prehabilitation at your site.
- ⚙️ Set realistic expectations for the group.
- ⚙️ Address concerns as they arise.
- ⚙️ Ensure opportunities for feedback.
- ⚙️ Offer training and support throughout the project.
- ⚙️ Have accessible, frequent communication within the team.
- ⚙️ Build a positive team culture where members feel respected and valued.
- ⚙️ Celebrate achievements, big or small.

SELECTING CLINICAL COMPONENTS & PATIENT POPULATIONS

It is recommended to start with 3-5 clinical components and then expand your initiative over time by including additional components and patient populations. The most common approach to prehabilitation is “screen, intervene, and measure” (Fig. 3). This is the model that SPOC employed for patient prehabilitation, which will be referenced throughout this guide.

Figure 3. Screen, Intervene, Measure Technique for Prehabilitation.



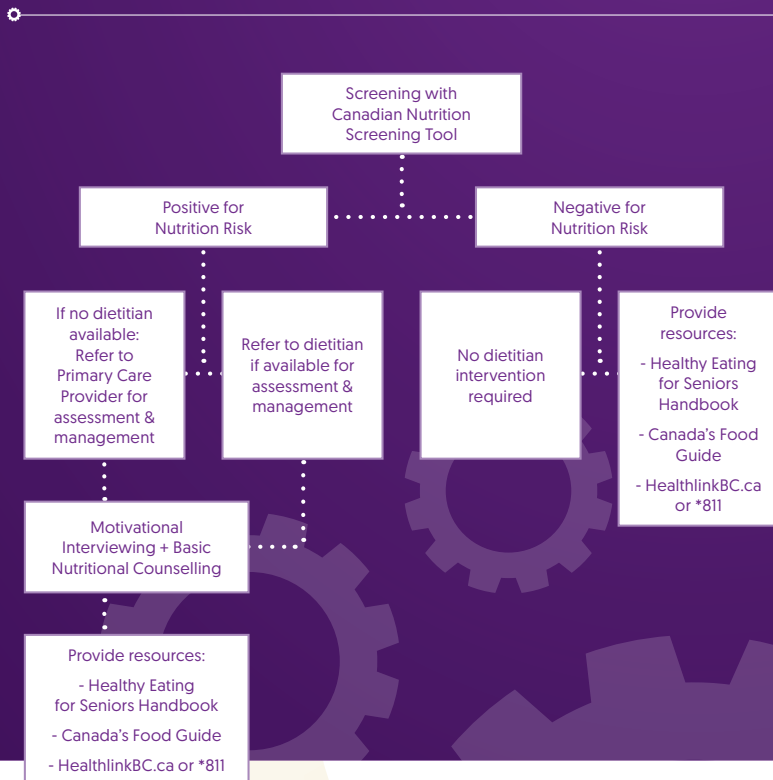
Thirteen clinical components were identified by SPOC for potential prehabilitation (Fig. 4).

Figure 4.
Clinical Components
targeted for
Preoperative
Prehabilitation.



The BC Surgical Prehabilitation Toolkit offers algorithms with screening tools, intervention options, and measures for each clinical component. Please keep in mind these are suggestions; many sites will have existing tools to improve clinical status or will identify more appropriate tools based on their local resources. We have included an example of the screen, intervene, measure model for nutrition. Please refer to the BC Surgical Prehabilitation Toolkit (Resource A) for more details on the remaining components.

NUTRITION ALGORITHM



Examining Local Data and Needs

Drawing on local data and known health needs in the region is an excellent way to help determine which clinical aspects and patient populations to target. This information can be anecdotal from local practitioners and health care professionals such as a high number of sedentary patients or patients who smoke cigarettes, or local research performed on the health needs of your community.

Another consideration is the infrastructure already in-place at your local site and community. It is essential to assess which, if any, prehabilitation interventions already exist at your site. Alternatively, if your site has resources that would support the prehabilitation of a specific component, it may be worth pursuing those. For instance, if you have a mental health professional on board and willing to be part of the project's prehabilitation action items, psychological prehabilitation would likely be a reasonable component to target. Input from team members and colleagues can also help identify target patient populations, as they may have a specific group in mind that would benefit from prehabilitation.

DATA MEASURES & COLLECTION

To help make data collection and analysis efficient, there is a pre-populated Excel measurement file to be used for monthly data collection and submission. It includes a step-by-step guide for data collection. It has automatically displayed data charts, making it easy for your team to track your own unique quality improvement data. Make sure your designated data collector team member is familiar with this Excel file. You must submit monthly data reports to PCAN using this Excel file.

