

ADAPT-OC Coaching Protocol

Assessing Delivery Approaches for Prehabilitation Trials in Ovarian Cancer

School of Kinesiology and Health Studies, Queen's University

This handbook is a collaborative work developed by:

Adrienne Kamerman, BScH

Jenson Price, PhD.

Brendon Gurd, PhD.

The format and content of this protocol is inspired by the Colon Health and Lifelong Exercise Change (CHALLENGE) Trial and corresponding Physical Activity Counsellor (PAC) Manual.¹



Table of Contents

<i>Protocol Overview</i>	<i>2</i>
Introduction	2
Coaching Approach: Motivational Interviewing.....	3
Incorporating MI Techniques.....	5
Behaviour Change Techniques (BCTs).....	5
The Importance of Using the BCT's as a Coach	5
Coaching Requirements: Remote vs. In-person	6
Table 2. Session Overview	7
<i>Introductory Session: Getting to Know Your Participant</i>	<i>10</i>
<i>Coaching Session 1: Introducing the Program.....</i>	<i>12</i>
<i>Coaching Session 2: Managing the Program</i>	<i>15</i>
<i>Coaching Session 3: Adapting and Supporting</i>	<i>19</i>
<i>Pre-Surgery Session: Establishing a Post-Surgical Plan</i>	<i>23</i>
<i>Supplementary Documents</i>	<i>27</i>
Worksheet 1.1: Coach Note for Participant Barriers and Facilitators	28
Worksheet 1.2: Participant Goal Worksheet	29
Worksheet 1.3: Barrier Management Chart.....	30
Worksheet 1.4: Facilitator Enhancement Chart	31
Worksheet 2.1: Off-Day Plan for Participants.....	32
Worksheet 2.2: Time Management	33
Worksheet 2.3: Including Your Support Networks.....	34
Worksheet 3.1: Pros and Cons List for Adherence	35
Worksheet 3.2: Incentivizing your goals	36
Key Behaviour Change Technique (BCT) Definitions	37

Protocol Overview

Introduction

The coaching protocol serves as a guideline for coach-participant interactions to encourage adherence to the ADAPT-OC intervention. These interactions are guided by two complementary approaches: motivational interviewing and behaviour change techniques. Motivational Interviewing (MI) guides *how* coaches should interact with participants, while Behaviour Change Techniques (BCTs) refer to *what* techniques coaches will use to support participant adherence. The BCTs were selected based on the Capability, Opportunity, Motivation and Behaviour (COM-B) model² and were then mapped onto the Theoretical Domains Framework^{3,4} to address determinants of participants' adherence. Note that as the COM-B model is our primary framework, correlated strategies have been embedded into each session guide and are not explicitly mentioned.

Coaches may employ a selection of BCTs considering their participant's voiced concerns and expectations of the program, as outlined in the introduction session. Though a variety of BCTs can be used in each session, it is necessary for the coach to tailor the content of the coaching portion of the intervention to the participant's wants and needs. To do this successfully, coaches should be mindful of building rapport throughout the sessions.

The study's aim is for all participants increase their MET-hours by **at least** 10 MET-hours from baseline over the course of the intervention. However, coaches should use their knowledge of both the participant and exercise intensity to support participants in exercising more than 10 MET hours from baseline when appropriate and attainable. In addition to the exercise program, coaches will ask about participant adherence to protein shake consumption and mindfulness exercises at the weekly coaching sessions. Probing questions for intervention components can be found within the weekly guides for coach reference.

The **Supplementary Documents** section includes coaching worksheets to assist achieving session objectives and implementing BCTs. In addition, all participants receive a **guidebook** as a personal supplemental resource which includes:

- MET-hour aerobic exercise chart
- Rate of Perceived Exertion (RPE) Scale
- **Optional** resistance training program

Coaching Approach: Motivational Interviewing

Though the coaching protocol is founded upon the COM-B model of behaviour change, coaches are asked to also adopt Motivational Interviewing (MI) techniques to support their coaching approach. MI has been shown to be an effective tool to encourage an individual's willingness to change or engage in a behaviour.⁵ Within ADAPT, coaches are asked to implement this empathetic, patient-centred approach to help facilitate adherence to the various aspects of the program. MI consists of an interacting style known as the "Spirit of MI" and consists of four components found in the acronym, "PACE"⁶:

- **Partnership** – This means the conversation with the participant is collaborative, not prescriptive. The goal is to work to develop a plan together.
- **Acceptance** – This means respecting autonomy, even if coaches disagree with choices participants are making. Acceptance is accomplished through empathy (genuinely trying to see the world through the participant's eyes) and affirmation (recognizing participant strengths and efforts).
- **Compassion** – This means acting in the participant's best interest. Compassion sounds obvious but in a research trial, coaches may have their own hopes or goals for a participant that must be put aside to respect and prioritize participant goals.
- **Evocation** – This means coaches work to draw out the participant's own ideas rather than imposing their own. Coaches should assume the participant has what they need to succeed and then work to help them find it (be it purpose, enjoyment, support, etc.).

