

From Start-Up to Scale-Up of a Health-Promoting Intervention for Older Adults: The Choose to Move Story

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Interventions that are effective in research (efficacy or effectiveness) trials cannot improve health at a population level unless they are successfully delivered more broadly (scaled up) outside of the research setting. However, scale-up is often relegated to the *100 hard* basket. Factors such as the need to adapt interventions prior to implementing them in diverse settings at scale, retaining fidelity to the intervention, and cultivating the necessary community and funding partnerships can all present a challenge. In the present review article, we present a scale-up case study—Choose to Move—an effective health-promoting intervention for older adults. The objectives of this review were to (a) describe the frameworks and processes adopted to implement, adapt, and scale up Choose to Move across British Columbia, Canada; (b) provide an overview of the phased approach to scale-up; and (c) share key lessons learned while implementing and scaling up health-promoting interventions with community partners across more than 2 decades.

Keywords: scaling up, implementation, sustainability, adaptation, physical activity

The theme of the 2022 Annual Meeting of the National Academy of Kinesiology, “Translating and Implementing Kinesiology Research into Society,” was timely and of critical importance. Our Active Aging Research Team (<https://activeagingrt.ca/>) spent the last 2 decades learning how best to apply implementation science concepts, frameworks, and evaluation approaches to health-promoting interventions. In this narrative review, we focus on the science of scale-up and tell the story of *Choose to Move* (CTM)—an effective health-promoting intervention for older adults. In doing so, we illustrate how over 8 years we scaled up CTM across the province of British Columbia (BC), Canada. Lessons learned can easily be applied to other health-promoting interventions across settings and populations. Our ultimate goal was to demystify the science and process of scale-up so that they are better understood and more routinely embedded into the planning and delivery of other health-promoting interventions.

Background

Scaling Up—What Does It Mean?

Effective interventions (e.g., based on efficacy or effectiveness trials) cannot improve health at the population level unless they move beyond the research setting and are implemented at scale. In our view, implementation and scale-up are intertwined concepts—there is not always a clear separation between them. Implementation and scale-up coexist on a continuum, or within a “program life cycle,” that spans development, implementation, maintenance, and scale-up (Bopp et al., 2013; Scheirer, 2005). Implementation—the process of putting to use evidence-based interventions within a setting (Rabin et al., 2008)—can range from implementing a pilot study in one site (e.g., one school) to implementing an intervention across many sites (e.g., a school district;

Bopp et al., 2013; Scheirer, 2005) to reach more people in more places on a lasting basis. Thus, we can implement without scaling up but cannot scale up without implementing (Peters et al., 2014).

Scaling up is a process, not an endpoint, and there is no clear distinction as to when scale-up “begins.” In our work, we consider that scale-up begins after an efficacy trial has been completed (Gray et al., 2021). However, there are many different pathways to scale-up; pilot, efficacy, and/or effectiveness trials do not always precede scale-up. A recent review described four pathways for scaling up based on the presence or absence of the following four stages: (a) development, (b) efficacy testing, (c) real-world trial, and (d) dissemination (Indig et al., 2018). However, the scale-up process is often not linear and may comprise any combination of stages (e.g., most often efficacy testing with no scale-up). There is no evidence that the presence or omission of stages leads to better results (Indig et al., 2018).


The Critical Role of Adaptation in Scaling Up Interventions

As interventions are scaled up, the contexts where they are implemented often become more diverse; this may lead to lower *compatibility* between the intervention and the new setting/population than during efficacy or effectiveness trials. Compatibility (also referred to as *fit*), is the “. . . extent to which the intervention fits with an organization’s mission, priorities, and values” (Durlak & DuPre, 2008, p. 337). Adaptation reflects continuous and customized improvements to achieve *best fit*. Adaptation is increasingly viewed as a necessary and vital process to meet the needs of diverse populations in diverse settings, to successfully deliver health-promoting interventions at scale (Chambers et al., 2013). Adaptation can occur at different phases across a program’s life cycle (Bopp et al., 2013; Wiltsey Stirman et al., 2019) and requires input from key stakeholders (e.g., participants, practitioners, decision makers) to guide and inform the process (Gray et al., 2020).

In contrast, some scholars contend that adaptations represent an implementation failure and could compromise the mechanisms

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through which an intervention is perceived to improve participant outcomes (Cohen et al., 2008; Elliott & Mihalic, 2004). Thus, adaptation must be continually balanced against *fidelity*—the extent to which an intervention corresponds to its original protocol (Durlak & DuPre, 2008). This tension is known as the adaptation–fidelity dilemma (Castro et al., 2004). This dilemma is often described as a potential clash between responding to the needs of participants and the delivery system, and researchers’ aim to retain fidelity to an evidence-based intervention (Bopp et al., 2013).

