Activities Report for the Cardiometabolic, Diabetes and Obesity Research Network - CMDO

PROMOUVOIR L'ACTIVITE PHYSIQUE EN SOINS DE PREMIERE LIGNE: UN ATELIER DE CO-CONSTRUCTION INTEGRANT EXPERTISE ET EXPERIENCE

Dr. Tracie A Barnett

Dr. Ariane Bélanger-Gravel

Dr. Jean-Pierre Després

Dr. Lise-Gauvin

Dr. Andraea Van Hulst

December 5 and 6, 2023, Hôtel Montfort, Nicolet, Quebec

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Executive Summary

On December 5th and 6th, 2023, the CMDO Research Network of the FRQS held an interactive workshop at the Hôtel Montfort in Nicolet, Québec, a central meeting point for participants traveling from Montreal, Trois-Rivières, Quebec City, and Sherbrooke. The workshop was led by Dr. Tracie Barnett and facilitated by Raissa Marks. The event was made possible with the financial support from the CMDO and CIHR. Following the style of deliberative dialogues, a group of 37 participants including patient partners, clinicians (kinesiologists, physicians, nurses, psychologists) and researchers with a vested interest in physical activity promotion convened. The overall goal was to gather input and consolidate the knowledge and experiences of various users of Québec's health system to inform the development of a personalized physical activity intervention to be delivered or coordinated in primary care settings.

The workshop itinerary was spread across two days. On Day 1, eight speakers addressed several themes, including the burden of physical inactivity, and the promise of physical activity promotion; patient and clinician perspectives on physical activity promotion within primary care settings; evidence and best practices for physical activity promotion within primary care settings; and an overview of the relevant behaviour change theories, frameworks, and motivational communication techniques for physical activity promotion and behaviour change. Following the presentations, on Day 2, participants took part in small group "brainstorming" sessions, discussions, and plenaries, to propose solutions to various challenges, including identifying patients to be targeted; reaching and mobilizing patients; reaching more marginalized populations; improving adherence (both from patients and clinicians); and which (individual or contextual) factors should be evaluated.

Main points of agreement (*details are provided in the Appendices*):

i. Factors including social support, motivation, accessibility, and physical activity history are likely to help determine if a patient is a promising candidate for physical activity counseling in primary care, and could be approached.
ii. Patients' sociodemographic, behavioural and medical characteristics, social ties, relationship with their healthcare provider (duration, quality), may impact their likelihood to volunteer or request physical activity counseling.
iii. Financial and human resources, physician training and personalization of physical activity counseling can support efforts at reaching and mobilizing targeted individuals.
iv. The co-construction of a culturally safe intervention which can be tailored to individual and community needs could help reach structurally disadvantaged populations.
v. Strategies for self-monitoring of behaviour, monitoring of behaviour by providers, patient education, social support, accessibility, and intervention personalization could increase the likelihood that patients adhere to their physical activity "prescription".
vi. Physical activity counseling can be made feasible for primary care providers by ensuring support of the healthcare team, offering provider training, limiting the impact on workload, and establishing clearly delineated responsibilities for the patient and all members of the care team.

Background

In July of 2022, our team submitted a proposal to the Canadian Institutes of Health Research (CIHR) for the Planning and Dissemination Grant – Institute Community Support. Our proposal outlined a plan to develop a comprehensive physical activity prescription program for clinical settings in Québec. The stages comprised in our proposal were: i) designing the program, ii) testing its feasibility and impact, and iii) escalating the intervention to a larger scale.

Our project received funding for the first stage from both, the CIHR and the CMDO Research Network. The CIHR grant contributed CAD $ 20,000.00, and the CMDO Research Network financial support for this first phase was CAD $ 25,000.00. The objectives were to 1) collaborate with numerous stakeholders, including patient partners, to co-construct a physical activity promotion intervention to be delivered in primary care settings, and 2) devise a protocol for testing its feasibility and eventual broader implementation and scale-up study. To carry out this project, we worked on a pre-workshop preparation phase that included graduate students and research assistants arranging the logistics for the event, preparing the workshop agenda, and workshop materials, and contacting participants and speakers. The workshop took place in Fall 2023, and its procedures are described in the following pages.

Program

Promouvoir l'activité physique avec succès en soins de première ligne: un atelier de co-construction intégrant expertise et expérience

5 décembre (midi)-6 décembre (16h00)- Hôtel Montfort Nicolet, 1141 Rue St Jean Baptiste, Nicolet, QC

AGENDA

Objectifs:

1. Partager les connaissances existantes et émergentes ainsi que les expériences vécues en matière d'intervention de promotion de l'activité physique dans les soins de première ligne.
2. Bonifier une intervention visant à promouvoir l'activité physique grâce à la co-construction pour en permettre l'implantation dans les soins de première ligne.
3. Identifier les questions de recherche entourant l'implantation de l'intervention bonifiée dans un contexte réel de soins afin d'orienter le développement d'un protocole d'évaluation.

Objectives :

1. *Share existing and emerging knowledge as well as lived experience of physical activity promotion intervention in primary care.*
2. *Present a draft intervention for promoting physical activity in primary care settings.*
3. *Refine the intervention so that it can be tested by clinicians in a real-life setting.*

5 décembre 2023

Heure		Activité
12h - 13h	**Inscriptions/arrivée**	**Salle La Cathédrale A**
13h - 13h45	Dîner (boîte a lunch)	**Salle La Cathédrale A**
13h45 - 14h	Mots de bienvenue ♦ Place de l'événement dans la programmation scientifique du CMDO. - *André Tchernof* ♦ Mot de bienvenue et présentation des objectifs de l'atelier. - *Tracie Barnett.* ♦ Déroulement des activités. - *Raissa Marks.*	
	Modératrice des présentations : Tracie Barnett	
14h - 14h20	Présentation et échanges ♦ « La révolution active en soins de première ligne : pourquoi la déclencher? » - *Jean-Pierre Després, Université Laval*	
14h20 - 14h40	Présentation et échanges ♦ « Recevoir une prescription pour faire plus d'activité physique de son équipe de soins en première ligne : Perspective d'un patient partenaire sur l'expérience de recevoir et de mettre en œuvre une telle recommandation. » - *Sonia Lussier, Université McGill*	
14h40 – 15h	Présentation et échanges ♦ « Promouvoir l'activité physique en soins de première ligne : Perspective d'une médecin de famille sur les bénéfices et les défis. » - *Constantin Filip, GMF Jardins Roussillon*	
15h-15h20	Présentation et échanges ♦ « Promouvoir l'activité physique : une perspective autochtone » - *Amy Shawanda, Université McGill* *(allocution en anglais)*	
15h20-15h40	Présentation et échanges ♦ « Comment promouvoir l'activité physique en soins de première ligne ? Portrait des données probantes provenant des écrits scientifiques. » - *Lise Gauvin, ESPUM*	
15h40 - 15h55	Pause	
15h55-16h15	Présentation et échanges ♦ « Présentation des composantes d'une intervention à bonifier » - *Anda Dragomir, Université Concordia*	

16h15-16h45	Présentation et échanges ♦ « Promotion d'activité physique en soins de première ligne : comment tirer profit des connaissances sur l'utilisation et l'agencement des techniques de changement de comportements sans s'y perdre. » « Comment faire vivre les interventions en promotion d'activité physique dans les milieux de pratique? Barrières et facilitants. » - *Ariane Bélanger-Gravel*, *Université Laval*
16h45 – 17h05	Présentation et échanges ♦ « Promouvoir l'activité physique auprès de populations défavorisées en première ligne : l'exemple de la prescription de parcs nature pour prévenir le diabète parmi des populations défavorisées à Toronto » - *Gillian Booth, University of Toronto* *(allocution en anglais)*
17h05 - 17h25	Perspectives et leçons tirées ♦ Bilan Journée 1 - *Tracie A Barnett* ♦ Objectifs pour la Journée 2 - *Raissa Marks*
17h25 - 18h30	Pause
18h30	**Cocktail Dinatoire** — **Restaurant de l'Hôtel Montfort**

6 décembre 2023

Heure	**Activité**	
8h - 9h	**Déjeuner**	**Restaurant de l'Hôtel Montfort**
		Salle La Cathédrale A
9h - 9h15	Mot de bienvenue	♦ Mise en contexte, survol des leçons tirée lors des échanges de la veille et objectifs pour la deuxième journée – *Tracie Barnett, Raissa Marks*
9h15-9h45	Présentation et échanges	Présentation d'une intervention - *TBD* *Modératrice des tables rondes : Raissa Marks*
9h45 - 10h45	1ière Table ronde	♦ Les patients à cibler
10h45 – 11h	Pause	
11h – 12h	2ième Table ronde	♦ La faisabilité
12h - 13h	**Dîner**	**Restaurant de l'Hôtel Montfort**
13h - 13h30	3ième Table ronde	♦ La prescription
13h30 - 14h30	4ème Table ronde	♦ La relation médecin-patient
14h30 - 14h45	Pause	
14h45 - 15h30	5ème Table ronde	♦ L'évaluation
15h30 - 16h	Clôture	♦ Acquis de l'atelier et prochaines étapes - *Tracie Barnett, Raissa Marks*