In **Table 1** coaches can find key MI techniques that may be helpful when adopting the MI approach. Additionally, a look into MI can be captured through the points below, found and adapted from Rollnick & Miller (1995).⁵

1. Motivation to change comes from the participant's own conclusions.
2. The participant is responsible for resolving their ambivalence (lack of desire) to change.
3. The coach should not try to persuade the participant a certain way.
4. The coaching style is thoughtful and directive.
5. The coach should direct the participant in discovering reasons for enacting a behaviour.
6. There should not be a power imbalance within coach-participant conversations, as MI reflects a partnership.
7. A participant's readiness to change (in the case of ADAPT, their readiness to engage in the prescribed program) reflects the quality of interaction between the coach and the participant.

Table 1: Motivational Interviewing Techniques adapted from Miller & Rollnick (2023).⁷

MI Technique	Definition
Open-ended questions	Invite people to provide their own answer rather than asking with a definitive response. Example: <i>"Tell me about your experience with _____"</i>
Affirming the participant	Acknowledge what the participant has communicated to you in a genuine manner. Examples: <i>"That was really brave of you."</i> <i>"I can see you value hard work"</i>
Reflecting	Repeating what the participant said in a rephrased manner to ensure understanding. Example: <i>Participant: "I am having a hard time completing my program because I don't really like walking in bad weather"</i> <i>Coach: "The reason you can't complete your program is because the prescribed exercise isn't working for you."</i>
Summarizing	Summaries are usually done near the end of the session to make sure you and the participant are on the same page. Summaries are a combination reflections and affirmations that showcase what you have understood through conversation with the participant. Example: <i>"You have mentioned that you are enjoying the prehabilitation program most of the time, but walking has been challenging for you so we should adjust that. Is there anything else?"</i>
Giving information	The coach provides neutral information related to what the participant has communicated. The tone of voice should not be persuasive but allow the participant to do what they will with the information themselves.
Shifting attention	Redirecting possible negative conversation from the participant to a more helpful perspective. Example: <i>"I recognize that was difficult for you, have you thought about how you have grown from that experience?"</i>

Ask-Offer-Ask	A cyclical process of providing information where after information is shared, you clarify understanding and proceed to more provide information if the participant wants it. Example: <i>Ask: "Would you like to talk about aerobic exercise and why that is a part of your program?" ...</i> <i>Offer: "Well, aerobic exercise is important for your heart health, which in turn improves your overall fitness." ...</i> <i>Ask: "Do you want to discuss different types of aerobic exercise options?"</i>
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Incorporating MI Techniques

Coaches are encouraged to review and incorporate the MI techniques listed above at their own discretion. Though BCT's are a mandatory portion of the protocol, MI aids in accomplishing behaviour change goals by supporting participants to make self-motivated changes. When participants desire change on their own terms, it is more likely to stick, assisting in the maintenance of behaviours after the coaching intervention is completed.

Behaviour Change Techniques (BCTs)

Coaching session plans are outlined with specific BCTs that have been identified through a review of barriers and facilitators found in prehabilitation literature. Mandatory BCT's are provided in the coaching script in order to target highly probable barriers and facilitators to participant adherence, while a "**BCT Toolbox**" is continuously provided for coach reference, building upon previous sessions for coaches to use at their discretion.

The Importance of Using the BCT's as a Coach

Coaches are required to utilize the mandatory BCT's outlined in the protocol, and they have been listed in the overview for each session for convenience. Prior to each session, coaches are asked review the BCTs if there are any they are unfamiliar with. The definitions of each BCT and examples of when/how to use them can be found in [Supplementary Documents: BCT Definitions](#).

Coaching Requirements: Remote vs. In-person

Study Arm	Number of exercise sessions	Coach Requirements
Remote	1 weekly behaviour coaching session. 3-5 exercise independent sessions completed on participant's own time.	- Guide participant through behaviour change coaching protocol. - Follow up on participant's self-led exercise sessions from the previous week. - Review nutrition and mindfulness adherence.
In-person	1 weekly behaviour coaching session followed by supervised exercise with the coach. 2-4 additional supervised exercise sessions a week.	- Guide participant through behaviour change coaching protocol. - Review the supervised exercise sessions from the week before. - Review nutrition and mindfulness adherence. - Coach participant through weekly changes in their exercise program.
Note: By consultation with participants, coaches will prescribe exercise frequency, intensity, time, and type (FITT). Participants will be prescribed a minimum of 3 and a maximum of 5 exercise sessions per week.		

