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# Lessons Learned In The Implementation Of HealthSteps: An Evidence-Based Healthy Lifestyle Program

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41 **Competing interests**

42 The authors declare that they have no competing interests.

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46 **Authors' contributions**

47 PKS contributed to acquisition of data and was a major contributor in writing the manuscript.

48 LMH contributed to acquisition of data and critical revision of the manuscript. RJP contributed  
49 to study conception, study design and was a major contributor in writing the manuscript. All  
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63 Lessons Learned in the Implementation of HealthSteps: An Evidence-Based Healthy Lifestyle  
64 Program

65 **Abstract**

66 HealthSteps is a pragmatic, evidence-based lifestyle prescription program aimed at reducing the  
67 rates of chronic disease, in particular, type 2 diabetes. A process evaluation was completed to  
68 assess the feasibility of the implementation of HealthSteps in primary care and community-  
69 based settings across Canada. Key informant interviews (program providers and participants)  
70 were conducted to identify facilitators and barriers to implementation and opportunities for  
71 future program adaptation and improvement. Forty-three interviews were conducted across five  
72 regions in Canada (15 sites ranging from remote, rural, suburban, and urban). Transcripts were  
73 analyzed using a qualitative naturalistic inquiry approach with several facilitating factors  
74 identified: pragmatic program design, in-line goals with sites' mandates, and access to ongoing  
75 support. Barriers were related to administrative challenges such as booking space, personnel  
76 changeovers, and scheduling participants. Findings from this analysis revealed insights on  
77 program delivery, design, and importance of site champions. Key lessons learned focused on two  
78 areas: infrastructure support and program implementation. The application of these learnings  
79 from the HealthSteps program may inform the development of strategies that can optimize  
80 program adaptation and support while reducing real and perceived barriers experienced, thus  
81 increasing the success of translation of the evidence-based diabetes program to different points  
82 of care.

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84 *Key words:* lessons learned, HealthSteps program, facilitators, barriers, implementation

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## Introduction

Obesity has reached epidemic proportions in Canada (Standing Senate Committee on Social Affairs Science and Technology, 2016). Given the increasing prevalence of diabetes worldwide, appropriate and practical prevention and management solutions are critical. The impact of obesity on mortality is alarming with 48,000 to 66,000 deaths per year in Canadians (Standing Senate Committee on Social Affairs Science and Technology, 2016). Particularly concerning is the fact that over 25% of Canadian adults self-reported a height and weight categorizing them as obese (Statistics Canada, 2015). This coincides with the increase in rates of type 2 diabetes, hypertension, stroke, cardiovascular disease, and some forms of cancer (Canadian Institutes of Health Information & Public Health Agency of Canada, 2011; Public Health Agency of Canada, 2016). Clearly, this data elucidates the urgent need to improve health-related outcomes for individuals with obesity and those with type 2 diabetes, and, especially, those afflicted with both.

100 Many chronic diseases including cardiovascular disease, diabetes and cancer, can be  
101 prevented through reducing behavioural risk factors such as physical inactivity and unhealthy  
102 eating habits (Hagobian & Phelan, 2013; Statistics Canada, 2014; Warburton, Nicol, & Bredin,  
103 2006). There is evidence that most cardiovascular diseases could be prevented by a coordinated  
104 effort to adopt and sustain an active lifestyle through focusing on small changes (Simmons,  
105 Unwin, & Griffin, 2010). Comprehensive lifestyle interventions have been found to have  
106 positive long-term effects leading to lower risk of type 2 diabetes (Hagobian & Phelan, 2013).  
107 Moreover, health coaching interventions where goal setting is utilized may effectively improve  
108 lifestyle changes (Olsen & Nesbitt, 2010). However, there is a need to better address barriers to

109 understand the effectiveness of prevention lifestyle programs (Stoutenberg, Stanzilis, & Falcon,  
110 2015) as there has been a lack representation of experiences from implementation in a wide  
111 distribution of “real-world” settings and “everyday” preventative health practice as well as  
112 participants’ perspectives. This includes different points of care (i.e., family practice, workplace,  
113 education institutions, community centers, fitness centers) where patients and health providers  
114 interact to improve health. Furthermore, experiences of program delivery focus on primary care  
115 (Blonstein et al., 2013; Josyula & Lyle, 2013; Lee, Hillier, & Weston, 2014).