Participants

Name of the participant	Affiliation	Profile	Attendance
Lucie Geneviève Lambert	NA	Patient partner	Online
Veronique Lowry	Université de Sherbrooke	Researcher	Online
Gillian Booth	University of Toronto	Researcher	In person
Raphaela Nikolopoulos	McGill University	Student	In person
Jean-Pierre Després	Université Laval	Clinician / researcher	In person
Ariane Bélanger Gravel	Université Laval	Researcher	In person
Raissa Marks	Lili Mark	Facilitator	In person
Paula Bush	McGill University	Researcher	In person
Anda Dragomir	Concordia University	Researcher	In person
Réal Barrette	Ministère de la Santé et des Services Sociaux	Clinician / decision maker	In person
Sonia Lussier	McGill University	Patient partner	In person
Keryn Chemtob	McGill University	Clinician	In person
Lucien Junior Bergeron	CMDO	Researcher	In person
Enrique Garcia	Laval University	Researcher	In person
Lise Gauvin	Université de Montréal	Researcher	In person
Linda Pagani	Université de Montréal	Researcher	In person
Ana Lungu	McGill University	Student	In person
Magali Brousseau-Foley	Université du Québec à Trois-Rivières	Clinician / Researcher	In person
Julie Houle	Université du Québec à Trois-Rivières	Researcher	In person
Roxane St. Amande	Montreal Clinical Research Institute	Clinician / Researcher	In person
Amy Shawanda	McGill University	Researcher	In person
Justin Gagnon	Université de Sherbrooke	Student / researcher	In person
Mélanie Lussier	NA	Patient partner	In person
Denis Boutin	NA	Patient partner	In person

André Gaudreau	NA	Patient partner	In person
Bianka Tardiff	NA	Patient partner	In person
Marie-Elen Leblanc	CIUSSS de l'Est de l'Île de Montréal	Clinician	In person
Jane Yardley	Institute de Recherches Cliniques de Montréal	Researcher	In person
Stephanie-May Ruchat	Université du Québec à Trois-Rivières	Researcher	In person
Isabelle Dore	Université de Montréal	Researcher	In person
Constantin Filip	GMF Jardins Rousillon, McGill University	Clinician	In person
Dominique Perron	Ministère de la Santé et des Services Sociaux	Clinician	In person
Manuel Escalona	Centre Hospitalaire de l'Université de Montréal	Researcher	In person
Ahmed J Romain	Université de Montréal	Researcher	In person
Dominic Chartrand	Laval University	Clinician / Researcher	In person
Tracie A Barnett	McGill University	Researcher	In person
Elena Ponce Alcalá	McGill University	Research Assistant	In person

Biographies of speakers and organizers

Jean-Pierre Després

Dr. Jean-Pierre Després is a full professor in the Department of Kinesiology at the Faculty of Medicine at Laval University. He is the scientific director of VITAM – the Center for Sustainable Health Research, the scientific director of the International Chair on Cardiometabolic Risk, and the co-holder of the Chair on Sustainable Health Research. His research interests include obesity, fat distribution, visceral obesity, type 2 diabetes, lipids, lipoproteins, cardiovascular diseases, and their prevention through physical activity and a healthy lifestyle. Thirty years ago, he was the first to highlight that an excess of fat in the abdominal cavity (visceral obesity) is particularly harmful to health. He is actively involved in major educational and mobilization activities aimed at preventing chronic societal diseases. In 2015, he was honored as a Knight of the National Order of Quebec.

Lise Gauvin

Lise Gauvin, PhD, is a full professor in the Department of Social and Preventive Medicine at the School of Public Health at the University of Montreal. She is the associate scientific director for population health research at the Research Center of the University of Montreal Hospital (CRCHUM) and a researcher at the Léa-Roback Research Center on Social Inequalities in Health in Montreal. She completed her PhD in Physical Activity Sciences at the University of Montreal in 1985. Her research focuses on the socio-environmental factors influencing physical activity, interventions to promote regular physical activity at the population level, and the social determinants of unhealthy eating behaviors. In 2015, Lise Gauvin was named a Fellow of the Canadian Academy of Health Sciences and serves on the Advisory Council of the Canadian Institutes of Health Research for Health Promotion and Prevention.

Tracie Barnett

Tracie Barnett is an Associate Professor in the Department of Family Medicine at McGill University and holds a senior career award from the Fonds de Recherche du Québec – Santé (FRQS). Dr. Barnett leads a research lab at CHU Sainte-Justine. Her research program focuses on understanding how built and social environments affect lifestyle habits and obesity in young people, as well as strategies to promote healthy weight. She uses emerging technologies to measure how environments influence health. Her interests include transforming environments and studying life course trajectories. Along with the CIRCUIT Clinic team, she evaluates an intervention aimed at increasing physical activity levels in young people at risk of cardiovascular disease by optimizing their existing environmental resources.

Ariane Bélanger-Gravel

Ariane Bélanger-Gravel, PhD, holds a doctorate in kinesiology from Laval University and completed a postdoctoral fellowship at the School of Public Health at the University of Montreal. She is primarily interested in studying the theoretical foundations behind adopting health-promoting behaviors and developing interventions and messages to encourage these behaviors. Her research aims to identify promising intervention targets and "active ingredients" (or intervention techniques) that could enhance the effectiveness of programs promoting healthy lifestyles. Her research interests also include evaluating the impact of communication campaigns and interventions deployed at the population level. Dr. Bélanger-Gravel is an Assistant Professor in the Department of Information and Communication at Laval University and an associate researcher at the Research Center of the Quebec Heart and Lung Institute, where she continues her various research and teaching activities.

Gillian Booth

Dr. Gillian Booth is a professor in the Department of Medicine and the Institute of Health Policy, Management, and Evaluation at the University of Toronto. She is also a scientist at the MAP Centre for Urban Health Solutions at St. Michael's Hospital and ICES in Toronto. Additionally, she holds a Tier 1 Canada Research Chair in Policy Solutions for Diabetes Prevention and Management. Her research focuses on the socioeconomic, environmental, and health factors that influence the risk of diabetes and its complications. Dr. Booth investigates how the built environment where people live affects the development of diabetes. Recently, she received funding to develop and optimize a "park prescription" intervention for diabetes prevention, aimed at increasing physical activity (like walking) in natural settings. Moreover, Dr. Booth leads a large clinical trial (T1ME) on a digital health solution designed to make education and support for the self-management of type 1 diabetes more accessible, transparent, and effective.

Raissa Marks

With over 20 years of experience in the non-profit sector, Raissa is a collaborative leader passionate about healthy communities and the people within them. She has extensive experience in facilitating diverse groups and stakeholders through consensus-based decision-making processes. Raissa is a strategic thinker with expertise in policy at both the federal and provincial levels. She is bilingual (English-French), a skill she honed through her education and work in New Brunswick, Canada's only bilingual province. She currently resides in Montreal.

Constantin Filip

Constantin Filip, M.D., is a new member of the Faculty Development Committee in the Department of Family Medicine at McGill University. He represents the Châteauguay site, a French-speaking unit located 30 minutes off the island, where family medicine has been practiced and taught since its establishment in 2009. Dr. Filip completed his residency there and now practices and teaches at the same location. He also maintains a practice at the GMF En-Route Square Victoria in Montreal.
Dr. Filip has always been deeply interested in teaching and supervision. By joining this committee, his goal is to become the go-to person for faculty development at Châteauguay. He aims to bring fresh ideas and contribute to the faculty development program. His motivation is rooted in a desire to improve his teaching skills to meet learners' deep desire for quality education. Currently, his scientific interests include working with hospitalized patients in family practice, particularly in follow-up care and prevention. Given the recent and ongoing technological changes in medicine, he is keen to understand and implement continuous quality improvement measures in family medicine units. Dr. Filip believes that among all the roles family physicians play, that of an educator is one of the most important, not just for learners but also for the general public.

Sonia Lussier

Sonia Lussier is a communication professional who has coordinated numerous health and environmental projects, including those focused on cancer patients. As a patient partner, she currently works with Dr. Tracie Barnett as the co-director of the Patient Partnership Hub of the Quebec Support Unit for Strategy for Patient-Oriented Research (SPOR) at McGill University and as co-director of the Quebec SPOR project at the McGill University Integrated Health and Social Services Network (RUISSS McGill). Since 2013, Sonia Lussier has been a patient partner trainer at the Patient Collaboration Partnership Directorate (DCPP) of the University of Montreal, working with health students and collaborating on other patient partnership development projects in the greater Montreal area. Additionally, Sonia Lussier is a professional musician and conducts two choirs in Montérégie.

Anda Dragomir

Anda Dragomir, PhD, is a clinical psychologist and postdoctoral researcher at Concordia University. She has deep expertise in the methodology of behavioral interventions and has been involved in designing and developing effective behavior change interventions. Her area of expertise includes training healthcare professionals in communication techniques to improve patient self-management.

Amy Shawanda

Amy Shawanda is an assistant professor and Indigenous researcher in the Department of Family Medicine. An Odawa Kwe, she specializes in Indigenous health and holds a Provost Postdoctoral Fellowship at the Dalla Lana School of Public Health at the University of Toronto. Born and raised in the unceded territory of Wikwemikong on Manitoulin Island, Ontario, she was immersed in Indigenous education and experiential learning from daycare through high school. She then focused her strengths on Indigenous knowledge throughout her undergraduate and graduate studies.