Table 2. Session Overview

Session	Objectives	Behaviour Change Techniques ⁸
Introductory Session	Develop rapport with the participant. Define potential barriers and facilitators to adherence using Worksheet 1.1 Gather information on desired exercises, goals, and motivations using Worksheet 1.2 Identify the participant's initial barriers and facilitators to adherence using Worksheets 1.3 and 1.4. Introduce the patient to the app and ensure they fully understand navigation.	1.1 Goal Setting 1.2 Problem Solving 5.1 Information about Health Consequences 10.10 Reward (Outcome)
Coaching Session 1	Demonstrate the exercise program. Discuss optional substitute exercises using Worksheet 2.1. Discuss time management strategies using Worksheet 2.2 and plan future session times. Review the importance of support networks and send participant home with Worksheet 2.3 to complete and review at the next session.	4.1 Instruction on how to perform the behaviour 5.1 Information about health consequences 7.1 Prompts/cues 8.1 Behavioural practice/rehearsal 8.2 Behavioural Substitution 12.1 Restructuring the physical environment 12.2 Restructuring the social environment

Coaching Session 2	Discuss what went well and what didn't go so well in the program. Determine if any changes need to be made in order for MET-h increases to be attained. Review and adjust the participant's goals using Worksheet 1.2, and guide the participant through the option of incentivizing goals using Worksheet 3.2 Facilitate a general discussion about issues with adherence using Worksheet 3.1.	1.5 Review Behaviour Goals 1.6 Discrepancy between current behaviour and goal 2.3 Feedback on Behaviour 8.7 Graded Tasks 9.2 Pros and Cons
Coaching Session 3**	Discuss what went well and what didn't go so well in the program. Determine if any changes need to be made in order for MET-h increases to be attained. Review Worksheet 3.1 with the participant and update the barrier and facilitator charts in Worksheet 1.3 and 1.4 if appropriate. Review participant's goals and/or set new goals with Worksheet 1.2	1.3 Problem Solving 1.5 Review Behaviour Goals 1.6 Discrepancy between current behaviour and goal 2.3 Feedback on Behaviour 2.4 Self-monitoring of behaviour 8.7 Graded Tasks
Pre-Surgery Session	Ensure participant leaves feeling encouraged to continue their exercise routine after their surgery. Review current exercise behaviours with participants and support participants in reflecting on how they can maintain their exercise.	1.1 Goal setting 1.2 Problem Solving 1.7 Review outcome goal 2.4 Self-Monitoring of behaviour 3.2 Social Support (Practical)

	Complete a new Worksheet 2.1 for participants, specific to the post-surgery period. Review Worksheet 2.3 with a focus on the post-surgical support networks. Discuss the importance of staying active post-surgery and discuss how the participant can use the app as a self-monitoring tool.	3.3 Social Support (Emotional)
**Session 3: Adapting and Supporting serves as a standing guide that encourages participants to continue to meet or progress from the goal of 10-MET hours-a-week. With discretion, coaches should use the protocol and knowledge of the participant to determine next steps.		

Introductory Session: Getting to Know Your Participant

***Completed In-Person at the Baseline Testing Visit**

Session Objectives:

- Develop rapport with the participant (*Remember the Spirit of MI*)
- Begin Worksheet 1.1 (used for coach reference only)
- Complete Worksheets 1.2-1.4
 - Support the participant in setting personal goals
 - Support the participant in creating a management plan for identified barriers
 - Support the participant in identifying facilitators to intervention adherence
- Gather personal information for program design
- App navigation and onboarding
- Participant-led question period

BCT Toolbox:

1.1 Goal Setting

1.2 Problem Solving

5.1 Information about Health Consequences

10.10 Reward (Outcome)

1. Developing Rapport, Worksheet Completion, and Education: ~30 minutes

The main goal of the introductory session is to cultivate a sense of trust between yourself and the participant through the rapport. To build rapport, converse about the participant's personal interests, needs, concerns, etc. To facilitate trust and understanding of the participant, two worksheets have been provided. These worksheets should also inform your exercise program design:

- Worksheet 1.1: **Coach Note for Participant Barriers and Facilitators**
- Worksheet 1.2: **Participant Goal Worksheet**
- Worksheet 1.3: **Barrier Management Chart**
- Worksheet 1.4: **Facilitator Enhancement Chart**

These worksheets are designed to meet the BCT's outlined in the session overview table. Helping participants accomplish their goals and work through challenges in prehabilitation is the main priority as a coach. Use the allotted time to go through the guidebook with the

participants, explaining the importance of prehabilitation and the potential impacts that may be offered, as well as leaving room for participants to ask outstanding questions and raise any concerns.

2. App Navigation: ~10-15 minutes

Coaches must assist the participant in app onboarding and an introduction to navigation so they can track the various aspects of the program. Coaches have back-end access to what the participant inputs into the app which will be discussed at weekly coaching sessions.

Coaches must go over the components listed below:

- Assist participant with downloading the app on their device (or lending one of ours) and putting icon on homepage;
- Assist with the sign up process;
- Review main pages and functionality of app;
- Review the weekly MET-hr goal and inputting an aerobic activity (and our term Move Points);
- Review logging missed days;
- Review how to book upcoming coaching sessions (book a few sessions if able);
- Review how to set the weekly plan and set the plan for week 1 (includes inputting the MET-hr goal for week 1);
- Consider some tips on remembering to use the app! (Reminders, sticky notes around the house, put in calendar).