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117 Through our previous research, we found that few physicians prescribed exercise to  
118 manage chronic disease (Petrella, Lattanzio, & Overend, 2007) and often lacked specific health  
119 promotion tools and training (Petrella et al., 2011; Petrella, Koval, Cunningham, & Paterson,  
120 2003; Petrella & Wright, 2000) for addressing at-risk patient needs. HealthSteps was developed  
121 from an extensive research base (Foisey, Cook, Intzandt, Stuckey, & Petrella, 2012; Petrella et  
122 al., 2011; Petrella, Koval, Cunningham, & Paterson, 2001; Petrella et al., 2003; Petrella,  
123 Lattanzio, Demeray, Varallo, & Blore, 2005; Petrella et al., 2007; Petrella & Wright, 2000;  
124 Stuckey, Shapiro, Gill, & Petrella, 2013) with the aim of developing a foundation of type 2  
125 diabetes prevention research in the points of care to create healthier communities. The  
126 HealthSteps program was further assessed through a randomized control trial which targeted  
127 physical inactivity, sedentary behaviour, and poor diet through one-on-one coaching, and health  
128 technology supports (Gill et al., 2017). The delivery of the HealthSteps program in this paper  
129 utilized similar goal setting, supports, and objectives (Gill et al., 2017), however sought to  
130 further extend our program reach and effectiveness into rural and remote communities.

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132 Rural and remote areas are at increased risk of chronic disease and type 2 diabetes  
133 (DesMeules & Pong, 2006). An important determinant of health outcomes for those living in  
134 rural and remote communities is their access to health services (Pong et al., 2011; Wilson, Smith,  
135 & Humphreys, 2008) and their use of health-related internet supports (Hale, Cotten, Drentea, &  
136 Goldner, 2010; Stuckey et al., 2011). To better understand the applicability and acceptability of  
137 HealthSteps in a range of rural and remote areas, an 8-month trial of the program was  
138 conducted across 5 different regions in Canada. The HealthSteps program was implemented in  
139 15 sites across 5 regions in Canada in a of range settings: North Eastern Ontario (4 sites; primary  
140 care and education institutions), South West Ontario (5 sites; primary care), North West  
141 Territories (2 sites; education institutions), North West Ontario (2 sites; workplace wellness  
142 initiatives and community center), and British Columbia (2 sites; health and fitness community  
143 centre and primary care). We provided role specific training prior to program onset and sought to  
144 build multifunctional teams in these sites with diverse functional backgrounds as they bring  
145 different and complementary knowledge (Bunderson, 2003) and utilized a centralized research  
146 team to the support program implementation across sites. This pragmatic approach was  
147 developed to limit costs and access to resources.

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149 The HealthSteps program draws upon evidence from diverse areas including physical  
150 activity and healthy eating, behaviour change, and knowledge translation. To support long-term  
151 lifestyle change, once every two months for an 8-month period, participants were provided one-  
152 on-one personalized coaching with a trained HealthSteps coach grounded in Motivational  
153 Interviewing (Rubak, Sandbaek, Lauritzen, & Christensen, 2005). As a part of the exercise  
154 proportion of the program, participants completed a sub-maximal fitness test, the STEP™ test

155 (Petrella & Wright, 2000). Participants had access to eHealth technology tools to support  
156 behaviour change between coaching sessions which included online personal networks and  
157 telephone based coaching (Gill et al., 2017). As a follow-up to program completion, we  
158 conducted interviews with key informants of the program.

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160 To better our understanding regarding feasibility of delivery and long-term uptake of  
161 HealtheSteps in “real world” settings, this paper explored the facilitators and barriers of program  
162 implementation including the research process. While addressing modifiable risk factors has  
163 yielded positive results through our research of the HealtheSteps program in clinically controlled  
164 settings, experiences learned through the program’s feasibility of implementation has yet to be  
165 explored, specifically in rural and remote areas where risk for chronic disease is greatest.

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## 167 **Methods**

168 Individual telephone interviews were conducted with key informants from each region in  
169 this study, representing Knowledge Brokers (KBs), coaches, participants, and Key Stakeholders  
170 (KSs) such as academic leads and program partners (i.e., management/ leadership from  
171 organizations hosting the HealtheSteps program) (Table 1). Unique interview guides were  
172 developed for each of the respondent groups, with the aim of eliciting their unique experiences  
173 consistent with their role in the program with questions designed to provide insight in their  
174 experience with program implementation. Forty-three interviews were conducted by one author  
175 to ensure consistency. Field notes were maintained for all interviews; additionally, all interviews  
176 were digitally recorded and transcribed.

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178 Transcriptions were analyzed using a qualitative naturalistic inquiry approach (Lincoln &  
 179 Guba, 1985). Reoccurring themes were identified through inductive analysis of the data without  
 180 prior assumptions (Patton, 2002). The analysis reflected the constructivist paradigm,  
 181 acknowledging multiple perspectives to specific phenomena, generating a thorough  
 182 understanding of individuals’ perceptions of and experience with the program within the context  
 183 of their role within the program (Denzin & Lincoln, 2008). Two authors reviewed the interview  
 184 transcripts several times to achieve immersion and gain full understanding of the perspectives of  
 185 interview participants. An initial review of the transcripts allowed for the generation of broad  
 186 categories and the identification of emerging themes. Study rigour was ensured during this  
 187 review of transcripts by another analyst, providing feedback on the coding. Furthermore,  
 188 additional rigour was achieved by the entire research team providing overall feedback on the  
 189 themes generated by the analysis. Inter-rater coding served to reduce bias in the identification of  
 190 emerging themes. Discussions of identified themes among the research team resulted in several  
 191 iterations of the broad themes and sub-themes to achieve greater clarity of the data (Braun &  
 192 Clarke, 2006). Ethical permission was approved by the Western University Sciences Research  
 193 Ethics Board (#105331).