Monthly data to be collected includes:

1. **Patient information** – Demographics, surgical profile.
2. **Process data** – The clinical component(s) optimized, screening results, interventions offered, post-intervention measurements, other specific data measures.
3. **Outcome data** – Defined adverse postoperative events, length of hospital stay.
4. **Patient-reported measures** – Patient reported experience measures, patient reported outcome measures.

DEVELOPING AN AIM

An aim statement will promote motivation and accountability within your team and help your project meet its intended outcomes. This is also an opportunity to refine the expected timeline of your project. Creating the Aim Statement should be a team effort.

To develop your aim statement, the SMART goal framework may be helpful:



An example of a SMART aim statement is the following:

“90% of orthopedic surgical patients who require prehabilitation for either nutrition, psychological support or exercise will receive at least one appropriate intervention by May 2023.”

IMPLEMENTATION STRATEGY



Without effective implementation strategies, most novel health interventions are not implemented on a scale that is large enough to make a significant impact on patient health.

A well-rounded strategy is needed for success, and it should be gradual and realistic about milestones.

The Consolidated Framework for Implementation Research (CFIR) is one of the most common tools used to evaluate potential facilitators and barriers to project implementation. The CFIR framework has 5 domains, each with a set of constructs that are likely to influence implementation. This framework can be found at: <https://cfirguide.org/constructs/>.

During the previous SPOC cycles, participating sites completed CFIR-based surveys to assess the most common facilitators, barriers, and neutral constructs. The results are presented in Table 1. While these reflect the mean results from all sites, each construct may have an important implication at your site. Please consider these CFIR constructs as potential barriers or facilitators when you are implementing your project.

Table 1. Facilitators, Barriers, and Neutral Constructs Identified from SPOC Team Surveys.

Facilitators

- 🔗 **Knowledge & Beliefs about the Intervention** – Provider belief in the value and benefits of surgical prehabilitation.
- 🔗 **Reflecting and Evaluating** – Collection and discussion of quantitative and qualitative information about the success of the project.

Barriers

- ⚙ **Complexity** – Intervention is complicated or time-consuming to implement in an already complex preoperative system.
- ⚙ **Structural Characteristics** – Existing infrastructure could not support the implementation very well, including staff shortages, lack of space and equipment.

Neutral

- ⚙ **Evidence Strength and Quality** – Level of evidence, research base and reliability of the information used to guide and support prehabilitation efforts.
- ⚙ **Patient Needs and Resources** – Assessed patients need for prehabilitation and available patient resources to support successful prehabilitation.
- ⚙ **External Policy and Incentives** – External factors that can influence and facilitate the successful adoption of prehabilitation efforts.
- ⚙ **Implementation Climate** – Overall readiness and receptiveness of the site to adopt and effectively implement prehabilitation efforts.
- ⚙ **Readiness for Implementation** – The degree to which the site is prepared and willing to accept and support the execution of prehabilitation efforts.
- ⚙ **Planning** – Identifying roles and responsibilities, outlining specific steps and milestones, and defining goals and measures for implementation success in advance.
- ⚙ **Engaging** – Encouraging participation in the prehabilitation efforts.
- ⚙ **Cost** – Operating costs are manageable with support available.

Critical Success Factors

In addition to the CFIR constructs above for implementation, participating SPOC sites identified “critical success factors”, or aspects of their project that were key to its success (Table 2). Please consider these as important elements that could help the success of your program.

Table 1. Critical Success Factors Identified from Previous SPOC Cycles.

Leadership Support

- ☀ Strong support from hospital leadership is vital. Leaders should champion the initiative, allocate resources, and foster a culture that values prehabilitation.

Clinical Protocols and Guidelines

- ☀ Developing evidence-based clinical pathways ensures consistency and quality in prehabilitation interventions.
- ☀ Previous efforts revealed that outcomes improved in parallel with the degree of adherence to an evidence-based perioperative care pathway.
- ☀ Creating a set of standard operating procedures for the project team, corresponding to each positive response on the screening questionnaire to ensure clear processes following a positive screening result.

Integration into Existing Workflows

- ⚙️ Seamless integration of prehabilitation into existing hospital workflows prevents disruptions and encourages adoption by health care providers.
- ⚙️ Review of your current perioperative pathway and surgical booking package[s] is critical to reflect and familiarize the team with current workflows and identify areas to adapt or improve upon.
- ⚙️ Creating, updating, and/or implementing a preoperative surgical screening questionnaire to incorporate the clinical components of your project is crucial to help identify and screen for patients who could benefit from prehabilitation.