Adapting an intervention to context may result in decreased effectiveness (referred to as “voltage drop” or a “scale-up penalty”; Chambers et al., 2013). However, the dynamic sustainability framework (Chambers et al., 2013) suggests that achieving *best fit* for an intervention within specific contexts through “. . . continued learning, problem solving, and ongoing adaptation of interventions” (Chambers et al., 2013, p. 1) minimizes the risk of program drift and subsequent voltage drop. In a recent systematic review (Lane et al., 2021), most physical activity (PA) interventions were adapted for scale-up and continued to yield health benefits. However, effect size was often diminished compared with when interventions were delivered at smaller scale (Lane et al., 2021). Importantly, voltage drop was lower among interventions that explicitly planned and designed the intervention for scale-up. Two interventions performed *better* at scale, compared with prescale trial results. Success was attributed to flexible interventions that could be readily adapted for less controlled, more diverse contexts at scale-up (Lane et al., 2021).

Taking the Process of Scaling Up Out of the “Too Hard” Basket

The scale-up process can be complex and prolonged as it demands substantial investment, most often from external government or funding agency partners (Milat et al., 2016). Thus, researchers who devise evidence-based scalable interventions must garner adequate resources, navigate complex and dynamic real-world systems, and interact with an array of stakeholders to identify delivery partners and obtain “buy-in” for implementation at scale to proceed and succeed (Bauman & Nutbeam, 2014). To develop a plan for scale-up, researchers must choose among a vast array of frameworks (>60) and strategies that guide design and evaluation of implementation and scale-up processes (Birken et al., 2017; McKay, Naylor, et al., 2019; Tabak et al., 2012). Researchers must also choose what to evaluate among a bevy of implementation outcomes and determinants (called indicators). To simplify this process, we used a Delphi approach to engage implementation scientists in PA and healthy-eating research and generated a roadmap for implementation evaluation (McKay, Naylor, et al., 2019). Experts recommended three frameworks, three process models, five outcomes, and 10 determinants they used most often to implement and evaluate PA and healthy eating interventions along the scale-up continuum. Recommendations were offered as a starting place to ease the process of implementation and scale-up evaluation. Many other decision-based guides can be used to support the scale-up process (e.g., Dissemination & Implementation planning webtool; <https://dissemination-implementation.org/tool/>).

The CTM Story

Why Study Healthy Aging?

Longevity is an unprecedented societal achievement, and the support of healthy aging is a global priority (World Health Organization, 2020). In 2019, there were 703 million people

aged 65 and older worldwide (United Nations Department of Economic and Social Affairs Population Division, 2020). By 2050, the global number of adults aged 65+ is expected to double to 1.5 billion. These demographic trends are projected to continue into the coming decades, especially in developed nations (World Health Organization, 2015).

Healthy aging is strongly predicated upon mobility and social connectedness (Michel & Sadana, 2017). PA enhances mobility (Paterson & Warburton, 2010), mental health (Bridle et al., 2012; Windle et al., 2010), and social health (Lindsay Smith et al., 2017; Shvedko et al., 2018). Mobility in turn promotes the psychological and physical health of older adults (Brown & Flood, 2013; Webber et al., 2010) and lowers risk of admission to long-term care (Gaugler et al., 2007; Sheppard et al., 2013). PA is “. . . one of the least expensive and most effective preventive treatments for combating the increasing problem of chronic diseases and may represent the most effective strategy to eliminate inequities in health status” (Bailey et al., 2013; Hasson et al., 2017, p. 856). However, despite the many well-known benefits of PA, 85% of older adults in Canada fail to meet PA guidelines (Clarke et al., 2019), and 94% are sedentary for more than 8 hr/day (Copeland et al., 2015).

To address these issues, a number of interventions were designed to enhance PA in community-dwelling older adults (Chase, 2015; Zubala et al., 2017). Despite an overall positive effect on PA (Chase, 2015; Conn et al., 2002), less than 5% of PA interventions for older adults were scaled up (Gray et al., 2021). This should not be surprising as we know relatively little about mechanisms that support or inhibit scale-up of effective interventions (Catford, 2009; Milat et al., 2014). Thus, we need to devise strategies to support scale-up of effective interventions that promote healthy aging (Kohl et al., 2012) and standardized approaches to evaluate them.

CTM is one example of an adaptable, scalable intervention designed to meet the highly variable needs, preferences, and capacities of older adults. Therefore, in the present article, we highlight CTM and: (a) describe the frameworks and processes we adopted to implement, adapt, and scale up CTM across BC, Canada; (b) provide an overview of our phased approach to scale-up; and (c) share key lessons learned while implementing and scaling up health-promoting interventions with community partners across more than 2 decades.

