

Physical activity is for everyone: a call to action for education and knowledge mobilisation to optimise the continuum of services for people with mobility disabilities in Québec, Canada

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ABSTRACT

Approximately 2.7 million Canadians live with mobility disabilities. There is scientific documentation describing the importance of physical activity for maintaining or increasing functional capacity, which can support mobility and enhance social participation for people with mobility disabilities. However, numerous barriers continue to restrict participation in community-based physical activity for people with mobility disabilities. It is critical to address these barriers now. A consensus activity was conducted to identify challenges and solutions to overcome the barriers to physical activity promotion among people with mobility disabilities in Quebec, Canada. Three challenges were identified: (1) better services and communication continuum between research, clinical and community organisations, (2) enhanced knowledge mobilisation between research, clinical and community settings and (3) more education for healthcare professionals and community knowledge users regarding mobility and physical activity. Research priorities should focus on developing, testing and implementing existing interventions and programmes to ensure accessible physical activity and to facilitate participation in community settings for people with mobility disabilities.

There are approximately 2.7 million people living with mobility disabilities in Canada.¹ Disability can be defined as ‘a dynamic interaction between health conditions and contextual factors, both personal and environmental’.² Mobility disability characterises people who experience limitations in their daily activities, such as moving around, even when using mobility aids (eg, cane, crutches, walker, wheelchair)¹ and may restrict participation in physical activity.^{3–4} People with mobility disabilities are 16%–62% less likely to meet physical activity recommendations than people without disabilities.⁵

Mobility disabilities can result from acquired injuries or lesions (eg, spinal cord injuries, multiple sclerosis, traumatic brain injuries, amputation), congenital conditions

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Despite the numerous benefits of physical activity, several barriers restrict participation in community-based physical activity for people with mobility disabilities.

WHAT THIS STUDY ADDS

⇒ Knowledge users from research, clinical and community settings agreed on the priorities to overcome physical activity barriers and enhance physical activity participation for people with mobility disabilities.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Provides possible solutions to facilitate knowledge mobilisation and education to bridge the gap in a continuum between research, clinical and community settings to ensure physical activity for all.

(eg, cerebral palsy, spina bifida) or ageing (eg, reduced strength and balance due to muscle atrophy). Individuals with mobility disabilities commonly have access to rehabilitation programmes, during which they receive ‘a set of interventions designed to optimize [their] functioning and reduce [the] disability [caused by their] health conditions in interaction with their environment’.⁶ Rehabilitation is effective⁷ but services offered vary tremendously among regions and clientele in Canada, and in the province of Quebec. Moreover, very little transition to community-based services (eg, gyms, adapted sports classes, inclusive outdoor groups) and physical activity opportunities are offered to individuals when they stop receiving rehabilitation services.³ If the continuum was optimised between the settings, this transition could help promote higher levels of physical activity over an extended period.⁸

Maintaining sufficient levels of physical activity is important for individuals with



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mobility disabilities, to preserve functional capacities and avoid future health problems.^{8,9} The most obvious benefit of physical activity is improved physical health. Increased physical capacity and strength¹⁰ can facilitate mobility and activities of daily living,¹¹ while reducing the risk of heart disease, stroke and other chronic diseases.¹² Physical activity can also impact psychosocial aspects by encouraging positive affect,¹³ improving emotional function¹⁴ and enhancing social interactions,^{15,16} while a lack of access to health education resources or to environments adapted to people with mobility disabilities are risk factors for secondary conditions (eg, pain, fatigue, weight gain, depression).⁹ Moreover, physical activity is associated with higher levels of subjective well-being and life satisfaction, and lower levels of depression for people with mobility disabilities.¹⁷

Community-based physical activities have also been associated with benefits of higher levels of leisure-time physical activity (eg, exercising at fitness centres, playing sports, and walking/wheeling) and enhanced participation in family-related activities.¹⁸ In fact, the availability of community-based physical activity programmes was identified as an important facilitator for physical activity participation.¹⁹

Adapted community-based programmes and facilities could help reduce⁸ the numerous barriers to physical activity faced by people with mobility disabilities.^{20–22} To name a few, architectural barriers in the built environment and outdoor spaces can restrict navigation and participation in physical activity.^{20,21} Another identified barrier was insufficient availability of transportation or adaptive equipment.^{20,21} Barriers to participation may also include emotional or psychological factors among persons with mobility disabilities and there might be concerns regarding the education and training of professionals, perceptions and attitudes of non-disabled individuals and professionals toward persons with mobility disabilities.²⁰ Some of these barriers highlight the concept of ableism, which was identified as a critical barrier to participation and as a priority to address to facilitate increased physical activity participation.¹⁹