Patient Selection

- ⚙️ It is important to consider who might benefit most when planning and adapting your project; identifying patients who stand to benefit the most from prehabilitation.
- ⚙️ From previous efforts, it appears that prehabilitation has larger benefits patients who are:
 - Older, rather than younger.
 - Have a moderately reduced reserve at baseline.
 - Undergoing cancer and thoracoabdominal procedures, compared to orthopedic procedures.

Financial Sustainability

- ⚙️ Developing a sustainable financial model, which may include demonstrating cost-effectiveness and potential savings, ensures the longevity of the prehabilitation program.

PROCESS MAPPING



A process map is a flow-chart that is used to visually map out workflows and processes. It is a useful tool and must be created before implementing your prehabilitation program. Process maps have many advantages, including:

- ❁ **Clarity and Understanding** – With a visual representation of the steps involved in prehabilitation, process maps can help clarify how the project will be executed for both team members and stakeholders.
- ❁ **Identifying Inefficiencies & Risk Management** – Process maps can help identify redundancies and bottlenecks, which can be addressed to optimize workflow. It can also help identify potential risks and permit the team time to develop mitigation strategies.
- ❁ **Communication** – The same process map shared amongst all team members can help ensure everyone has the same understanding of the workplan. It also makes it easier to discuss and resolve issues that may arise.

It is helpful to create a process map for both the CURRENT state of the preoperative journey, and the planned FUTURE state with the incorporation of prehabilitation. We have included an example of a general process map related to surgical prehabilitation (Fig. 5) When creating your process map, we encourage you to be as detailed as possible. Think about who will contact the patient along their prehabilitation journey and what that communication will look like. Think about where patients will be referred to for prehabilitation of their health factors. An issue that commonly arose during SPOC was the inefficiencies around having a patient optimized. It is crucial to reach out to clinics, specialists, allied health professionals, and explore available resources to ensure that the intervention options are already in-place for patients. This is a key element of the nurse navigator role. A streamlined process will save time and energy and avoid having to go through the many phone calls, faxes, texts to ask a health care provider each time if they would see a patient for prehabilitation.

[illegible]

Figure 5. Process Map example for a Surgical Perioperative Pathway.

CREATING A WORK PLAN

A Work Plan must be submitted to PCAN that outlines your project and answers specific questions. A template will be provided for you to utilize for your work plan.

PLAN-DO-STUDY-ACT CYCLES

It is now time to put your surgical prehabilitation plan into action!

We recommend starting small, evaluating the process, and then beginning to expand the initiative. This is the basis of the Plan-Do-Study-Act (PDSA) framework (Fig. 6). PDSA cycles are specifically recommended as a part of surgical prehabilitation projects. For your first PDSA cycle, recruit a single patient and have them go through your prehabilitation pathway until their targeted clinical component reaches optimization. After this, connect with your team and reflect on the process. What went well? What were some challenges, both anticipated and unanticipated? What can your team do to improve the cycle for the next patients? Gather feedback from the patient as well. Make the necessary alterations to improve the process for the next cycle. Once you are ready, recruit 2-3 more patients and go through the next PDSA cycle. Continue to expand the number of patients undergoing prehabilitation. This iterative nature of PDSA cycles helps make project implementation successful and expansion more manageable.

Figure 6.
Plan-Do-Study-Act
cycles for
implementing
health care
change.



SUSTAINABILITY



After your prehabilitation program has been implemented, it is essential to ensure its sustainability. This involves the integration into routine practice and fostering continuous improvement. Through this, your program will be better equipped to adapt to best practices and will continue to provide patient-centred prehabilitation. It is important to include your team members in the discussion as their joy in work and belief in the intervention will strongly relate to the project's sustainability.

The **S-P-R-E-A-D** acronym defines six critical areas to promote spread and sustainability. Try to adopt these principles within your program.



▲
Access a
digital copy
of the
**Spread and
Sustainability
Resource
Cards** here

S - SUPPORT

Effective and supportive leadership is critical in change.

Leaders need to be visible, encouraging, and authentic. Leaders solicit and respond to feedback, demonstrating care and active listening.

P - POSITIVE CULTURE

Culture reflects the attributes, beliefs, perceptions & values that team members share. Change leaders must understand the role that culture plays on team members' buy-in, motivation, and engagement.