Choose to Move

Motivation and Guiding Principles

We previously described, in detail, the driving forces behind our intervention, guiding principles for the CTM program, and our approach to implementation and scale-up (McKay et al., 2017). Briefly, to address low levels of PA (Colley et al., 2011) and associated increases in rates of chronic disease (Provincial Health Services Authority, 2010), the BC Ministry of Health developed a PA strategy document (Ministry of Health, 2015), which identified ways to enhance older adults’ PA as one priority area. Key stakeholder groups identified four principles to guide development of a PA intervention (i.e., target low active community-dwelling older adults; devise an evidence- and choice-based model; include active travel training; focus on improving PA and social connectedness) and its implementation (i.e., equitable access; broad geographic reach; collaborate with partners; build local capacity for sustainability). BC Ministry of Health engaged our team to code-sign, implement, evaluate, and scale up the PA and social connectedness intervention among BC older adults.

Why Us? Experience With Action Schools! BC

We had experience and learned many lessons while scaling up Action Schools (AS)! BC (AS! BC) across BC from 2002 to 2015. AS! BC is a whole-of-school PA and healthy eating model that adhered to comprehensive school health principles (McKay et al., 2015; Nettelfold et al., 2021). Over more than a decade, we scaled-up AS! BC with government, school, and community partners from 10 schools (515 students) to >1,500 schools (an estimated 500,000 students). We reflected on the approach we applied previously to AS! BC but, for CTM, adopted more current and relevant implementation frameworks and process models. For example, for AS! BC, we adopted Simmons and Shiffman's framework (Simmons & Shiffman, 2007); it predated publication of the framework we thought most applicable to guide scale-up of CTM (Yamey, 2011). However, there are many elements (e.g., the chosen delivery strategy) common to both frameworks.

Codesign of CTM

We describe how we codesigned the CTM program with community partners in detail elsewhere (McKay et al., 2017) but briefly summarize here. We referred to the Community Healthy Activities Model Program for Seniors (CHAMPS) intervention, which served as a starting point to inform design of the CTM program. CHAMPS was a theory-informed, choice-based intervention that effectively increased PA behaviors in participants (Stewart et al., 1997, 2001). Within their phased research approach, CHAMPS was successfully disseminated to reach more organizations (Stewart et al., 2006) and achieved sustained delivery to more diverse populations (based on ethnicity, socioeconomic status, and health) for 4 years within Active for Life (Wilcox et al., 2006, 2008, 2009).

Similarly, CTM integrated principles of behavior change (Bailey, 2019; Locke & Latham, 1990) into various CTM intervention components, which are delivered to older adults by an activity coach. Activity coaches support participants, individually and in small group sessions, to set goals, develop action plans, and tackle barriers while also providing health information and facilitating supportive social connections between participants.

Guiding Frameworks

Implementation. Delivery of our intervention is guided by the framework for effective implementation (Durlak & DuPre, 2008), which nests the interactive systems framework (Wandersman et al., 2008) within a socioecological model. The interactive systems framework (Wandersman et al., 2008) describes three interrelated systems: (a) Prevention Synthesis and Translation System (our research team that distills research outcomes); (b) Prevention Support System (Active Aging Society, which serves as central support for CTM to support delivery partners to adopt and deliver CTM); and (c) Prevention Delivery System (delivery partner organizations and activity coaches that delivered CTM to participants). The framework for effective implementation (Durlak & DuPre, 2008) also describes three domains that drive adoption and implementation of health-promoting interventions. These domains are (a) community context (evidence-base, political support, funding, and policies), (b) provider characteristics (perceived need for the intervention, willingness, proficiency delivering the intervention [i.e., *readiness*]), and (c) intervention characteristics (flexibility and compatibility of an intervention for a setting; Durlak & DuPre, 2008; Wandersman et al., 2008). Prevention Support System and Prevention Delivery System “actors” collaborate to devise implementation strategies that increase an organization's

readiness to deliver an intervention with impact (Leeman et al., 2017; Watson et al., 2022).

These implementation frameworks also guided evaluation of CTM (McKay et al., 2017). We collected data from study participants across levels within the interactive systems framework Prevention Delivery System and Prevention Support Systems (i.e., older adult participants, activity coaches, recreation center staff, and provincial leads/executive directors at delivery partner organizations). To evaluate across phases of scale-up, we adopted a Type 2 hybrid effectiveness–implementation study design (Curran et al., 2012) and mixed methods (e.g., surveys, direct measures, interviews, and focus groups) to assess both the *effectiveness* (e.g., change in PA, mobility, social connectedness) and *implementation* (e.g., feasibility, acceptability, reach, dose delivered) of CTM (McKay et al., 2017).

Scale-Up. Our scale-up approach aligned with two conceptual frameworks (Simmons & Shiffman, 2007; Yamey, 2011). Factors that promote scale-up success are (a) characteristics of the intervention being scaled up (e.g., simple and scientifically robust), (b) attributes of the implementers (e.g., leadership and governance mechanisms), (c) strategic choices that support the scale-up strategy (e.g., integrated and phased approaches), (d) attributes of adopting communities and organizations (e.g., engaged leads and staff), (e) the broader environment and political context (e.g., policy climate and political will), and (f) evaluation and monitoring data as scale-up proceeds (Yamey, 2011). Our approach aligned with all of these factors as we codesigned and delivered CTM in close collaboration with community partners.