3. Participant-led question period: ~5-10 minutes

Here, coaches are encouraged to ask the participant if they have any questions or concerns. Similar questions should be repeated each week while also leaving time to allow participants to ask their own questions.

- *Is there anything that you'd like to discuss from today's session?*
- *Do you have any questions or concerns about the program?*
- *Is there anything I should know as your coach to help you in this intervention?*

Coaching Session 1: Introducing the Program

Session Objectives:

- Continue building rapport with the participant
- Review goals that were set in the introductory session
- Review program design
- Demonstrate and supervise the prescribed program
- Complete/Handout Worksheets 2.1-2.3
 - Discuss behavioural substitution strategies
 - Encourage participant to reflect on their time management
 - Guide participant through establishing different types of social support for prehabilitation and post-surgery needs.
- Participant-led question period

BCT Toolbox:

Session targets:

- 1.1 Goal Setting
- 4.1 Instruction on how to perform the behaviour
- 5.1 Information about health consequences
- 7.1 Prompts/cues
- 8.1 Behavioural practice/rehearsal
- 8.2 Behavioural Substitution
- 12.1 Restructuring the physical environment
- 12.2 Restructuring the social environment

Previous tools:

- 1.2 Problem Solving
- 5.1 Information about Health Consequences
- 10.10 Reward (Outcome)

Session Overview

The primary goal of Session 1 is to introduce your participant to their exercise program and allow them to complete their program with your supervision. The program should be designed with their interests, concerns, needs, and identified barriers in mind.

1. Welcome participant: ~5 minutes

Open the session with the intention of building rapport with the participant. Doing so will help build and set the tone for the relationship moving forward. Consider asking them:

- *How have the past few days been since we last chatted?*
- *How is work going?*
- *How is the family/spouse/partner/kids?*
- *Last time we reviewed the outline of the program and reviewed the app. Do you have any outstanding questions?*

2. Review previous session information and complete new worksheets: ~10-15 mins

Next, review the participant's goals, barriers, and facilitators from the Introductory session. Follow up will continue to build rapport and trust while providing an opportunity for the participant to update their information. Clarifying details will also ensure continuity between their needs and the program the coach has developed. Afterward, introduce the following worksheets. Participants should complete **Worksheet 2.1** with coach guidance, while **Worksheet 2.2** and **2.3** can be completed on their own time and reviewed with you next week.

- **Worksheet 2.1: Off-Day Plan for Participants**
- **Worksheet 2.2: Time Management**
- **Worksheet 2.3: Including Your Support Networks**

3. Program Overview: ~5-10 minutes

During this time, discuss the program you have designed with your participant. If the participant has asked for additional resistance training exercises (completed outside the study), then you can use the allotted time to demonstrate those exercises as well.

Finish the conversation by asking the participant these questions:

- *How do you feel about the program?*
- *Is there anything you would like to change?*

4. Program walk-through

In-Person: Provide time for the participant to complete their exercise program.

Remote: Participant can complete their exercise on their own time.

5. Participant-led question period: ~5-10 minutes

- Is there anything that you'd like to discuss from today's session?
- Do you have any questions or concerns about your exercise program?
- Have any new concerns come up for you?
- Is there anything I can do as a coach to help you in the next session?

Coaching Session 2: Managing the Program

Session Objectives:

- Continue building rapport with the participant
- Discuss experience with prescribed program and make appropriate adjustments
- Review and adjust the participants previously set goals and/or set new ones
- Review completed worksheets 2.1, 2.2 and 2.3
- Complete worksheets 3.1 and 3.2
 - Encourage participants to reflect on pros and cons of adhering to the prescribed program
 - Discuss the opportunity to incentivize set goals
- Participant-led question period

BCT Toolbox:

1.5 Review Behaviour Goals

1.6 Discrepancy between current behaviour and goal

2.3 Feedback on Behaviour

8.7 Graded Tasks

9.2 Pros and Cons

Previous tools:

1.1 Goal Setting

1.2 Problem Solving

4.1 Instruction on how to perform the behaviour

5.1 Information about health consequences

7.1 Prompts/cues

8.1 Behavioural practice/rehearsal

8.2 Behavioural Substitution

10.10 Reward (Outcome)

12.1 Restructuring the physical environment

12.2 Restructuring the social environment

Session Overview:

Session 2 is the first opportunity participants have to reflect on their exercise program. It is highly important that you gather as much information as possible from the participants, as their hesitations to further progression and difficulties with the current program are indicative of their adherence and must be solved.