R - RESOURCES

Teams and individuals must feel capable to transition into the new desired state. Change leaders must provide time and access to knowledge for team members to implement the required skills and behaviours.

E - ENGAGEMENT

The degree of person-centredness in a system is reflected in superior decision making, design and care. Change leaders need to ensure everyone has a vested interest in the change, across all levels and roles, and feels that they have a voice in the change process.

A - ADOPTION

Understanding why errors occur and tackling poor design and procedures is key to improvement. Hearing, listening, and responding to the voices of staff and patients is key to ensuring the successful implementation of a change. Change leaders need to ensure that reasons for change, processes, and required skills are made clear to maximize adoption.

D - DESIRED RESULTS

All improvement will require change, but not all change will result in improvement. Evaluation is vital to our understanding of which methods and innovations work to improve quality. Where there is a clear benefit from a change, innovation, or improvement, that modification will be adapted and spread more rapidly.

PATIENT RESOURCES



For patients to learn more about Prehabilitation, there is a YouTube playlist created by Doctors of BC that provides an overview, as well as brief videos to demonstrate the importance of optimizing each clinical component.

This playlist can be found at:

www.youtube.com/playlist?list=PLg3FvFQU-i5Toajlc-QrLFcNAW_UmuV1-

or by searching the internet for “YouTube BC Surgical Patient Prehabilitation”.

As mentioned previously, there is a Patient Passport that patients can bring to their prehabilitation care visits to ensure they are on track, and to keep them engaged throughout the process. This Patient Passport is linked in Resource B.



APPENDIX 1

AHRQ-BASED READINESS ASSESSMENT SCALE



DEFINED NEED

1. Have you clearly defined the need that is driving your site to consider implementing a surgical prehabilitation process? ☐ Yes ☐ No
2. Is the Surgical Patient Prehabilitation Collaborative an appropriate strategy to address your prehabilitation goals? ☐ Yes ☐ No

READINESS FOR CHANGE

3. Is now the right time for implementing a surgical patient prehabilitation process [e.g., it will not compete with other major changes currently being made within your organization]? ☐ Yes ☐ No
If your organization is experiencing several changes, it may not be an ideal time to begin an initiative. Attempting to manage multiple change efforts at one time may degrade your organization's ability and willingness to implement and sustain the quality improvement efforts.
The project may be viewed as a distraction rather than a solution.
4. Will your organization's leaders support the Surgical Patient Prehabilitation Collaborative change and effort required to implement and sustain the quality improvement initiative? ☐ Yes ☐ No
It is essential that the leaders within your organization actively support and champion the Surgical Patient Prehabilitation Collaborative needs and deliverables.

TIME, RESOURCES, PERSONNEL

5. Will your organization provide sufficient staff with the necessary time and resources to support the Surgical Patient Prehabilitation Collaborative? ☐ Yes ☐ No
6. Will your organization allow time to prepare and continue work on Surgical Patient Prehabilitation Collaborative deliverables? ☐ Yes ☐ No

SUSTAINMENT OF THE CHANGE

7. Will your site be willing and able to measure and assess progress and continuously improve processes? ☐ Yes ☐ No
8. Will your site be able to reinforce and reward positive teamwork behaviours and improvements in processes? ☐ Yes ☐ No
To become accepted practice, positive teamwork behaviours and improvements in processes and outcomes need to be reinforced and rewarded. Leaders, champions, instructors and coaches should be willing to provide ongoing feedback to others within the organization. Successes need to be formally recognized and showcased throughout the organization.

READINESS ASSESSMENT SCORE

Number of Yes responses you have selected is 6-8 out of 8:

This is likely a good time within your organization to participate in the Surgical Patient Prehabilitation Collaborative. As you begin the implementation process, continue to monitor whether the answers to these questions change and keep a close eye on any items to which you answered "no."

Number of Yes responses you have selected is 4-5 out of 8:

Your organization may not be ready on one-third to one-half of the factors. This reduces the likelihood of project success. Evaluate if this is an appropriate time to participate in the Surgical Patient Prehabilitation Collaborative.

Number of Yes responses you have selected is 1-3 out of 8:

Based on your responses, significant work is likely needed to raise the readiness level of your organization. Participation in the Surgical Patient Prehabilitation Collaborative could create significant risk that it will not succeed or produce the desired results. Strongly consider before agreeing to participate in the Surgical Patient Prehabilitation Collaborative.