Adaptation. A series of steps, informed by the literature, guided our process of adaptation (Gray et al., 2020). First, we identified and assembled a collaborative team across levels of stakeholders (e.g., older adult participants, activity coaches, recreation staff, and provincial coordinators). Second, we conducted a needs assessment (using qualitative methods) to gather input from stakeholders about what changes were required to support scale-up of CTM. Third, we developed a prototype of adaptation(s). Fourth, we validated our prototype with stakeholders. Fifth, we created the adapted model, and sixth, we pilot-tested adaptations—including all evaluation methods and approaches. Across all steps, feedback loops were incorporated in a continuous knowledge-to-action cycle (Graham et al., 2006) that supported planned and iterative adaptation processes between CTM scale-up phases (Barrera & Castro, 2006; Bernal et al., 1995; Domenech Rodriguez & Wieling, 2005; Graham et al., 2006).

CTM Delivery and Scale-Up

The phased approach we used to scale up CTM is illustrated in Figure 1. As scale-up progressed, we recognized and responded to the very real constraints that existed within the CTM Prevention Delivery System (Gray et al., 2020) and adapted CTM to enhance fit and support scale-up. However, we sought to retain fidelity to what we considered the underlying mechanisms of the intervention (e.g., core intervention functions; Hawe et al., 2004) that drive change. In Table 1, we highlight adaptations we made to CTM and its delivery from Phase 1 to present (Phase 4). Within each phase, CTM programs were delivered in cycles with start dates that aligned with typical community center programming: Fall (September–October start dates), Winter (January–February start dates), and Spring/Summer (May–July start dates). Below, we summarize the details of each phase.