Ms. Shawanda has a background in Law and Justice and Indigenous Studies, along with a Master's degree in Indigenous Relations. Her doctoral work focused on Anishinaabe motherhood and exploring the challenges, tensions, and strengths of traditional teachings and pedagogies in a contemporary context; she shares specialized knowledge in strengthening Indigenous ways of being, acting, knowing, and asserting.

Overview of the Workshop

On December 5th and 6th 2023, a total of 37 participants, including patient partners, clinicians (kinesiologists, physicians, nurses, psychologists) and researchers, shared their experiences, knowledge and opinions related to the implementation of physical activity counselling and prescription in primary care settings. The workshop was held in person, but we also offered an online option to a couple of participants. We offered live language translation between French and English for monolingual participants

This 2-day event took place at the Montfort Hotel in Nicolet, Québec. This venue was chosen as it was a central point for participants, who were mostly attending from Montreal, Trois-Rivières, Quebec City, and Sherbrooke. The event was led by Dr. Tracie A Barnett, principal investigator of this project, and facilitated by Raissa Marks. The first day consisted of presentations by researchers, clinicians and patient partners, followed by a quick comments section and the use of Wooclap to generate word clouds of each topic presented (Pictures 1 - 11).

The objective of Day 1 was to provide participants with a comprehensive background which included the rationale for offering physical activity counseling intervention in primary care, scientific evidence from similar interventions, barriers, facilitators and tools for implementing physical activity promotion in primary care, from the perspectives of various interested parties The intended purpose of this approach was to equip participants with relevant and timely information and to prepare them to contribute meaningfully to discussions on Day 2. Given their volume, presentations are available upon request only.

On the second day, participants sat with attendees of the same profile (e.g., clinicians with clinicians), and a professional workshop facilitator (Raissa Marks) guided the discussions. This day began with a summary of the patient, clinician and researcher perspectives shared from Day 1. The facilitator, Raissa Marks, and Dr. Tracie Barnett then introduced the format of the small group and plenary discussions. The various prompts are described further in this report. A set time was provided to reflect on and discuss specific questions in small groups (these were shuffled at the mid-point of Day 2), and to provide suggestions, written out on large poster size sheets. After each question was sufficiently considered, all sheets were then circulated amongst all other groups, who would select their “top ranked” suggestions. The conclusions from each table were later shared and discussed in plenary. The main findings are described further in the report and in greater detail in the appendices.

Picture 1. Presentation of Professor L. Gauvin, “How to promote physical activity in primary care? Overview of data from scientific literature”.

Picture 2. Generation of word cloud after the presentation of patient partner Sonia Lussier

Picture 3. Profiles of participants who attended the workshop

Picture 4. Word cloud generated after the talk “La révolution active en soins de première ligne: pourquoi la déclencher?” by Jean-Pierre Després.

Picture 5. Word cloud generated after the talk “Recevoir une prescription pour faire plus d’activité physique de son équipe de soins en première ligne: Perspective d’un

patient sur l'expérience de recevoir et de mettre en ouvre une telle recommendation" by Sonia Lussier

Picture 6. Word cloud generated after the talk "Promouvoir l'activité physique en soins de première ligne : Perspective d'un médecin de famille sur les bénéfices et les défis: by Constantin Filip

Picture 7. Word cloud generated after the talk "Promouvoir l'activité physique: une perspective autochtone" by Amy Shawanda

Picture 8. Word cloud generated after the talk "Comment promouvoir l'activité physique en soins de première ligne? Portrait des données probantes provenant des écrits scientifiques" by Lise Gauvin.

Picture 9. Word cloud generated for the talk “Présentation des composantes d’une intervention à bonifier” by Anda Dragomir

Picture 10. Word cloud generated from the talk “Promouvoir l’activité physique en soins de première ligne : comment tirer profit des connaissances sur l’utilisation et l’agencement des techniques de changement de comportements sans s’y perdre” by Ariane Bélanger-Gravel

Picture 11. Word cloud generated from the talk “Promovoir l’activité physique auprès de populations défavorisées en première ligne: l’exemple de la prescription de parcs nature pour prévenir le diabète parmi des populations défavorisées à Toronto” by Gillian Booth

Details of the Workshop: DAY 1 Presentations

- *"La revolution active en soins de première ligne: pourquoi la déclencher?"*
  Jean-Pierre Després, Université Laval
  The burden of inactivity and the value of assessing and increasing population-wide levels of physical activity was presented.

- *"Recevoir une prescription pour faire plus d'activité physique de son équipe de soins en première ligne: Prescpective d'un patient partenaire sue l'expérience de recevoir et de mettre en oeuvre une telle recommendation."*
  - Sonia Lussier, McGill University

- *"Promouvoir l'activité physique en soins de première ligne: Perspective d'un médecin de famille sue les bénéfices et les défis."*
  - Constantin Filip, GMF Jardins Rousillon

- *"Physical Activity from a First Nation's Perspective"*
  - Amy Shawanda, McGill University
  Dr. Shawanda discussed the connection between physical activity and Indigenous spirituality and traditional way of life, including hunting and gathering, procuring materials and building infrastructure, dancing, transportation, and art. Further, she emphasized that decolonizing physical activity is an essential step to beginning to heal from the trauma and violence Indigenous Peoples have endured.

- *"Comment promouvoir l'activité physique en soins de première ligne? Portrait des données probantes des écrits scientifiques."*
  - Lise Gauvin, ESPUM
  Dr Gauvin provided an overview of the recommendations and best evidence from recognized authorities.

- *"Motivation communication: How to leverage communication skills for behaviour change without getting lost."*
  - Anda Dragomir, Concordia University
  Dr. Dragomir highlighted the applications of the motivational conversation for behaviour change within a consultation setting. She further demonstrated how the motivational conversation can be used as a tool to explore ambivalence and build patient motivation, confidence and capacity. Following her presentation, Dr. Dragomir conducted an interactive simulation of a motivational conversation which demonstrated how to implement techniques such as reflexive listening and the use of open-ended questions to effectively collaborate with patients to motivate them towards change.

- *"Promotion d'activité physique en soins de première ligne: comment tirer profit des connaissances sur l'utilisation et l'agencement de techniques des changement de comportements sans s'y perdre." "Comment faire vivre les interventions en*

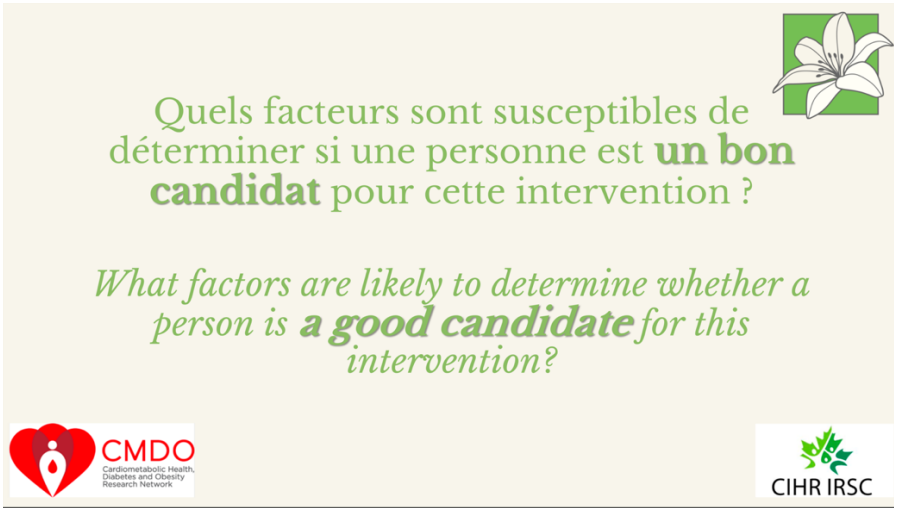
promotion d'activité physique dans les milieux de pratique?" Barrières et facilitants."
- Ariane Bélanger-Gravel, Université Laval
Dr. Bélanger-Gravel provided an overview of the behaviour change theories and frameworks which are the foundation for physical activity promotion efforts. She then further emphasized techniques commonly found in the behaviour change literature and provided recommendations for an effective physical activity promotion intervention, specifically a physical activity counseling intervention tailored to individual physical and social environments.