1. Welcome participant: ~5 mins

Use the allotted time to continue with rapport-building, asking the participant about their lives and any details you spoke about last week. Try to allow the conversation to flow naturally, but last week's prompts can be used as a guide:

- *How have the past few days been since we last chatted?*
- *How is work going?*
- *How is the family/spouse/partner/kids?*
- *Last time we completed your prescribed program. Do you have any outstanding questions from that or about the app?*

2. Review the past week of program completion: ~5-10 minutes

- **Coaches:** *review participant progress from the app*
- *After the discussion, discern whether the participant needs to maintain, regress, or progress their MET-hour target or adjust components of their program.*

Use the allotted time to discuss what did and what did not go well with the program completion over the last week. Depending on their experience, use the following open-ended questions to probe participants to explore barriers and facilitators that the participant encountered:

The last week went well:

- *What part of the plan was easy to accomplish?*
- *What part of the plan was difficult to accomplish?*
- *Is there anything about the program that you did not enjoy?*
- *Is there anything you'd like to adjust in your program?*

The last week was difficult:

- *Tell me about last week. What parts of the program were manageable, and which were more difficult to keep up with?*

- *What would you need, from me or outside of our sessions, in order to be able to complete your program more easily?*
- *Are there exercises in your current program that you'd like to change if possible?*
- *Are there any ideas you have on what you might like to adjust?*

To end the conversation:

- Affirm the participant by offering verbal encouragement or recognizing their commitment, desire to change, etc.
- Remind the participant of the goals that they set at the introductory session and help them come up with a plan to incentivize their goals if they are able interested (**Worksheet 3.2**).
- **Make appropriate adjustments** to the exercise program based on the conversation you just had.

3. Check-in: Goals, Barriers, Facilitators & Review Last Week's Worksheets (if applicable)

- Review and update participant goals
- Review and update barrier management chart
- Review and update facilitator enhancement chart
- Review social support worksheet

Prompts to aid in the discussion:

- *How are you doing with your goals?*
- *Do we need to adjust them?*
- *How can I help you meet them?*

4. Handout Worksheet 3.1: Pros and Cons List for Program Adherence

This worksheet is provided to help participants reflect on the reasons why they want to complete the intervention. Some participants will not find the worksheet useful, and some will. Introduce it either way and instruct the participant to complete it on their own time.

5. Check in on additional program components: ~5 minutes

- How are you finding the box breathing exercises?
- Have you been able to stay on top of your protein supplement intake?

6. In-Person Group: Supervise the exercise program: ~30-60 minutes

7. Participant-led question period: ~5-10 minutes

- *Is there anything that you'd like to discuss from today's session?*
- *Do you have any questions or concerns about your exercise program?*
- *Have any new concerns come up for you?*
- *Is there anything I can do as a coach to help you in the next session?*

Coaching Session 3: Adapting and Supporting

***NOTE: Session 3 serves as a guide for all sessions until the pre-surgery session.**

Session Objectives:

- Continue building rapport with the participant
- Discuss adherence and experience with prescribed program and make appropriate program adjustments
- Support the participant through appropriate maintenance or increase in exercise
- Review worksheets 1.2, 1.3, 1.4 and 3.1 if appropriate
 - Review goals
 - Review barriers and facilitators
 - Review participant's pros and cons list for adherence
- Assist participant in self-directed motivation to accomplish goals
- Participant-led question period.

BCT Toolbox:

1.2 Problem Solving

1.5 Review Behaviour Goals

1.6 Discrepancy between current behaviour and goal

2.3 Feedback on Behaviour

2.4 Self-monitoring of behaviour

8.7 Graded Tasks

Previous tools:

1.1 Goal Setting

4.1 Instruction on how to perform the behaviour

5.1 Information about health consequences

7.1 Prompts/cues

8.1 Behavioural practice/rehearsal

8.2 Behavioural Substitution

9.2 Pros and Cons

10.10 Reward (Outcome)

12.1 Restructuring the physical environment

12.2 Restructuring the social environment

Session Overview:

Session 3 serves as a guide/outline for the continuing sessions up until the pre-surgery session. At this point, the participant is ideally at the **10 MET-hour** goal or higher, participant goals should be well-established, and barriers should be discussed at each coaching session. As a coach, you should use your discretion with BCT usage according to the needs and information communicated by the participant. Additionally, previously used worksheets can be reviewed and updated as you discern the participant requires it.

Optional worksheets: *Update based on session progress and knowledge of the participant.*

- 1.3: Barrier management chart
- 1.4 Facilitator enhancement chart
- 2.1: Off-day plan
- 2.2: Time management
- 3.1: Incentivizing your goals
- 3.2: Pros and cons list to adherence

1. Welcome participant: ~5 mins

Use the allotted time to continue with rapport-building, asking the participant about their lives and any details you spoke about last week. Try to allow the conversation to flow naturally, but last week's prompts can be used as a guide:

- How have the past few days been since we last chatted?
- How is work going?
- How is the family/spouse/partner/kids?
- Do you have any outstanding questions from our last session? (provide a refresher)

2. Review the past week of program completion: ~5 minutes

- **Coaches:** *review participant progress from the app*
- *After the discussion, discern whether the participant needs to maintain, regress, or progress their MET-hour target or adjust components of their program.*

Use the allotted time to discuss what did and what did not go well with the program completion over the last week. Depending on their experience, use the following open-ended questions to probe participants to explore barriers and facilitators that the participant encountered:

The last week went well:

- *What part of the plan was easy to accomplish?*
- *What part of the plan was difficult to accomplish?*
- *Is there anything about the program that you did not enjoy?*
- *Is there anything you'd like to adjust in your program?*

The last week was difficult:

- *Tell me about last week. What parts of the program were manageable, and which were more difficult to keep up with?*
- *What would you need, from me or outside of our sessions, in order to be able to complete the program more easily?*
- *Are there exercises in your current program that you'd like to change if possible?*
- *Are there any ideas you have on what you might like to adjust?*

To end the conversation:

- Affirm the participant by offering verbal encouragement or recognizing their commitment, desire to change, etc.
- Remind the participant of the goals that they set at the introductory session and help them come up with a plan to incentivize their goals if they are able interested (**Worksheet 3.2**).
- **Make appropriate adjustments** to the exercise program based on the conversation you just had.

3. Check-in: Goals, Barriers, Facilitators & Review Last Week's Worksheets (if applicable)

- a. Review and update participant goals
- b. Review and update barrier management chart
- c. Review and update facilitator enhancement chart
- d. Review social support worksheet

Prompts to aid in the discussion:

- *How are you doing with your goals?*
- *Do we need to adjust them?*
- *How can I help you meet them?*

4. Check in on additional program components: ~5 minutes

- *How are you finding the box breathing exercises?*
- *Have you been able to stay on top of your protein supplement intake?*

5. Introduce the progression of this week's program (if applicable): ~5 minutes

Tell the participant about the changes you made and **why** you made them to help with the “buy-in,” assisting with motivation and adherence. Provide time for the participants to ask any questions about the adjustments you made.

6. In-Person Group: Supervise the exercise program: ~30-60 minutes

7. Participant-led question period: ~5-10 minutes

- *Is there anything that you'd like to discuss from today's session?*
- *Do you have any questions or concerns about your exercise program?*
- *Have any new concerns come up for you?*
- *Is there anything I can do as a coach to help you in the next session?*

Pre-Surgery Session: Establishing a Post-Surgical Plan

***Depending on surgery date, this coaching session may occur less than a week after the previous coaching session.**

Session Objectives:

- Assist in motivating participants to continue exercise, nutrition, and breathing exercises post-surgery.
- Review current exercise program and support participants in reflecting on how they can continue exercising on their own.
- Complete worksheet 2.1 and 2.3 with new focus on the post-surgery period
 - Guide participants in creating fresh goals
 - Support participants in reflecting on social support networks
- Complete additional worksheets at coach's discretion (list provided in guide)
- Participant-led question period: focus on any outstanding questions for the post-surgery period.

BCT Toolbox:

- 1.1 Goal setting
- 1.2 Problem Solving
- 1.7 Review outcome goal
- 2.4 Self-Monitoring of behaviour
- 3.2 Social Support (Practical)
- 3.3 Social Support (Emotional)

Previous tools:

- 1.5 Review Behaviour Goals
- 1.6 Discrepancy between current behaviour and goal
- 2.3 Feedback on Behaviour
- 4.1 Instruction on how to perform the behaviour
- 5.1 Information about health consequences

7.1 Prompts/cues
8.1 Behavioural practice/rehearsal
8.2 Behavioural Substitution
8.7 Graded Tasks
9.2 Pros and Cons
10.10 Reward (Outcome)
12.1 Restructuring the physical environment
12.2 Restructuring the social environment

Session Overview:

For the pre-surgery session, it is important to identify persistent barriers to exercise and lead a discussion with the participant about how to overcome them in a self-determined manner. Though the intervention is focused on pre-surgery exercise, we want to leave participants motivated to continue the behaviours they have learned to engage with during their prehabilitation period. During these discussions, you are encouraged to utilize open-ended questions that help the participant reflect and come to conclusions on their own so that goals and behaviour changes are self-produced, and therefore, more likely to stick.

Optional worksheets: *Use based on your knowledge of the participant.*

- Worksheet 1.3: **Barrier management chart**
- Worksheet 1.4: **Facilitator enhancement chart**
- Worksheet 2.1: **Off-day plan**
- Worksheet 2.2: **Time management**
- Worksheet 3.1: **Incentivizing your goals**
- Worksheet 3.2: **Pros and cons list (continuing exercise rather than adherence)**

1. Welcome participant: ~5 mins

Use the allotted time to continue with rapport-building, asking the participant about their lives and any details you spoke about last week. Try to allow the conversation to flow naturally, but last week's prompts can be used as a guide:

- How have the past few days been since we last chatted?
- How is work going?

- How is the family/spouse/partner/kids?
- Do you have any outstanding questions from our last session? (provide a refresher)

2. Review the past week of exercise program completion: ~5 minutes

- **Coaches:** review participant progress from the app
- Finish the conversation by discussing what exercise the participant will aim to accomplish on their own time.