Choose to Move

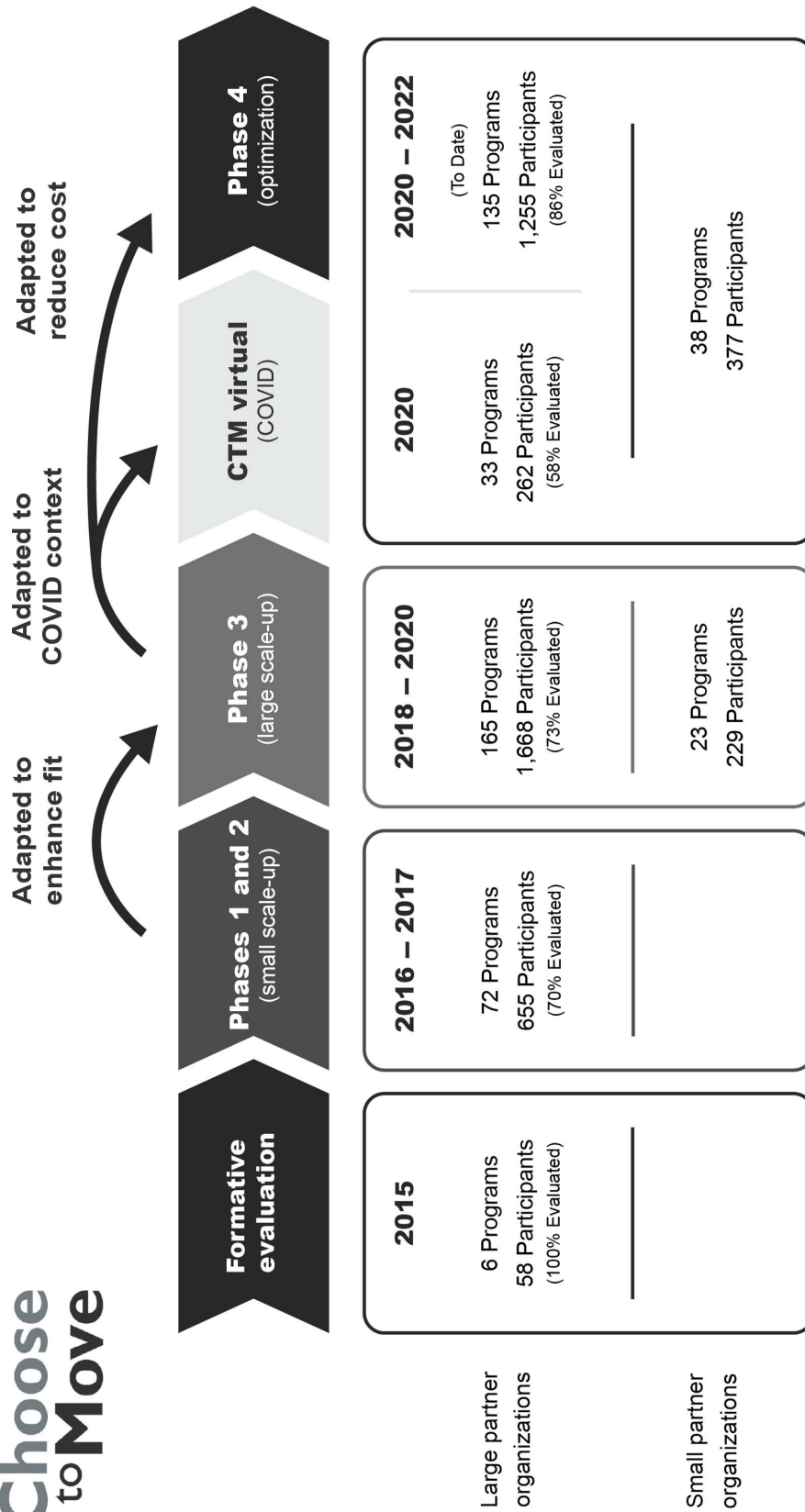


Figure 1 — Choose to Move was scaled up in phases from 2015 to 2022. Curved arrows show adaptation across phases (a) for best fit and to accommodate broad scale-up, (b) for virtual delivery during the COVID-19 pandemic, and (c) to optimize the intervention for cost. Older adult participants were not evaluated at small partner organizations. CTM = Choose to Move.

Table 1 Overview of Adaptations to CTM Program Format and Intervention Activities Across Phases 1 and 2, Phase 3, and Phase 4

	Phases 1 and 2	Phase 3	Phase 4
Format	<ul style="list-style-type: none"> No information session prior to program start Initial 60-min consultation during same week as group Meeting 1 Four group meetings (in-person) Ten check-ins (telephone) 	<ul style="list-style-type: none"> Information session 1–2 weeks prior to program start Initial 60-min consultation 1 week prior to group Meeting 1 Five group meetings (in-person) Six check-ins (telephone) 	<ul style="list-style-type: none"> Information session 1–2 weeks prior to program start Initial 30-min consultation between group Meetings 1 and 2 Eight group meetings (in-person, virtual, hybrid) No check-ins (telephone)
Intervention activity: <i>group meetings</i>	<ul style="list-style-type: none"> Health topics covered in group meetings (active travel included in every meeting) <ol style="list-style-type: none"> PA and chronic conditions Chronic disease self-management Reducing stress and easing anxiety Review CTM principles and behavior change No designated movement breaks during meetings No formal integration of social connectedness No group challenge No peer check-ins No “check-in” newsletter 	<ul style="list-style-type: none"> Health topics covered in group meetings (active travel only in Meeting 1 as “incidental activity”) <ol style="list-style-type: none"> PA and social connection Healthy weight management and nutrition Stress and anxiety Brain health and preventing injury Revisit your goals and celebrate! Prescribed movement breaks during meetings Group meeting slides prescriptive for group and paired discussions; contact information included in each CTM participant group No group challenge No peer check-ins No “check-in” newsletter 	<ul style="list-style-type: none"> Health topics covered in group meetings <ol style="list-style-type: none"> Welcome and goal setting PA and social connection Incidental PA Goals revisited Nutrition Falls prevention Stress management and brain health Goals and celebration Prescribed movement breaks during meetings (in-person); none prescribed during virtual delivery (safety; coaches may encourage participants to move around) Group meeting slides prescriptive for group and paired discussions; contact information included in each CTM participant group Group challenge at end of each meeting Optional peer check-ins Optional “check-in” newsletter (biweekly)
Intervention activity: <i>check-ins</i>	<ul style="list-style-type: none"> Activity coach guide includes <ol style="list-style-type: none"> PA action plan and goal setting between activity coach and participant Extensive section on pain management No questions about future goals/PA plans No motivational interviewing prompts No focus on the CTM as a social community of support 	<ul style="list-style-type: none"> Activity coach guide includes <ol style="list-style-type: none"> PA action plan and goal setting between activity coach and participant Pain section reduced Increased emphasis on compliance to action plan (revisit goals, set new goals, future plans) Added prompts for motivational interviewing Focus on the CTM as a social community of support 	<ul style="list-style-type: none"> No check-ins Core functions (e.g., goal setting, action planning) of the check-ins shifted to the group meetings (specifically, Meetings 1, 4, and 8)
Activity coach eligibility and training	<ul style="list-style-type: none"> Qualification—certified fitness leaders or kinesiologists Activity coaches hired by delivery partners Training specific to fitness professionals (as described above) Training delivered as day-long, in-person session, and a hardcopy manual Social connectedness not formally integrated into the activity coach training No specific training for virtual delivery 	<ul style="list-style-type: none"> Qualification—anyone with experience in fitness leadership or older adults Activity coaches hired by delivery partners in consultation with recreation coordinators Training expanded to support activity coaches who may not be fitness professionals Training delivery: self-directed online platform with interactive practical component Training adapted to emphasize social connections; group meeting presentation slides more prescriptive for group and pair discussion No specific training for virtual delivery 	<ul style="list-style-type: none"> Same as Phase 3, with the following exception <ul style="list-style-type: none"> Training expanded to include guidance on delivering virtual meetings and how to support those participants who are unable to join virtual meetings with video