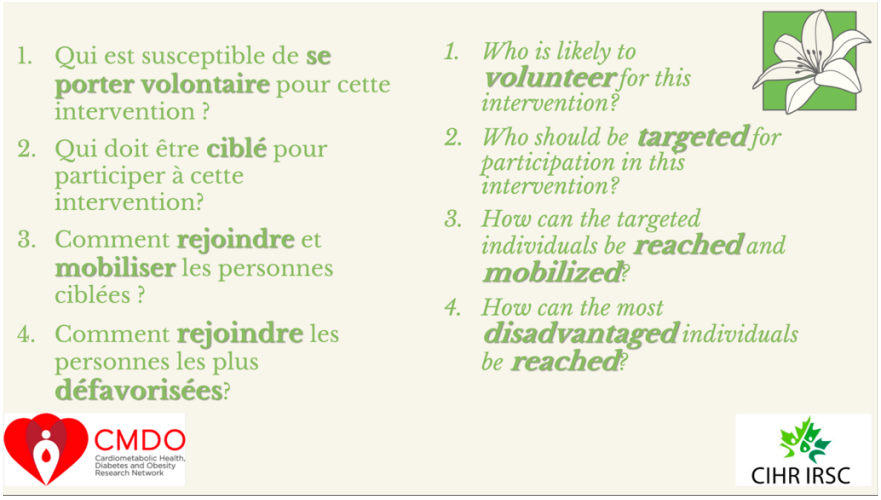
- *"Development and evaluation of a Park Prescription Intervention"*
- Gillian Booth, University of Toronto
In her presentation, Dr. Booth outlined an ongoing project aimed at designing and evaluating a Park prescription intervention to promote physical activity and enhanced mood in populations at high risk of diabetes. Lower income and racialized communities are among the most vulnerable, however these communities often have fewer parks, less tree cover, and lower quality greenspaces. She discussed the importance of patient and community engagement and collaboration with healthcare providers in order to develop, implement, and evaluate a feasible and effective intervention.

Details of the Workshop: Day 2 Discussion Prompts

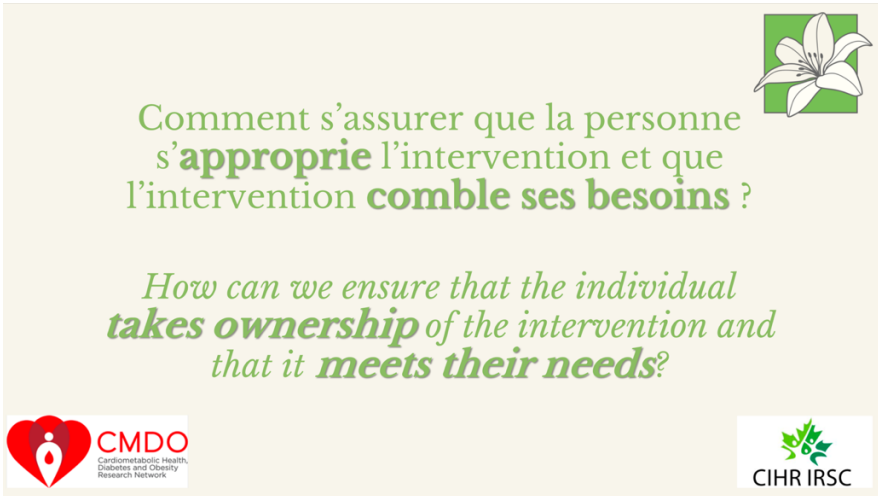
The following slides include the prompts, questions and sub-questions that were posed to the attendees and discussed in small groups and in plenary:

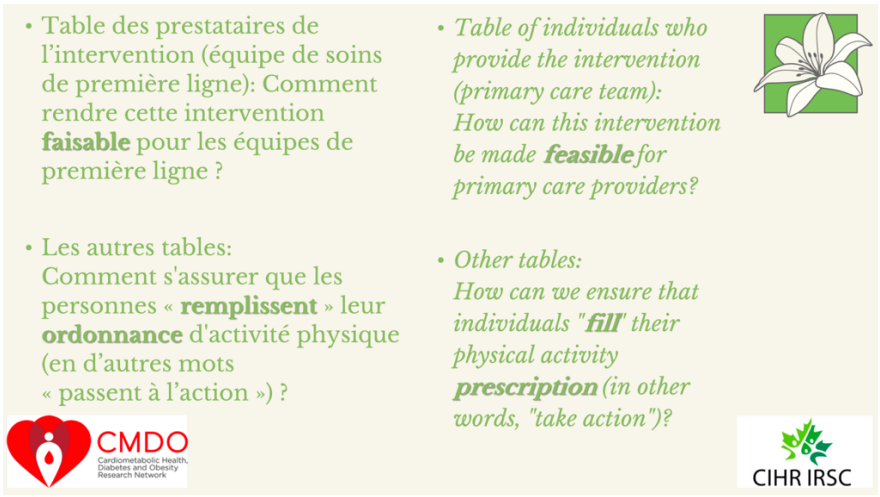
1. For discussing who would be the target patients





2. For discussing feasibility, prescription, and the doctor-patient relationship:





3. For discussing the evaluation:

Results of the Discussions

The main findings are summarized below; complete results are included in the Appendix.

Specific small group prompts

- **What factors are likely to determine when a person is a good candidate for this intervention?**

The analysis of these discussions resulted in 25 individual themes which were further categorized into four main groups (Appendix I): 1) social support, 2) motivation, 3) accessibility, and 4) physical activity history.

Social Support

Adequate social support from one's family, entourage and community may dictate someone's ability to integrate PA into their lifestyle, therefore individuals with strong support networks may be good candidates PA intervention uptake.

Motivation

Participants recognized that motivation is a characteristic which would make an individual a good candidate to receive a PA intervention in primary care. However, participants further stipulated that motivators vary, identifying a diagnosis or pre-diagnosis of cardiometabolic disease, the desire to engage in physical activity as a lifestyle behaviour, and the desire to engage in physical activity as a disease prevention and disease management strategy as motivators, among others.

Accessibility
Participants discussed that patients with reduced access (i.e. lower income, lower education, socially isolated, allophones, etc.) would be good candidates for this intervention as they may not be aware of the benefits of PA. However, feasibility of intervention delivery may be increased for patients with greater access.

Physical Activity History
Participants stipulated that a patient's history with PA as well as their current PA practices determine whether they are a good candidate to receive this intervention. Patients who have had a favourable past experience with PA may be more easily onboarded while those who are mainly sedentary or inactive may derive the most benefits.

♦ **Who is likely to volunteer for this intervention?**

The analysis of the participant discussions yielded 12 characteristics, grouped into five categories (Appendix II): 1) sociodemographic, 2) behavioural, 3) medical, 4) patient history with healthcare provider, and 5) social entourage.

Patients at-risk of or recently diagnosed with one or more cardiometabolic diseases, and those with a supportive social entourage, were identified as candidates who would likely request or be very receptive to PA counseling. Those deemed likely to benefit from a PA intervention initiated in a primary care setting but less likely to volunteer included structurally disadvantaged populations, individuals with lower socioeconomic status (SES) and educational attainment, those experiencing social isolation, and allophones. In contrast, populations with higher SES and greater access to healthcare were deemed more likely to request or be very receptive to PA counseling.

♦ **How can targeted individuals be reached and mobilized?**

Upon identifying vulnerable and disadvantaged populations as those most likely to benefit from the implementation of a PA intervention in primary care, participants further discussed strategies to best reach and mobilize these communities. Overall, 12 suggestions were identified, listed in Appendix III, that can be grouped into 4 categories: 1) adequate resources, 2) provider training, 3) personalization, and 4) in-clinic initiatives.

Adequate Resources
The appropriate resources are needed for both the patient and the provider in order to mobilize individuals to uptake any PA intervention. These include an "adequate" number and "appropriate" range of professionals with the relevant skillset and expertise. In addition, to enhance accessibility, patients may require complementary support to initiate or remain engaged in a PA intervention (e.g., necessary equipment, financial support).

Provider Training
As PA counseling uptake by primary care providers is suboptimal, with reasons including lack of training, among others, the importance of adequate training on motivational behaviour change techniques, was emphasized by both patients and providers.

Personalisation
Personalisation is a strategy used in many industries and fields in order to tailor a service or good to the needs of an individual or a group. Thus, tailoring components of the PA intervention to the physical and social environment and lifestyle of a patient will improve its feasibility. Emphasis was placed on the importance of the group, such as the community or one's family, as a mobilizing factor.

In-Clinic Initiatives
In order to reach patients who may be potential candidates to PA counseling, participants suggested having nurses working in primary care initiate contact with these patients. Further, according to patients, short appointment times jeopardize the feasibility of delivering a PA intervention in primary care. Patients recommended that clinics allocate more time for appointments related to PA counseling, including PA prescriptions.

- **How can the most disadvantaged individuals be reached?**

Participant dialogue generated a comprehensive list (Appendix IV) of community and social services as well as other frequently visited establishments where disadvantaged populations can likely be reached. Intervention strategies to enhance accessibility to marginalized populations, such as personalization, were further identified.

Round table discussions regarding the feasibility of intervention adoption and implementation, the components of a physical activity prescription, and the role of the patient-provider relationship were held within clinician (i.e. physician, nurse, phycologist, etc.) and non-clinician (i.e. patient partner, researcher, etc.) groups. This session further explored the evaluation of intervention implementation and delivery.

- **How can we ensure individuals "fill" their physical activity prescription and take action?**

Once mobilized, the round tables discussed strategies which will help ensure that this intervention is feasible for the target population. Participants identified 31 recommendations which were grouped into six categories (Appendix V): 1) self-monitoring of behaviour, 2) monitoring of behaviour by others, 3) patient education, 4) intervention personalisation, 5) social support, and 6) PA accessibility.

Self-Monitoring and Monitoring of Behaviour by Others
Participants identified tools and strategies which may support self-monitoring or monitoring by others, including primary care providers and kinesiologists, which will keep patients accountable for their progress. These tools also allow for transparency between the patient and the provider which facilitates the continuous documentation and evolution of goals, and allow both parties to have a comprehensive view of the patient's progress, and any facilitators and barriers to said progress.