Use the allotted time to discuss what did and what did not go well with the program completion over the last week. Depending on their experience, use the following open-ended questions to probe participants to explore barriers and facilitators that the participant encountered:

The last week went well:

- *What part of the plan was easy to accomplish?*
- *What part of the plan was difficult to accomplish?*
- *How do you feel in terms of wrapping up this portion of the study and completing your exercise program without the coaching sessions?*

The last week was difficult:

- *Tell me about last week. What parts of the program were manageable, and which were more difficult to keep up with?*
- *How can I help you leave this session feeling more confident to complete your program?*
- *How do you feel in terms of wrapping up this portion of the study and completing your exercise program without the coaching sessions?*

To end the conversation:

- Affirm the participant by offering verbal encouragement or recognizing their commitment, desire to change, etc.

3. Check-in: Goals, Barriers, Facilitators & Review Last Week's Worksheets (if applicable)

- Review and update participant goals
- Review and update barrier management chart
- Review and update facilitator enhancement chart
- Review social support worksheet

Prompts to aid in the discussion:

- *How are you doing with your goals?*
- *Do we need to adjust them?*
- *How can I help you meet them?*
- *What might you do to overcome barriers after your surgery?*

4. Check in on additional program components: ~5 minutes

- *How are you finding the box breathing exercises?*
- *Have you been able to stay on top of your protein supplement intake?*

5. In-Person Group: Supervise the exercise program: ~30-60 minutes

6. Open up a conversation about how to self-monitor continuing goals: ~5 minutes

Considering what you have learned about the participant (interests, needs, goals, etc.), encourage them to reflect on how they want their behaviours to continue after the coaching sessions are finished. Participants are still able to access the app once the intervention is over, so they are able to use that as a self-monitoring strategy from the get-go.

7. Participant-led question period: ~10 minutes

- *How are you feeling have completed the prehabilitation program?*
- *Is there any information I could offer that would help you in completing exercise on your own?*

Supplementary Documents

In the following section of the handbook, you will find linked worksheets and behaviour change resources that are outlined in the Table of Contents and Session Guides.

Worksheet 1.1: Coach Note for Participant Barriers and Facilitators

This worksheet should be used for **coach knowledge** only. Use it during the initial sessions, or whenever participants identify a new barrier or facilitator with you. Tracking barriers and facilitators in the chart below aims to assist in future program adjustments or participant-based decisions that you need to make as a coach.

Participant-Identified Barrier or Facilitator	Required Follow-Up or Program Adjustment

Worksheet 1.2: Participant Goal Worksheet

SMART Goal Worksheet	
General Program Goal (if applicable):	
<i>Consider and incorporate the components of a SMART goal:</i> Specific: Where, when, how, will this goal be completed? Measurable: How will I know that this goal is accomplished? Attainable: Is this goal reasonable considering the resources and skills I have? Relevant: Is this goal applicable to my prehabilitation journey? Timed: Have I made my goal time-bound? When will it be completed by?	
Short-term SMART goal #1	
Short-term SMART goal #2	
Short-term SMART goal #3	
Short-term SMART goal #4	
Short-term SMART goal #5	

Worksheet 1.3: Barrier Management Chart

Barrier Management Chart	
What are some challenges that you expect to experience or have been experiencing in this program?	What are some things that you can implement to help you overcome these challenges?
EXAMPLE:	
<i>"I find it difficult to walk outside when it is raining"</i>	<i>"When it's raining, I can substitute my walk for an indoor cycle"</i>
•	•
•	•
•	•
•	•
•	•
•	•
•	•
You know yourself and your routine best! Incorporating a new habit into your life takes time and effort. Reflect on your personal goals, needs, commitments, and what things you need to make adherence to this program possible.	

Worksheet 1.4: Facilitator Enhancement Chart

Facilitator Enhancement Chart	
What encourages you to complete exercise?	How can you make this more possible in your everyday life?
EXAMPLE	
<i>"If I lay out my workout clothes the night before I will be more likely to do my work out before work."</i>	<i>Put a reminder in my phone to prep my clothes and attire for the morning</i>
1.	
2.	
3.	
4.	
5.	
You know yourself and your routine best! Incorporating a new habit into your life takes time and effort. Reflect on your personal goals, needs, commitments, and what things you need to make adherence to this program possible.	

Worksheet 2.1: Off-Day Plan for Participants

Off-Day Exercise Plan	
This worksheet acts as a guide for days when you might be experiencing diagnosis-related symptoms. If possible, and if desired, these optional exercise prescription replacements can help you still get your body moving at a lower intensity.	
Example: Prescribed exercise <i>30-minute moderate intensity cycle</i>	Example: Off-day Replacement <i>15-minute low intensity walk</i>
Prescribed Exercise	Off-Day Replacement