(continued)

Table 1 (continued)

	Phases 1 and 2	Phase 3	Phase 4
Program operations	<ul style="list-style-type: none"> • Lead time for program delivery not standardized across delivery sites (often <3 months) • No formal communication plans between delivery partners and delivery sites • No central recruitment resource available to delivery sites • Delivery site agreements vague; exact roles, and responsibilities unclear • Promotion and recruitment materials lacked emphasis on benefits of CTM to participants 	<ul style="list-style-type: none"> • Delivery sites given 3–6 months lead time prior to start-up • Each delivery site given site-specific communication plan, which includes: implementation and site activity checklists, communication plan • Central recruitment resource available • Agreements modified to clearly articulate expectations regarding promotion and recruitment • Promotion and recruitment materials modified to highlight the benefits of CTM to participants 	<ul style="list-style-type: none"> • Same as Phase 3

Note. Details on adaptation between Phases 1 and 2 and Phase 3 are reproduced from Gray et al. (2020) with permission from Springer Nature. CTM = Choose to Move; PA = physical activity.

Formative Phase (2015). Our initial CTM program was implemented as a translational formative evaluation (feasibility study) and focused on older men (called Men on the Move). It provided us the opportunity to evaluate our implementation approaches, evaluation methods, and participant-level outcomes (McKay, Mackey, et al., 2019). Men on the Move was delivered by activity coaches affiliated with one large community delivery partner organization (BC Recreation and Parks Association—BCRPA). Over 12 weeks, the program comprised a 60-min one-on-one consultation, monthly group meetings ($n = 3$), and weekly telephone calls (~15 min/call). In total, three activity coaches delivered six programs to 58 older men. Participants also received transit training (60-min session), free transit passes, and pedometers. After 12 weeks of intervention, participants in Men on the Move were more active (i.e., steps, moderate–vigorous PA, and energy expenditure) and more likely to use transit and meet PA guidelines than the control group (Mackey et al., 2019). Men on the Move was deemed feasible based on retention and adherence to the intervention protocol (Mackey et al., 2019). However, similar to others (Anderson et al., 2016), recruiting men to participate proved a challenge. We seek to address this in future studies.

CTM Phases 1 and 2 (2016–2017). To prepare for province-wide scale-up, we adapted CTM based on delivery partner and older adult feedback and to reflect that older adults of any sex/gender were welcome to participate. In Phases 1 and 2, CTM was a 6-month program delivered in collaboration with two major delivery partners (BCRPA and the YMCA). CTM comprised a 60-min one-on-one consultation with an activity coach, four monthly group meetings with small groups (up to 12) of older adults (facilitated by their activity coach), and regular telephone check-ins (10 over 6 months). Activity coaches delivered 72 CTM programs to 655 older adults, of which 458 were evaluated. Delivery partners noted that CTM aligned with organizational priorities and was easy to deliver (Sims-Gould et al., 2019). CTM enhanced PA and mobility and diminished social isolation and loneliness in older adults (McKay et al., 2018) after 3 and 6 months. Our 1-year follow-up demonstrated that many health benefits were maintained 12 months after the intervention ended (McKay et al., 2021).

CTM Phase 3 (2018–2020). Prior to Phase 3, we adopted a systematic process (Family & Youth Services Bureau, n.d.; National Cancer Institute, n.d.; van Dongen et al., 2017) to adapt CTM based on feedback from our delivery partner organizations, activity coaches, and older adults while retaining fidelity to core functions (Gray et al., 2020). As there was general consensus regarding the need for older adults to socially connect more often, Phase 3 included more opportunities for social interaction (i.e., extra group meeting and more peer interaction during meetings). Thus, CTM Phase 3 comprised a 60-min one-on-one consultation with an activity coach, five monthly group meetings with small groups of up to 12 participants, and regular telephone check-ins (six over 6 months). In January 2018, the adapted CTM model rolled out across BC. We also began to collaborate with smaller organizations who served as delivery partners to reach more geographically diverse regions of BC (23 programs to 229 participants), a diversification referred to as scale-out (Aarons et al., 2017). At large partner organizations, activity coaches delivered 165 CTM programs to 1,668 participants, of which 1,216 were evaluated. The benefits for older adults (e.g., enhanced physical and social health) we observed in Phases 1 and 2 were evident after Phase 3 participation. However, improvements were slightly attenuated (voltage drop) for some measures (Macdonald et al., 2021; McKay et al., 2022). Importantly, we noted a twofold decrease in social isolation (despite scale-up) that we partially attributed to the increased number of group sessions.