Patient Education
Patient education was identified by both patient partners, clinicians, and behaviour change experts as a critical component of any PA counseling intervention, including knowledge about the benefits of PA, and the potential consequences of physical inactivity.

Personalisation
Participants emphasized the need to set goals with patients, identify strategies to reduce and remove barriers to PA initiation, as well as the importance of addressing barriers to adherence to a PA plan explicitly.

Social Support
Participants suggested inquiring about patients' perceived levels of social support to help craft feasible PA goals.

Accessibility
Accessibility was discussed with respect to ease of initiation and safety. Participants further mentioned that implementing PA counseling into primary care should not require any personal or professional sacrifice, and should be easily integrated into their daily routines.

♦ **How can this intervention be made feasible for primary care providers?**

In order to encourage uptake by the providers and to ensure intervention fidelity, participants identified 14 individual strategies, which were further grouped into four categories (Appendix VI): 1) practical social support, 2) impact on workload, 3) instruction on how to perform the behaviour, and 4) identifying the responsibilities of all involved parties.

Practical Social Support
This is defined as advising on, arranging, or providing practical help (e.g., from friends, relatives, colleagues, buddies or staff) for performance of the behaviour. In this context, primary care providers noted that interdisciplinary teamwork, particularly with kinesiologists, is paramount to the feasibility of the implementation of a PA intervention in primary care.

Impact on Workload

As the workload of primary care providers continues to increase due to the growing number of patients and reduced appointment durations, clinicians emphasized the importance of a concise intervention. Brevity would contribute to increased uptake and positive attitudes towards the intervention by clinicians.

Instruction on how to Perform Behaviour

Clinicians emphasized the desire for training on how to deliver the intervention, including advice on how to perform relevant skills such as the use of positive talk, assessing sedentary behaviours and nutritional quality. Awareness of resources available to patients and providers would further facilitate the implementation of PA counseling; moreover awareness of emerging findings could help design more personalized goals and recommendations based on the best current evidence.

Responsibilities of Involved Parties

In addition to provider instruction on how to perform the intervention, the roles and responsibilities of the entire care team, as well as that of the patient, must be clearly defined, thus emphasizing the importance of accountability. As clinicians expressed, "if it's everyone's job, nobody will do it".

What are the most relevant evaluation questions?

Lastly, the diverse and interdisciplinary group of attendees considered methods to evaluate the effectiveness of the PA intervention (Appendix VII). In addition to physical assessments (e.g., aerobic capacity, body composition), patient attitudes, behaviours, and outcomes, as well as provider behaviours and perceived acceptability of the intervention by both patients and providers can be used as indicators of the intervention's feasibility and effectiveness. Therefore, it is important to further consider the variation of these measures across sociodemographic groups when designing this intervention.

Ethical Considerations

Prior to starting the event, we obtained signed consent from all the participants. Consent forms were available for presenters and attendees in English and French. The consent forms specified that future plans with the data collected from the workshop were to share a report of the exchanges and publish an article. It was also specified that pictures of the event could be included in the report. Participants were able to indicate their preferences in regards to accepting to be photographed, being contacted in the future to collaborate on related publications, and sharing their contact information with the rest of the participants. Additionally, speakers were asked if they authorized the research team to share their PowerPoint presentations on the CMDO website and to confirm they had the right to use the material included in their presentations. The signed consent forms are kept in the office of Dr. Barnett at 5858 Chemin de la Cotê-des-Neiges, Montreal, H3S 1Z1. The consent forms templates follow:

Participant consent form in English:

PARTICIPANT CONSENT FORM

Interactive workshop: ***Promoting physical activity in primary care: a co-construction workshop integrating expertise and experience***. December 5th and 6th, 2023.

Name of participant: _____

Phone number: _____E-mail :_____

As part of this workshop, we plan to share a report of the exchanges, publish an article, and probably distribute photos taken during the event. Please confirm or deny the possibility of using the items mentioned below, sign the consent form and return it to the organizers.

Within the framework of the workshop mentioned in the heading, I authorize the CMDO Network to :

1. Take notes of my speeches, to share in whole or in part by various technological means, the contents of my speech.
   Yes____ No____
2. I agree to be contacted in the future to be invited to collaborate on subsequent publications based on this workshop.
   Yes____ No____
3. Take photos of myself that could be used in reports about the workshop.
   Yes____ No____
4. Share my email address with the rest of the participants of this workshop.
   Yes____ No____

I UNDERSTAND THE CONTENT AND AGREE TO THE TERMS. IN WITNESS WHEREOF, I SIGN,

Signature: _____ Date: _____

Name : _____

Participant consent form in French:

FORMULAIRE DE CONSENTEMENT POUR PARTICIPANTS.ES.

Atelier interactif : ***Promouvoir l'activité physique en soins de première ligne : un atelier de co-construction intégrant expertise et expérience***. 5 et 6 décembre, 2023

Nom du participant.e :_____

Téléphone : _____Courriel : _____

Dans le cadre de cet atelier, nous prévoyons partager un compte-rendu des échanges, publier un article et vraisemblablement diffuser des photos prises lors de l'événement. Veuillez SVP confirmer ou infirmer la possibilité d'utiliser les éléments mentionnés ci-dessous, signer le formulaire de consentement et le remettre aux organisateurs. Dans le cadre de l'atelier mentionné en rubrique, j'autorise le Réseau CMDO à :

1. Prendre de notes relativement à mes interventions verbales, à repartager en entier ou en partie par différents moyens technologiques, les contenus de mon allocution.
   Oui____ Non____
2. J'accepte d'être recontacté dans le futur afin d'être invité à collaborer à des publications ultérieures basées sur cet atelier
   Oui____ Non____
3. Prendre des photos de moi qui pourraient être utilisées dans les rapports concernant l'atelier
   Oui____ Non____
4. Partager mon adresse courriel avec le reste des participants de cet atelier
   Oui____ Non____

J'AI COMPRIS LE CONTENU ET ACCEPTE LES CONDITIONS. EN FOI DE QUOI, JE SIGNE,

Signature : _____ Date : _____

Nom : _____

Speaker consent form in English:

SPEAKER CONSENT FORM

Interactive workshop: ***Promoting physical activity in primary care: a co-construction workshop integrating expertise and experience.*** December 5th and 6th, 2023.

Name of speaker: _____

Conference title:_____

Phone number: _____E-mail :_____

As part of this workshop, we plan to share a report of the exchanges, publish an article and probably distribute photos taken during the event. Please confirm or deny the possibility of using the items mentioned below, sign the consent form and return it to the organizers. Within the framework of the workshop mentioned in the heading, I authorize the CMDO Network to :

1. Distribute the PowerPoint presentation or the content presented during my speech via the CMDO website (https://www.rrcmdo.ca) in digital PDF format (uneditable).

Yes____ No____

2. To take notes of my speeches, to re-share in whole or in part by various technological means, the contents of my speech including texts, images, photographs and graphics (if applicable).

Yes____ No____

3. I certify that I hold the rights and authorizations to distribute the photos or images used in my PowerPoint presentation.

Yes____ No____

4. Take photos of myself that could be used in reports about the workshop

Yes____ No____

5. Share my e-mail address with the rest of the workshop participants

Yes____ No____

Furthermore, I understand that no participant's name will be identified, I will receive no financial compensation for the dissemination of these contents, and I agree to be contacted in the future to be invited to collaborate on future publications based on this workshop.

I UNDERSTAND THE CONTENT AND AGREE TO THE TERMS. IN WITNESS WHEREOF, I SIGN,

Signature: _____ Date: _____

Name : _____

Speaker consent form in French:

FORMULAIRE DE CONSENTEMENT POUR CONFÉRENCIERS.ÈRES

Atelier interactif : ***Promouvoir l'activité physique en soins de première ligne : un atelier de co-construction intégrant expertise et expérience***. 5 et 6 décembre, 2023

Nom du conférencier.ère :_____

Titre de la conférence :_____

Téléphone : _____Courriel : _____

Dans le cadre de cet atelier, nous prévoyons partager un compte-rendu des échanges, publier un article et vraisemblablement diffuser des photos prises lors de l'événement. Veuillez SVP confirmer ou infirmer la possibilité d'utiliser les éléments mentionnés ci-dessous, signer le formulaire de consentement et le remettre aux organisateurs. Dans le cadre de l'atelier mentionné en rubrique, j'autorise le Réseau CMDO à :

1. Diffuser la présentation PowerPoint ou le contenu présenté lors de mon allocution via le site Web du CMDO (https://www.rrcmdo.ca) en format numérique PDF (non modifiable)
   Oui____ Non____
2. Prendre de notes relativement à mes interventions verbales, à repartager en entier ou en partie par différents moyens technologiques, les contenus de mon allocution incluant les textes, les images, les photographies et les graphiques (s'il y a lieu)
   Oui____ Non____
3. J'atteste détenir les droits et les autorisations de diffusion des photos ou des images utilisées dans ma présentation PowerPoint
   Oui____ Non____
4. Prendre des photos de moi qui pourraient être utilisées dans les rapports concernant l'atelier
   Oui____ Non____
5. Partager mon adresse courriel avec le reste des participants de cet atelier
   Oui____ Non____

Par ailleurs, je comprends que aucun nom de participant ne sera identifié, je ne recevrai aucune compensation financière pour la diffusion de ces contenus , et j'accepte d'être recontacté dans le futur afin d'être invité à collaborer à des publications ultérieures basées sur cet atelier.