BRIDGING THE GAP

To address the barriers to physical activity among people with mobility disabilities, a consensus activity exploring how to improve collaboration between research, clinical and community knowledge users was conducted in Quebec, Canada. A knowledge user was defined as ‘an individual who is likely to be able to use the knowledge generated through research to make informed decisions about health policies, programs and/or practices’.²³ Held during a research conference to facilitate in-person participation, the half-day meeting involved an interdisciplinary group of 17 clinicians, researchers, graduate students with expertise in mobility and physical activity, and representatives of community organisations. The activity followed the Collaborative Prioritized Planning Process, which is designed to help groups achieve

consensus on key challenges, solutions and action plans within their focus area. This process-based and solution-focused approach is grounded in the guiding principles of creativity, democratic collaboration and inclusivity, and includes four steps: (1) Knowledge synthesis; (2) Challenge identification and prioritisation; (3) Solution identification and consolidation and (4) Prioritisation and action planning).²⁴ Following this four-step approach, the group identified and prioritised gaps in the literature and current challenges in clinical and community settings regarding physical activity for persons with mobility disabilities. They then proposed aligned solutions and actions to be taken.

Although the activity initially aimed to identify research priorities, it became evident during the discussions on current challenges that the need for resolution of implementation issues was more critical than the need for new research. Despite the variety of participants involved, the overarching message was unanimous: ‘physical activity is for everyone’.¹⁹ In line with the current literature, they agreed that promoting mobility and physical activity opportunities would require multisector approaches that consider how to change environment and healthcare system policies to enhance accessibility, and how to best engage knowledge users to educate and motivate the target population.^{22,25,26} In this way, participants of the consensus activity identified three challenges to address the barriers to physical activity promotion among people with mobility disabilities: (1) the need for a better services and communication continuum between research, clinical and community organisations, (2) an enhanced knowledge mobilisation between those settings, and (3) more education to healthcare professionals and community knowledge users regarding physical activity. **Figure 1** illustrates participants’ viewpoints on how knowledge mobilisation and education could help bridge the gap in the continuum between clinical and community settings, by allowing research results to be communicated and interventions implemented. Participants of the consensus meeting proposed solutions and actions that may target the three identified challenges as described in the three action items below.

Action 1: create and optimise the continuum

As previously described, the lack of a communication and a continuum of services directly impacts health outcomes of the population.⁸ From an organisational standpoint, a formalised structure between the various clinical and community settings could facilitate participation in physical activity for individuals with mobility disabilities, especially after cessation of traditional rehabilitation services. Identifying current partnerships and funding opportunities for implementing interventions and programmes in local contexts were the first actions suggested by the participants. They stated it would allow to describe the current state of their continuum to identify indicators of success for the future (**table 1**).

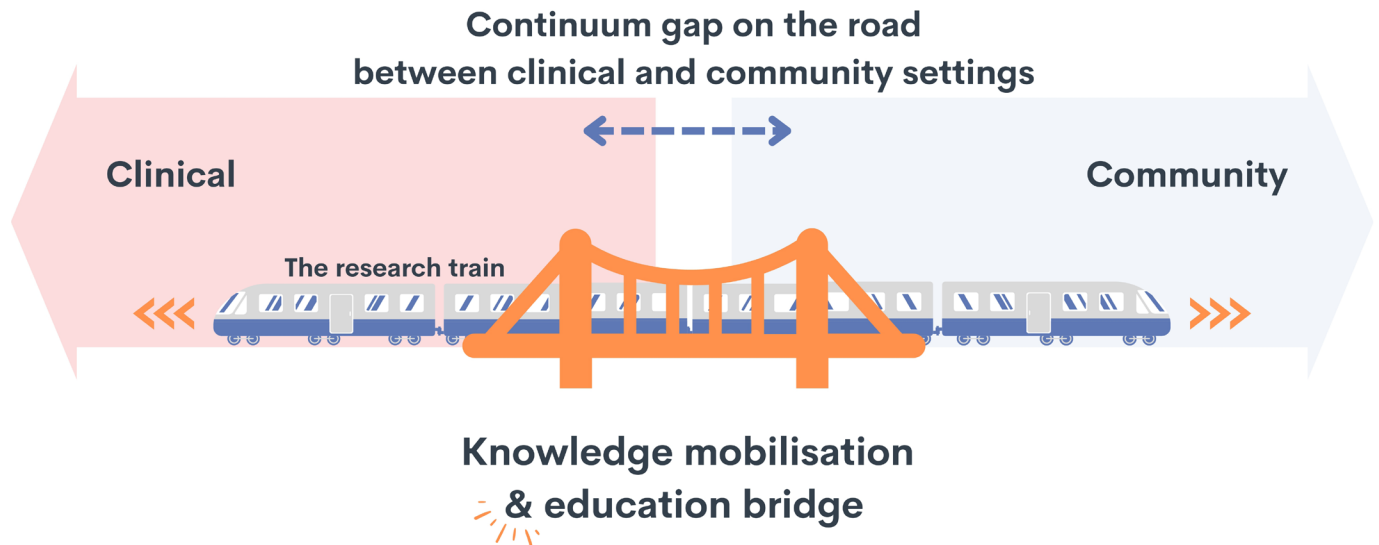


Figure 1 Conceptual framework of the research ‘train’ bringing knowledge along in clinical and community settings to *bridge the gap* in the continuum.