CTM Phase 4 (2020 to Present). In Fall 2019, we began an optimization process whereby we systematically adapted CTM to reduce cost while maintaining benefits (manuscript in preparation). Quantitative data from early CTM phases demonstrated that health benefits were achieved after 3 months (McKay et al., 2018); qualitative data showed that telephone check-ins were not globally well received and were inefficient (i.e., many attempts were often required). Therefore, CTM Phase 4 was adapted to become a 3-month program comprised solely of group meetings. Our planned launch date was April 2020; however, the COVID-19 pandemic struck. We rapidly adapted CTM for virtual delivery and moved our evaluation online (Gray et al., 2022) to meet the needs of older adults who were “sheltering at home” in response to COVID public

health mandates. The CTM “at-home” 3-month model was delivered from April to October 2020 and comprised six virtual group meetings delivered to a convenience sample of previous CTM participants. In total, 262 older adults (153 evaluated) participated in 33 virtual CTM programs. Our implementation evaluation demonstrated that it was feasible and acceptable to deliver CTM virtually. However, activity coaches identified two main barriers during delivery—technological challenges and lower levels of older adult engagement (Gray et al., 2022). Our effectiveness evaluation of the virtual CTM program showed that approximately two-thirds of older adults maintained or increased their mobility, PA, and social connectedness at 3 months (unpublished data).

In Fall 2020, we began to roll out CTM Phase 4; delivery is ongoing. The Phase 4 model can be delivered in-person or virtually and is comprised of two components. During a 30-min one-on-one consultation, activity coaches helped older adults to set PA goals, address barriers to PA, and choose among physical and social activities provided in their communities (as before). Activity coaches facilitated eight group meetings over 3 months where participants received health information, interacted with other participants, and shared challenges and solutions to being active and staying socially connected. To date, across all phases and delivery partners, activity coaches have delivered >450 CTM programs to >4,300 older adults. Of these, approximately 2,800 older adults have been evaluated, and their data comprise our outcomes.

Key Lessons Learned Across 2 Decades of Scale-Up

In the following discussion, we illustrate (Figure 2) and discuss how CTM demonstrated many of the attributes of Yamey’s framework (Yamey, 2011) deemed essential for scale-up success. Those insights may guide readers who anticipate scaling up health or kinesiology-focused interventions in the future.

Attributes of the Model. CTM is simple, evidence-based, flexible, and adaptable (McKay, Mackey, et al., 2019; McKay, Nettlefold, et al., 2019; McKay et al., 2018, 2021, 2022). Design of the CTM program was guided by an evidence-based intervention (CHAMPS) that enhanced PA behaviors in older adults (Stewart et al., 1997, 2001). CTM’s choice-based, flexible design allowed us to adapt the program along the scale-up continuum to achieve

“best fit” within varied delivery contexts and for participants with different abilities and preferences. CTM’s adaptability also supported us to rapidly pivot to virtual delivery during the COVID-19 pandemic.

Attributes of the Implementers. Activity coaches are the heart of CTM. They were deemed essential to successfully implement CTM and to achieve a positive health impact at the participant level (Franke et al., 2021). In Phases 1 and 2, activity coaches were fitness professionals (BCRPA) or kinesiologists (YMCA). As smaller organizations were recruited as delivery partners in Phase 3, the role of activity coach was often filled by individuals without specific fitness training. The commitment to improving older adult health did not waiver across activity coaches, so as scale-up proceeded we designed and adapted CTM training modules for activity coaches who had a more limited health or fitness training background.

Attributes of the Organizations. It is important to note that authentic partnerships are at the core of successful scale-up, but they take time (i.e., often years) to build (McKay, Nettlefold, et al., 2019). We could not have scaled up CTM without committed delivery partner organizations (e.g., BCRPA, YMCA). The leaders of those partner organizations acknowledged the importance of older adult health and made CTM a priority within their program offerings. As scale-up progressed in Phase 3, we partnered with equally committed, smaller community-based organizations (e.g., neighborhood houses) that allowed us to extend the reach of CTM to more geographically diverse communities across BC.

Chosen Delivery Strategy

The most notable feature of our delivery strategy was our phased approach that was tailored to context. As we were in receipt of ongoing BC Ministry of Health support across 8 years, we were able to follow a comprehensive “pathway” (Indig et al., 2018) to scale-up. At every step along the phased, scale-up continuum, we monitored, evaluated, and adapted CTM based on evidence to ensure best fit within different and expanding contexts, to address resource (i.e., capacity) constraints within different delivery partner organizations, and to activate lessons learned.