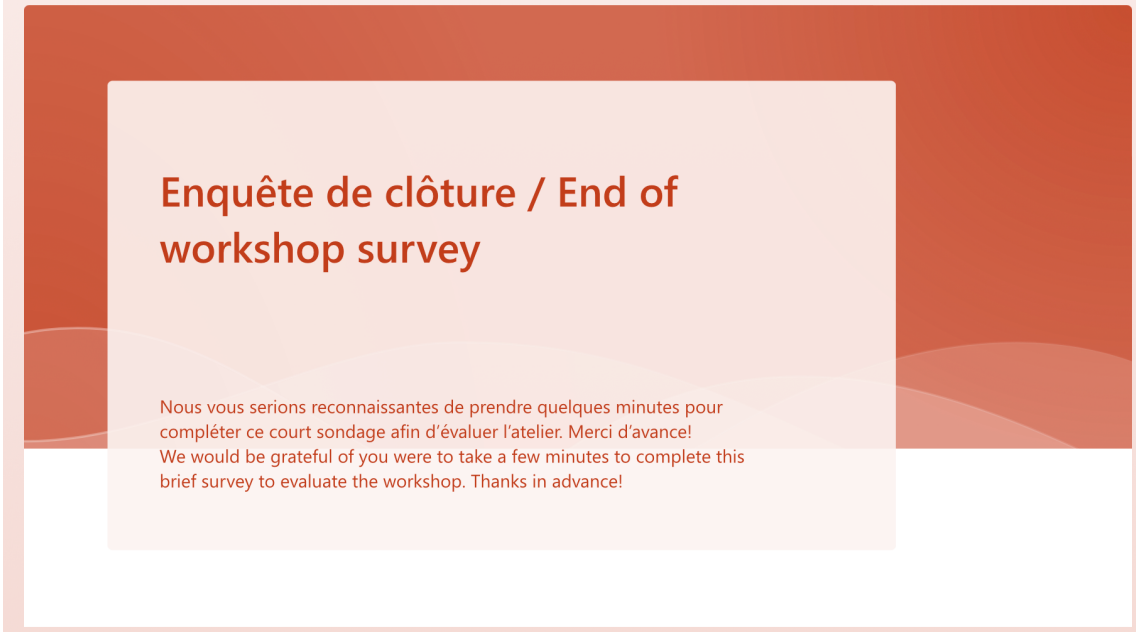
J'AI COMPRIS LE CONTENU ET ACCEPTE LES CONDITIONS. EN FOI DE QUOI, JE SIGNE,

Signature : _____ Date : _____

Nom : _____

Appreciation and Evaluation

At the end of the event, participants were invited to complete the following evaluation form online:



Enquête de clôture / End of workshop survey

Nous vous serions reconnaissantes de prendre quelques minutes pour compléter ce court sondage afin d'évaluer l'atelier. Merci d'avance!
We would be grateful of you were to take a few minutes to complete this brief survey to evaluate the workshop. Thanks in advance!

1. 1.Veuillez indiquer jusqu'à quel point vous êtes d'accord avec les affirmations suivantes. / *Please indicate your level of agreement with the following statements.* *

	Pas du tout d'accord/ Strongly disagree	Pas d'accord/ Disagree	D'accord/ Agree	Tout à fait d'accord/ Strongly agree
En général, cet atelier a rencontré mes attentes / Overall, this workshop met my expectations	○	○	○	○
J'ai l'impression que ma voix a été entendue au cours de cet atelier / I feel my voice was heard during this workshop	○	○	○	○
Je suis satisfait.e de la qualité du contenu présenté lors de cet événement / I am satisfied with the quality of the content presented at this event	○	○	○	○
Je suis satisfait.e des activités réalisées lors de cet événement / I am satisfied with the activities done during this event	○	○	○	○

Les résultats de cet atelier ont recontré mes attentes / The outcome of this workshop met my expectations	◯	◯	◯	◯
Je suis satisfait du service fourni par les organisateurs et le personnel de cet événement / I am pleased with the service provided by the organizers and staff of this event	◯	◯	◯	◯
L'hôtel et la nourriture ont répondu à mes attentes / The venue and food met my expectations	◯	◯	◯	◯

2. Quel impact les leçons tirées de cet atelier auront-elles sur vos activités quotidiennes ? / *How will the lessons learned from this workshop impact your day-to-day activities?* *

Enter your answer

3. Qu'est-ce qui aurait pu être fait différemment pour améliorer cet événement? / *What could have been done differently to improve this event?* *

Enter your answer

4. Qu'avez-vous appris sur la co-construction d'interventions fondées? / *What did you learn about co-constructing interventions?* *

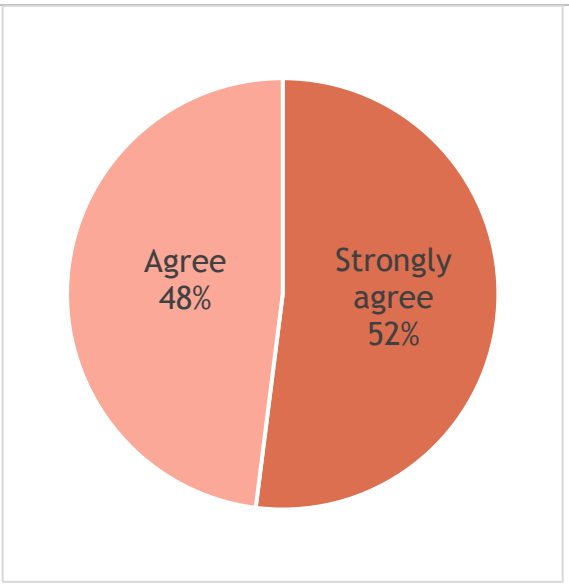
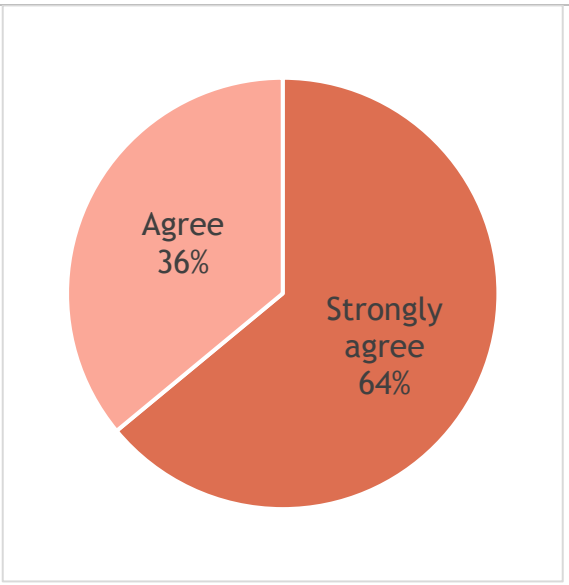
Enter your answer

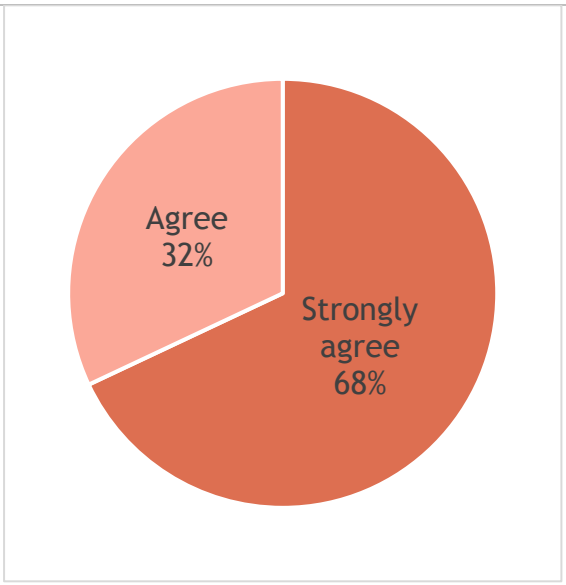
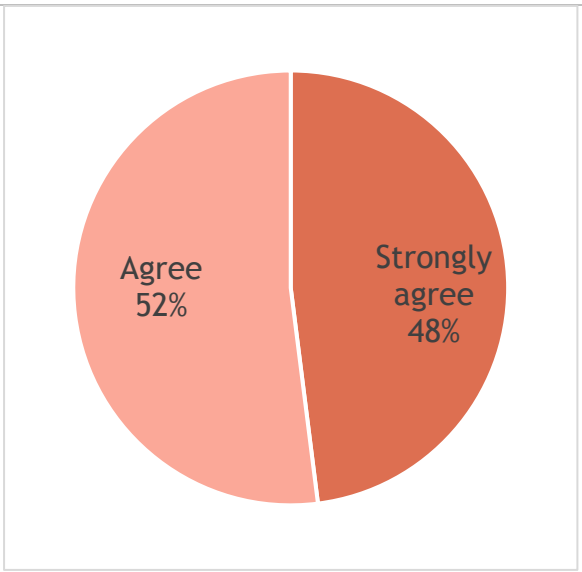
5. Avez-vous d'autres commentaires ou suggestions ? / *Do you have any other comments or suggestions ?*