RESOURCE A

BC SURGICAL PREHABILITATION TOOLKIT

Available under SPOC's page on the SSC Website.

Online PDF

www.sscbc.ca/sites/default/files/SPOC%20Change%20Package-2.pdf

BC Surgical Prehabilitation Toolkit

SURGICAL PATIENT OPTIMIZATION COLLABORATIVE

APRIL 2022 - V.5

SSC
SPECIALIST SERVICES COMMITTEE

PROCESS IMPROVEMENT
Introduce a refined process to allow for prehabilitation

Adapt/mod to allow for to take place

ANEMIA TREATMENT ALGORITHM

High risk (Hb 100-110g/L) or symptomatic (Hb < 100g/L) or patient request for transfusion

Change Sites

- Prehabilitation center
- Analysis of existing
- Facilitated discussion
- Individualized plan of care
- Direct work ordering
- Business analysis

Access a digital copy of the BC Surgical Prehabilitation Toolkit here

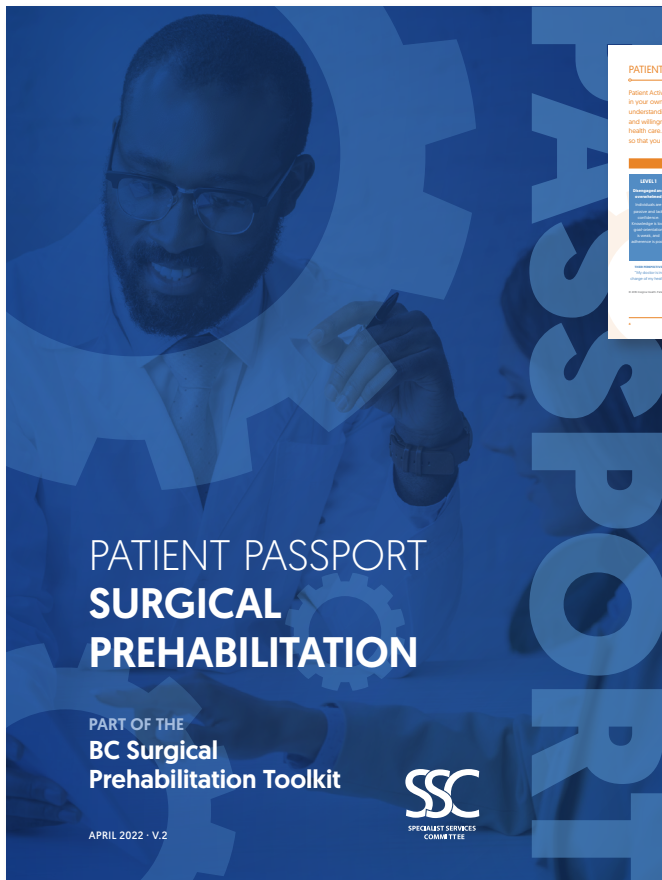
RESOURCE B

SPOC PATIENT PASSPORT

Available under SPOC's page on the SSC Website.

Online PDF

www.sscbc.ca/sites/default/files/Surgical_Patient_Optimization_Passport_0.pdf



**PATIENT PASSPORT
SURGICAL
PREHABILITATION**

PART OF THE
**BC Surgical
Prehabilitation Toolkit**

APRIL 2022 - V.2

SSC
SPECIALIST SERVICES
COMMITTEE

PATIENT ACTIVATION

Patient Activation focuses on your [patient] involvement in your own health and health care. This includes understanding your health condition, as well as your ability and willingness to take action to manage your health and health care. In this case it is to prepare yourself for surgery so that you can have

ANEMIA

My hemoglobin concentration at the time of my referral for surgery was: _____ g/L
My ferritin concentration at the time of my referral for surgery was: _____ µg/L
Date of measurement: _____

During Prehabilitation


To manage my anemia, I have:

- ☐ Not used primary care provider regarding my anemia
- ☐ Not used an iron or hematologic agent regarding my anemia
- ☐ Have prescribed oral iron supplements
- ☐ Have prescribed intravenous (IV) iron
- ☐ Have prescribed erythropoiesis-stimulating agents
- ☐ Other: _____

After Prehabilitation

My hemoglobin concentration closest to my surgery date was: _____ g/L
Date of measurement: _____

Access a digital copy of the Patient Passport for Surgical Prehabilitation here



NOTES



Lined area for taking notes, featuring horizontal ruling lines across the page.







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◀ Access a digital copy of the
**Surgical Patient Prehabilitation
Implementation Toolkit** here