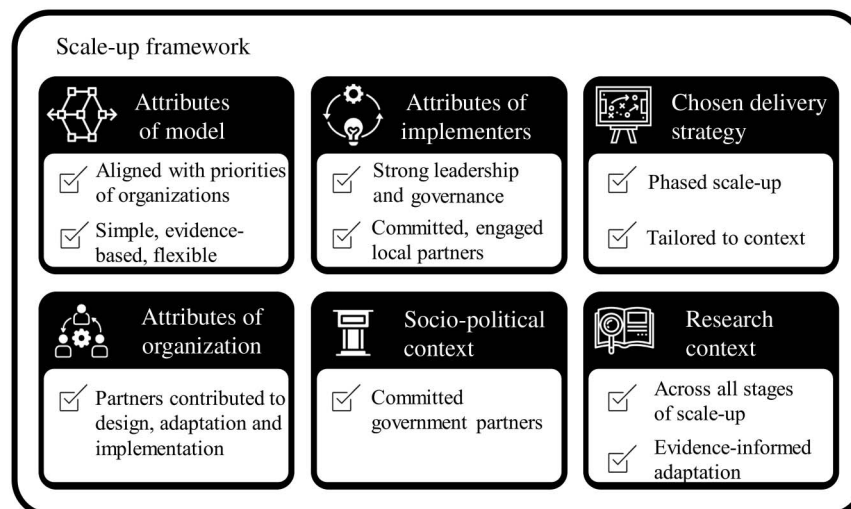


Figure 2 — Alignment of Choose to Move with our selected scale-up framework (Yamey, 2011).

Sociopolitical Context. We engaged our government funding partners early as part of our codesign and delivery process. We committed to frequent, ongoing, clear communication (e.g., in-person meetings, infographics, and reports) to keep partners engaged and “in the loop” regarding the reach and impact of CTM. We sought to align our program and our approach with government priorities and, where possible, public health and other policies (e.g., older adult health was a priority in the Active People, Active Places policy document, a priority that escalated during COVID-19). We were immediately responsive to funding partner questions, concerns, or requests for information about the program and its outcomes; we provided the information they sought in lay language and often in “communication-ready” format. We externalized and reduced the cost of CTM by obtaining research and evaluation funds through separate grant funding mechanisms (e.g., Canadian Institutes of Health Research). Trust is the cornerstone of effective partnerships (Tseng et al., 2017), and partnerships are the foundation of successful scale-up. Relationship building was considered more important than selecting effective implementation strategies (Metz et al., 2021). We cultivated many of our trusted government and community partner relationships over 20 years. Above all else, we sought to embed equity components in implementation planning and practice (DuMont et al., 2019).

Research Context. The CTM initiative was led by a trans-disciplinary academic research team that spanned the social and applied sciences and medicine. In parallel, we worked in close collaboration with many community and government partners throughout and beyond the lifecycle of the CTM program. Together, we committed to generating quality evidence that we used to inform our implementation and scale-up pathways, approaches, evaluation methods and to interpret and present our outcomes (i.e., evidence-based practice). Equally important—as scale-up proceeded—we relied upon practice-based evidence while integrating the skills and knowledge of our community partners and program participants (i.e., informally and formally, as part of the adaptation process). We consistently incorporated our research findings into implementation (“learning and doing”) through a constant knowledge-to-action cycle of evaluation–adaptation–implementation (Simmons & Shiffman, 2007). We aimed to retain fidelity to what we perceived were CTM’s core functions (Hawe et al., 2004) while adapting CTM to meet delivery partner and older adult needs. For example, we moved activity coach training from an in-person session to an online, self-directed module between Phases 2 and 3 (Gray et al., 2020). While the form changed, the content and skill development (the “function”) remained in place. Although adaptations may be perceived as a threat to internal validity, we carefully weighed the potential risk of all adaptations against the potential benefits of generalizability—reaching and supporting more older adults to enhance health-promoting behaviors.

Attributes of our team were considered essential to successful scale-up: a strong shared and compelling goal (i.e., to enhance the health of older adults) that every member of our team ascribes to; multidisciplinary knowledge and mixed-method research/evaluation skills; strong leadership, governance, and internal/external communication models; a highly supportive and flexible work environment; a commitment to mentorship and training; and an ability to align with and respond to community partners and the often “immediate” needs of government.

Conclusion

Scale-up can be a daunting process. Nonetheless, it is imperative that scale-up be removed from the *too hard* basket to become a routine part of health promotion and kinesiology implementation and evaluation pathways. In the present review, we have shared our science and some of our successful scale-up processes as a means to activate implementation and scale-up science research. At the forefront of lessons to be learned is to build scalability and adaptability into health interventions by “beginning with the end in mind” (World Health Organization and ExpandNet, 2011) and form trusted partnerships with key stakeholder groups (i.e., in the academic, community, and public sectors). By doing so, the likelihood of significant scale-up success will be greatly enhanced, and key drivers of improved population health can be effectively promoted and spread across diverse settings and populations (World Health Organization, 2010).

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