Worksheet 2.2: Time Management

Time Management Tool	
<i>Here, you can reflect on life commitments that exist alongside this study. Only so many hours exist in a day, and it is important that the right things to you get prioritized. Planning goes a long way, especially for incorporating new routines.</i>	
What commitments (eg., family time, work) do I have in my life that cannot change: 1. 2. 3. 4. 5.	
Is my time going anywhere else that feels unnecessary? 1. 2. 3. 4. 5.	
Based on my commitments, what time seems most suitable to complete my program? <i>Reflect on this below</i>	Do I need to make any adjustments to make this commitment possible? <i>Reflect on this below</i>

Worksheet 2.3: Including Your Support Networks

Forming My Prehab Support System⁹ Information adapted from Uchino, 2004.	
Emotional Support: Displayed through care and concern, listening, comfort.	Informational Support: Someone you trust offering advice or guidance.
<i>Make a list of people you rely on for this type of support and things you can ask of them to support you best.</i> • • • • •	<i>Make a list of people you rely on for this type of support and things you can ask of them to support you best.</i> • • • • •
Tangible Support: Shown through practical help and aid.	Belonging Support: Spending time with people you love.
<i>Make a list of people you rely on for this type of support and things you can ask of them to support you best.</i> • • • • •	<i>Make a list of people you rely on for this type of support and things you can ask of them to support you best.</i> • • • • •

Worksheet 3.1: Pros and Cons List for Adherence

PROs and CONs List of Program Completion	
In the boxes below, list the “pros” and “cons” of adhering to different aspects of the prehabilitation program. Once that is completed, list some reasons why completing aspects of the program are important to you.	
Pros of progression	Cons of progression
• • • • •	• • • • •
Reflecting on your “pros,” list some reasons why different aspects of the program are important to you (exercise, nutrition, mindfulness). If it is helpful, reflect on the goals you have set to assist you.	
1. 2. 3. 4. 5.	

Worksheet 3.2: Incentivizing your goals

Incentivizing Your Goals

List your current goals here:

1. _____
2. _____
3. _____
4. _____
5. _____

What goal(s) feels like it needs an incentive, and why?

What am I going to reward myself with if I complete my goal(s)?

Incentives should:

- Encourage you to complete your goals
- Aid healthy habit- and routine-building behaviours

Incentives should not:

- Encourage unhealthy thoughts or behaviours

Key Behaviour Change Technique (BCT) Definitions

Adapted from The Human Behaviour Change Project⁸

1.1 Goal Setting: A set target to work towards in order to assist in a behaviour change achievement

1.2 Problem Solving: Guiding the participant through barriers that come up throughout the program. Use motivational-interviewing-style questions to help participants come to their own conclusions.

1.5 Review Behaviour Goals: Review goals that have been previously set and achieved with the participant. Discuss potential for new goals to be set, or for behaviour to be maintained.

1.6 Discrepancy between current behaviour and goal: Talk to the participant about challenges they are facing in meeting their goals. Conversely, ask about goals that are set too low and guide them in reflecting on whether such goals need adjusting.

1.7 Review Outcome Goal: Similar to review behaviour goal, this BCT focuses on when an outcome goal has been achieved and new goals that can be set for a more challenging outcome.

2.3 Feedback on Behaviour: Affirm the participant in their efforts of working towards set goals and behaviours and provide education on topics that are appropriate.

2.4 Self-monitoring of behaviour: Support participants in setting up strategies that will support their continued behaviour change after the intervention is finished.

3.2 Social Support (Practical): Assist participants in reflecting on social relationships they can rely on during the intervention for practical support.

3.3 Social Support (Emotional): In tandem with 3.2, assist participants in reflecting on social relationships they can rely on during the intervention for emotional support.

4.1 Instruction on how to perform the behaviour: Make sure to demonstrate each exercise you show the participant (aerobic, stretching, optional resistance). Ask the participant if they understand and let them show you how they think they are to complete it.

5.1 Information about health consequences: Discuss the importance of sticking to the exercise routine for the sake of their outcomes and goals originally set.

7.1 Prompts/cues: Provide appropriate cues and prompts during the exercise program.

8.1 Behavioural practice/rehearsal: Through adherence to exercise, nutrition, and mindfulness components, participants are closer to behaviour change. As a coach, you can support this change through MI-grounded conversation, open-ended questions, etc.

8.2 Behavioural Substitution: Discuss the importance of the Day-Off Plan and reasoning for completing low-intensity activity in place of the high intensity on off-days due to diagnosis-related symptoms.

8.7 Graded Tasks: Ensure that goals are attainable by starting them at a low enough point that they are able to increase with appropriate challenge.

9.2 Pros and Cons: Walk through potential reasons for wanting to (pros) and not wanting to (cons) complete a behaviour.

10.10 Reward (Outcome): Participants arrange their own reward if certain behaviour goals are met. The Reward BCT works in coordination with the Goal Setting (1.1) BCT in the intervention, and is intended to eventually work alongside **2.4, Self-monitoring of behaviour.**

12.1 Restructuring the physical environment & 12.2 Restructuring the social environment: This is an ongoing BCT that should be utilized each session. Consistently review the program, the participants goals, and make changes where appropriate that help lead them to the overall intervention goal of achieving as many MET-hours as possible.

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