Action 2: mobilise the knowledge

Participants stated that evidence from research is not commonly made accessible to the potential knowledge users (whether clinicians or community organisations), therefore limiting the implementation or optimisation of physical activity programmes. This gap directly and negatively affects people who could benefit from engaging in these programmes. Alternatively, research does not always fully value experiential knowledge of the people directly involved in community programmes and their clientele in identifying needs and possible solutions. Mobilising knowledge would imply developing an efficient bidirectional relationship between the different knowledge users and different settings to share ideas, needs and knowledge (both from research and experiential). Suggestions on how to enhance this relationship are provided in [table 1](#).

Action 3: educate the knowledge users

Finally, the lack of education resources for healthcare professionals and community knowledge users is a major barrier to physical activity participation in this population.^{19 20} According to the participants, developing new education opportunities for knowledge users would allow to better adapt programmes to the needs of people with mobility disabilities ([table 1](#)). Accordingly, some educational resources have already been developed in Quebec (and across Canada) and are accessible online ([table 2](#)).

Considerations for next steps

For physical activity to be inclusive for everyone, research priorities should focus on developing, testing, and, above all, implementing interventions aiming at making physical activity accessible for individuals with mobility disabilities within the continuum between rehabilitation

Table 1 Challenges, solutions and actions to promote physical activity for individuals with mobility disabilities, according to the consensus activity participants

Challenge	Solution	Suggested actions
Better services and communication continuum between research, clinical and community settings	Conduct an inventory to identify indicators of success and diagnose the current state of the continuum	<ul style="list-style-type: none"> ▶ Identify actual partnerships and funding sources in the network ▶ Prioritise funding of implementation initiatives
Enhanced knowledge mobilisation	Develop a bilateral relationship between knowledge users and settings, including <i>Centres Intégrés Universitaires de Santé et de Services Sociaux (CIUSSS)</i> and <i>Réseau Provincial de recherche en Adaptation-Réadaptation (REPAR)</i>	<ul style="list-style-type: none"> ▶ Develop an online sharing platform ▶ Organise dedicated knowledge mobilisation activities ▶ Hire a knowledge broker
More education resources for healthcare professionals and community knowledge users regarding physical activity	Determine the level of knowledge needed for knowledge users and develop e-learning accordingly	Hold a consensus activity to determine the content of the online training

**Table 2** Current initiatives in the province of Quebec and Canada addressing the identified physical activity challenges

Organisation	Description of the initiative
Adaptavie/Viomax	Education modules and a project to standardise the concepts of accessibility and inclusiveness within community programmes are to come.
Participation sociale et villes inclusives (PSVI)	Publications and infographics related to inclusion in sports, schools and businesses
Inclusive society	Educational vignettes related to participatory research and financial support for projects related to the inclusion of individuals with mobility disabilities
Canadian disability participation project (CDPP)	Quality Participation Blueprint resources from CDPP Sport and Exercise team

and community settings.¹⁹ A critical step needed is to include individuals with mobility disabilities in the development of solutions to address calls to action identified by rehabilitation and community researchers and professionals. Evidence suggests involving people who could benefit from the research results from the very start of the process, to create innovations together and better address the needs of the community.²⁷ Programmes that are created with participatory research are more likely to be successful²⁷ and lead to systemic change of practices²⁸ because they involve users, their needs and context-specific knowledge from the start. In this consensus activity, the three challenges identified by the participants (continuum, knowledge mobilisation and education) were consistent with the strategies for effective participative research, including maximising communication strategies, engaging community partners in all stages of research, and creating education and training opportunities for all team members.²⁸ This consensus activity mainly targeted researchers, clinicians and community organisation workers, who can become (unwillingly) barriers to physical activity participation for people with mobility limitations. To ensure the identified solutions and actions address the needs of people with mobility disabilities, the next consensus activity and any steps taken to answer the action items should include the voice of people with mobility disabilities.

CONCLUSION

Based on discussion and consensus with experts in the field, researchers in partnership with research users and people with mobility disabilities should attempt to enhance the (1) services and communication continuum, (2) knowledge mobilisation and (3) education of research users to address barriers to physical activity for people with mobility disabilities.

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