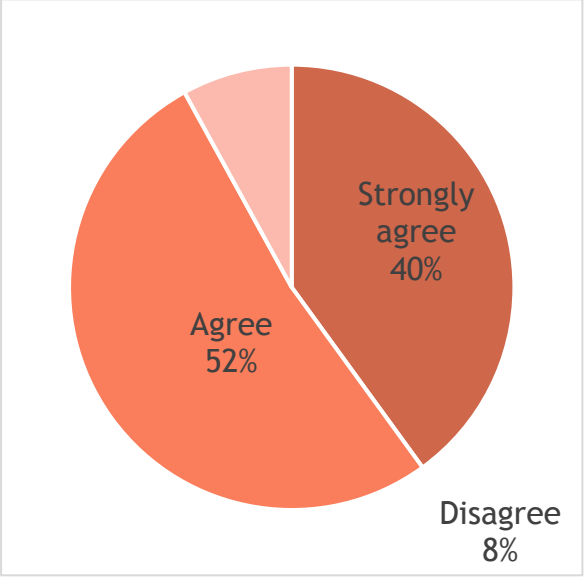
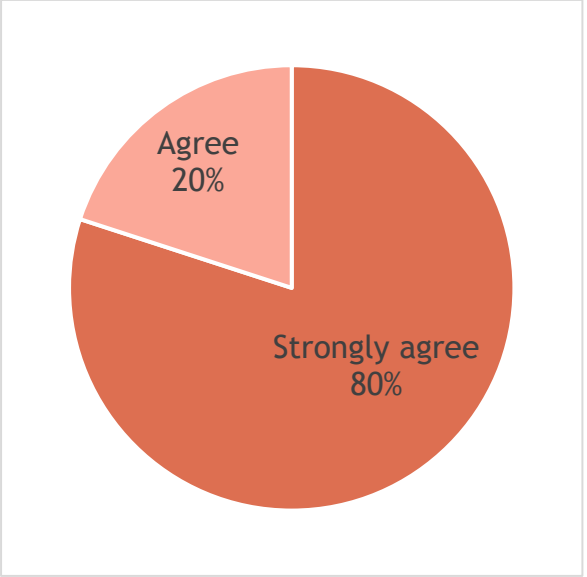
Enter your answer

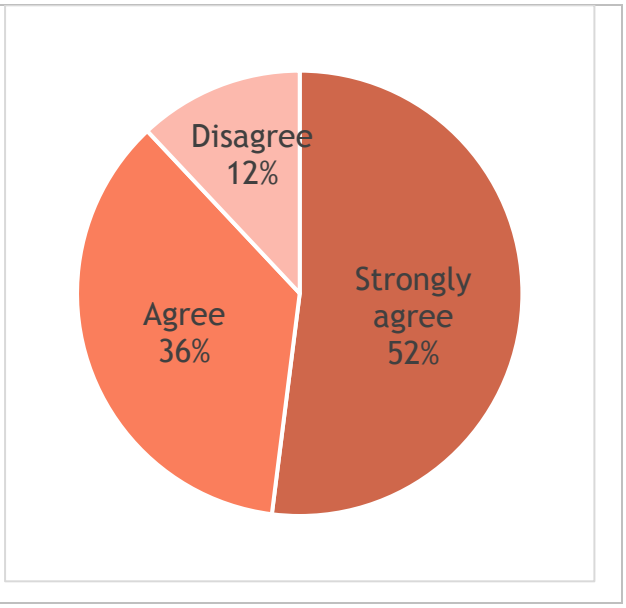
+ Add new

27 Individuals completed the evaluation. The results are described below:

Question 1	Response
1.1 En général, cet atelier a rencontré mes attentes / Overall, this workshop met my expectations	
1.2 J'ai l'impression que ma voix a été entendue au cours de cet atelier / I feel my voice was heard during this workshop	

1.3 Je suis satisfait.e de la qualité du contenu présenté lors de cet événement / I am satisfied with the quality of the content presented at this event	
1.4 Je suis satisfait.e des activités réalisées lors de cet événement / I am satisfied with the activities done during this event	

1.5 Les résultats de cet atelier ont recontré mes attentes / The outcome of this workshop met my expectations	
1.6 Je suis satisfait du service fourni par les organisateurs et le personnel de cet événement / I am pleased with the service provided by the organizers and staff of this event	

1.7 L'hôtel et la nourriture ont répondu à mes attentes / The venue and food met my expectations	

Question 2. Quel impact les leçons tirées de cet atelier auront-elles sur vos activités quotidiennes ? / How will the lessons learned from this workshop impact your day-to-day activities?

Many participants responded that they recognized the importance of incorporating the discussion of physical activity with their patients in their clinical practice, in teaching, and in their research projects. Some people specified that they would incorporate motivational communication in their activities. Others mentioned that the workshop provided them with a better understanding of the complexity of developing an intervention for the promotion of physical activity and that it was important to incorporate the perspectives of clinicians and patients and to consider the functioning of the health system. Three people mentioned that they perceived little impact from the workshop on their daily activities.

Question 3. Qu'est-ce qui aurait pu être fait différemment pour améliorer cet événement? / What could have been done differently to improve this event?

Most of the participants responded that the event was well organized and that everything met their expectations. Some participants indicated that it would have been good to incorporate some stretching, walking or movement activities. A couple of people would have preferred to have some snacks between the meals. Regarding the content of the workshop, a few participants suggested that having a general idea of the foreseen intervention would have helped to better orient the discussions. A few participants suggested that it would have been convenient to invite more patient partners. A couple of respondents suggested it would be good to work in mixed tables for the round tables' activity.

Question 4. Qu'avez-vous appris sur la co-construction d'interventions fondées? / What did you learn about co-constructing interventions?

In summary, participants responded they learned about the importance of interdisciplinary work and integrating the perspectives of both patients and clinicians into the intervention, and the knowledge that can be provided by communication experts and researchers. They mentioned that it was a complex process that needed to consider the work of a multidisciplinary team to be successful.

Question 5. Avez-vous d'autres commentaires ou suggestions ? / Do you have any other comments or suggestions ?

Approximately half of the participants responded something to this question, which was optional. Most of them provided a positive overall review of the event. One person suggested incorporating some physical activity in a similar workshop in the future.

Other Outputs

The workshop process and its outcomes have been summarized in an abstract presented at the International Society for Physical Activity and Health Congress, which took place in Paris October 28th to 31st 2024.
The abstract follows:

Co-Constructing Physical Activity Interventions with Multiple Stakeholders: Findings from the Application of a Promising Approach

Raphaela Nikolopoulos, Lise Gauvin, Ariane Bélanger-Gravel, Jean-Pierre Després, Paula Bush, Sonia Lussier, Ana Lungu, Tracie Barnett

Background: Physical activity (PA) counselling by primary care providers (PCP) is recommended, but its implementation remains challenging, with PCPs citing lack of time and training as primary barriers. Moreover, such interventions may exacerbate health inequities, with rural, racialized, and economically disadvantaged populations experiencing reduced access to preventative care. Co-construction with stakeholder engagement is foundational to achieving acceptability and broader implementation.

Program Delivery: We adopted a co-construction approach of an evidence-based PA promotion intervention to be implemented by PCPs, targeting patients with cardiometabolic conditions. A 2-day facilitator-led workshop brought together 32 stakeholders, including patient-partners, clinicians (kinesiologists, physicians, nurses, psychologists), and researchers. The workshop followed deliberative consultation methods and used small group discussions (both expertise- and context-specific, and transdisciplinary).

Evaluation: Participants identified patients with higher SES, recently diagnosed with a cardiometabolic condition, and previously engaged in PA, as those most likely to be receptive to PA counselling. Patients with lower SES, who were allophones (i.e., first language other than English or French), and those experiencing social isolation, were identified as those most in need of PA counselling, but hardest to reach and least likely to seek PA counselling. Engaging social workers and caregivers, increasing intervention visibility with health and social service providers, and building more extensive communication channels with community partners, were identified as strategies to better address the needs of under-resourced and marginalized groups, enhance reach and adherence, and deliver impactful PA counselling efforts.

Conclusions: Our approach was deemed feasible, allowed for a greater understanding of the barriers faced by patients and clinicians, and generated solutions to facilitate the adoption of this intervention.

Practical Implications: Co-construction with multiple stakeholders is an insightful intervention development strategy. As in our case, resulting interventions should be piloted for feasibility and acceptability, and subsequently, for real-world effectiveness.

Funding: CIHR, FRQS, and the CMDO network.

APPENDICES: DETAILED RESULTS FOR EACH PROMPT

Appendix I

What factors are likely to determine when a person is a good candidate for this intervention?

Answers	Themes
People who are open to lifestyle change	Social Support ▪ A person's family members (or entourage) ▪ A person's caregiver ▪ Community sport and exercise groups ▪ Community organizations
People who are motivated to exercise	
People who are open to a PA intervention	
People with psychosocial issues	
People with accessibility or mobility issues	
People with chronic illnesses	Motivation ▪ People who are open to lifestyle change ▪ People who are open to a PA intervention ▪ People interested in using PA as disease prevention ▪ People interested in PA as a health/disease management strategy ▪ People who are motivated to exercise ▪ People who initiate a conversation about PA/volunteers ▪ People contemplating exercise ▪ People with cardiometabolic disease ▪ People with chronic illnesses ▪ People with psychosocial issues ▪ People with COPD ▪ People at risk for cardiometabolic disease ▪ People who smoke ▪ Age
People who are inactive	
People who are sedentary	
People who have had prior success with a PA intervention	
People interested in using PA as disease prevention	
People interested in PA as a health/disease management strategy	
A person's family members (or entourage)	
A person's caregiver	
Community organizations	
People who smoke	
People with COPD	
People with no contraindications to exercise	

People with cardiometabolic disease	Accessibility ▪ People with lower socioeconomic status ▪ People with access to healthcare ▪ People with no contraindications to exercise ▪ People with accessibility or mobility issues
People at risk for cardiometabolic disease	
Age	
People contemplating exercise	
Community sport/exercise groups	
People with lower socioeconomic status	PA History ▪ People who are inactive ▪ People who are sedentary ▪ People who have had prior success with a PA intervention
People with access to healthcare	
Patients who initiate a conversation about PA/ volunteers	

Appendix II

Who is likely to volunteer for this intervention?

Answers	**Themes**
People with higher socioeconomic status	Sociodemographic Characteristics ▪ People with higher socioeconomic status ▪ People with access to healthcare
A patient's entourage	
People with cardiometabolic disease	
People at risk for cardiometabolic disease	Behavioural Characteristics ▪ People with self-efficacy ▪ People who are motivated to exercise ▪ Minimally active people
People wishing to limit healthcare interactions	
A patient's caregiver	
A patient's family	Medical Characteristics ▪ People with cardiometabolic disease ▪ People at risk for cardiometabolic disease
People with access to healthcare	
People with self-efficacy	
People who are motivated to exercise	History with Healthcare Provider

People who are minimally active	▪ People wishing to limit healthcare interactions
People with a recent adverse health event or diagnosis in their social entourage	<u>Social Entourage</u> ▪ A patient's entourage ▪ A patient's family ▪ A patient's caregiver ▪ People with a recent adverse health event or diagnosis in their social entourage

Appendix III

How can targeted individuals be reached and mobilized?

Answers	**Themes**
Practitioners trained in PA promotion strategies	<u>Adequate Resources</u> ▪ Adequate amount of personnel and support staff ▪ Provide necessary equipment, if needed ▪ Provide financial support, if needed
Adequate amount of personnel and support staff	
Community sport/exercise groups	
Longer appointment durations	
Nurse initiation in the front line	<u>Provider Training</u> ▪ Practitioners trained in PA promotion strategies ▪ Practitioners trained in the motivational conversation
Practitioners trained in the motivational conversation	
Provide necessary equipment, if needed	
Family-based or group-based intervention	<u>Personalisation</u> ▪ Community sport/exercise groups
Provide financial support, if needed	
Set realistic/feasible goals	

Set personalised goals	▪ Family-based or group-based intervention ▪ Set realistic/feasible goals ▪ Set personalised goals ▪ Interventions focused on enjoyment
Interventions focused on enjoyment	<u>In-Clinic Initiatives</u> ▪ Longer appointment durations ▪ Nurse initiation in the front line

Appendix IV

How can the most disadvantaged individuals be reached?

<u>Community and Social Services</u> ▪ Community leaders as champions ▪ Community organizations ▪ Social workers ▪ Food banks ▪ Home care ▪ Religious institutions/ spiritual leaders ▪ Chronic disease associations ▪ Collaboration with community associations ▪ Collaboration with neighbourhood associations
<u>Schedule Flexibility</u> ▪ Offer same day appointments ▪ Offer evening appointments ▪ Offer weekend appointments

Community Outreach Locations

- Local community service centres (CLSC)
- Family medicine group (FMG or GMF)
- Centre intégré universitaire de santé et de services sociaux (CIUSSS)
- Pharmacies
- Clic-santé
- 811
- Social media
- Workplace
- Grocery stores
- Recreational areas
- Schools/universities

Recruitment Strategies

- Targeted advertising to patients
- Posters in neighbourhoods
- Advertising in clinic waiting rooms
- Advertising in emergency room waiting rooms
- Word of mouth (snowball effect)
- Relatability: use “average” people in advertisements, not models/athletes
- Incentivize target patients to provide insights on their needs for this type od intervention

Intervention Characteristics and Development

- Provide culturally appropriate interventions
- Address specific needs
- Co-creation of an intervention with partners with target demographics

Community Characteristics

- Awareness of the characteristics of people and communities where sociodemographically disadvantaged people live

Appendix V

How can we ensure individuals "fill" their physical activity prescription and take action?

Answers	Themes
Identify the patient's motivation "the 'why'"	Self-Monitoring of Behaviour ▪ Physical activity booklet ▪ Progress pictures ▪ Step counter ▪ Patients create a contract with themselves (accountability) ▪ Ensure patient (and provider) roles are clear
Create SMART goals	
Provide a backup plan	
Patient follow-ups by kinesiologists	
Address personal limitations to beginning or continuing to be engaged in PA	
Community groups	
Create an intervention that can be easily integrated into the patient's everyday life/leisure time	Monitoring of Behaviour by Others ▪ Initial follow-up by physician ▪ Patient follow-ups by kinesiologists ▪ Patient referrals to kinesiologists ▪ Regular patient follow-ups ▪ Follow patient progress and adherence using technological tools
Use knowledge from an interdisciplinary team	
Provide multiple options for PA	
Consequences of non-adherence to a PA plan	
Benefits of PA	
Discuss how to address/remove barriers with the patient	
Follow patient progress and adherence using technological tools	Patient Education ▪ Benefits of PA ▪ Consequences of non-adherence to a PA plan
Regular patient follow-ups	

All clinicians in the care team discuss PA with the patient	▪ All clinicians in the care team discuss PA with the patient
Peer support	
Patient referrals to kinesiologists	<u>Intervention Personalisation</u>
Initial follow-up by physician	▪ Create SMART goals
Easy PA plan	▪ Use knowledge from an interdisciplinary team
Initial follow-up by physician	▪ Provide multiple options for PA
Provide a specific destination and PA action plan	▪ Provide a backup plan
Safe PA plan	▪ Identify intermediate benchmarks and an end goal with the patient
Determine a PA reminder with the patient	▪ Identify the patient's motivation "the 'why'"
Social media	▪ Provide a specific destination and PA action plan
Should not require patient sacrifice	▪ Create an intervention that can be easily integrated into the patient's everyday life/leisure time
Discuss non-traditional forms of PA	▪ Determine a PA reminder with the patient
Ensure patient (and provider) roles are clear	▪ Address personal limitations to beginning or continuing to be engaged in PA
Step counter	▪ Discuss how to address/remove barriers with the patient
Physical activity booklet	▪ Discuss non-traditional forms of PA
Patients create a contract with themselves (accountability)	<u>Social Support</u>
Progress pictures	▪ Community groups
	▪ Peer support
	▪ Social media
	<u>Physical Activity Accessibility</u>
	▪ Easy PA plan
	▪ Safe PA plan
	▪ Should not require patient sacrifice

Appendix VI

How can this intervention be made feasible for primary care providers?

Answers	Themes
Use a roadmap	<u>Practical Social Support</u> ▪ Interdisciplinary teamwork ▪ Having kinesiologists in primary care clinics ▪ Patient referrals to kinesiologists ▪ Patient follow-ups by kinesiologists
Know the availability of relevant resources	
Use positive talk	
Training for health professionals	
Interdisciplinary teamwork	
Having kinesiologists in primary care clinics	<u>Impact on Workload</u> ▪ Ensure the intervention delivery is brief
Patient follow-ups by kinesiologists	
All clinicians in care team address PA with the patient	<u>Instruction on how to Perform the Behaviour</u> ▪ Use a roadmap ▪ Training for health professionals ▪ Physician education of "healthy vital signs" ▪ Know the availability of relevant resources ▪ Use positive talk ▪ Use of the chronic illness registry to ensure target patients do not slip through the cracks
Physician education of "healthy vital signs"	
Use of the chronic illness registry to ensure target patients do not slip through the cracks	
Ensure the intervention delivery is brief	
Ensure clarity of patient and provider roles	
Ensure clarity of the roles of all members of the care team	
Patient referrals to kinesiologists	<u>Identify Responsibilities of All Parties</u> ▪ Ensure clarity of patient and provider roles ▪ Ensure clarity of the roles of all members of the care team ▪ All clinicians in care team address PA with the patient

Appendix VII

What are the most relevant evaluation questions?

Evaluation Questions
Change in VO2max
Change in Visceral Fat
Patient understanding of the Intervention
Patient Satisfaction with the intervention
Patient's perceived Acceptability of the Intervention
Number of referrals to exercise specialists (i.e., kinesiologists)
Trust in the delivered intervention
Effectiveness of the intervention relative to patient sociodemographic characteristics
Impact beyond parameters of health
Relapse
Emergence of adverse effects
Autonomous management of PA
Autonomous management of illness/health
Patient adherence to PA intervention
Evolution of patient's understanding PA