194

195 **Findings**

196 Key informants identified several facilitating factors towards program implementation:  
 197 program design, program goals, and access to ongoing support (Table 2). The HealthSteps  
 198 program was found to support both success and sustainability through its pragmatic design and  
 199 delivery. The design and participant focus within the program was perceived as simple and easy  
 200 to grasp. The low cost and resource needs facilitated implementation which supports its strength

201 in its adaptability to different settings, organizations, geographic regions, and populations. The  
202 participant-centred focus of the program, in terms of individualizing the program and supports to  
203 participant needs and preferences encouraged behaviour change. Participants established goals  
204 that were self-relevant and reflected how they lived their lives, a factor that was also perceived as  
205 a strength of the program. The focus on self-management and the self-directed focus of the  
206 program were perceived as facilitating sustained change in their health behaviours.

207

208         A key determinant of program delivery was accountability. This included the relationship  
209 developed between the coach and the participant. As evidence of this, when the program was  
210 first launched, participants were not assigned a specific coach (they saw a different coach at each  
211 visit); high attrition rates were attributed to the lack of a relationship between participants and  
212 coaches. However, upon recognition of the importance of matching coaches to participants, each  
213 participant was assigned a specific coach halfway through program delivery. This allowed for the  
214 development a foundation on which to base future goals and health behaviour changes were  
215 made. Also, the participants were more amenable to the research data collection when they had a  
216 relationship with the coach. Without this established relationship, participants felt they were  
217 there primarily as research participants. As well as participants, dedicated personnel in the roles  
218 of the KB and coaches were key to successful delivery. Teams that had committed personnel  
219 instilled confidence among participants. Another form of accountability that facilitated the  
220 program was the collaborative relationships between Ks and the central research team. For  
221 community partners, the program was described as well aligned and consistent with their  
222 organization's mission and vision related to wellness and health promotion. Additionally, the use

223 of evidence-based measurements provided objective, concrete evidence of improvement, which  
224 motivated participants to continue with their goals developed through the program.

225

226 Knowledge translation was a key factor that facilitated program implementation. Many  
227 participants expressed how the program increased their awareness about their health suggesting  
228 the length of the program promoted long-term health behaviour changes. Moreover, KSS  
229 appreciated that the program provided a training opportunity for students and staff, affording  
230 them the opportunity to apply what they had learned in their formal education to practice (real  
231 life application). Additionally, the program provided KSS' staff further expertise and confidence  
232 when working with patients within and outside the program. Transparency in communication  
233 further facilitated collaborative teamwork amongst sites and the central research team. KBs and  
234 KSS felt comfortable accessing the central team. Program sites felt that the central research team  
235 respected their input and valued their feedback, as evidenced by requests for feedback and  
236 enthusiasm to take on suggestions.

237

### 238 *Barriers*

239 All but 3 of 15 program sites established and sustained the program over the 8-month  
240 period. Several barriers to implementation were identified (Table 3). The sites unable to sustain  
241 the program faced many challenges including loss of communication with KBs and limited  
242 support, as KSS were geographically distant as well as central research team. Most barriers  
243 identified by key informants were primarily related to administrative processes. As this was the  
244 first time the program was run within each site, many informants perceived these challenges as  
245 resolvable.

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While the central research team provided sites with program specific training and worked together with sites and community partners to implement the programs, often, coordinating competing priorities and schedules, managing cancelled sessions, and room availability placed constraints on the coaching sessions. Similarly, technological supports were underutilized and was attributable to several factors: a) competing interests b) introduction of supports too late in the program; c) technological problems. Sites without access to these supports for program launch, resulted in limited interest among participants to engage in this later in the program. Participants were noted to prefer working one-on-one with coaches, with whom they had established a working relationship and wanted to maintain this connection rather than establish a new one.

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The implementation of the program was negatively impacted by the additional paperwork and time commitments research requires. Specifically, recruitment and support for the program was challenged by the need for detailed and multiple documentation that was often repetitious. This challenged the retention of participants and coaches in the program due competing priorities. Moreover, implementation of the program posed difficulty with frequent staff and student turnover. Turnover was frequent and often when new personnel came in to take over a role, no formal training was provided which resulted in miscommunication among sites and lack of coach continuity for coach and participant relationships. A barrier found in remote areas was limited funding and human resources. Research completed in areas where availability of personnel or students and funding was limited made it a challenge to recruit coaches for the program. While students were deemed appropriate for coaching role, they also posed challenges

269 with scheduling and required continual support to ensure training was adhered to and that clear  
270 objectives and goals of the program were understood.

271

272 Many informants expressed that they lacked support at beginning of program and that  
273 objectives were unclear, which led to difficulty with initial program implementation and  
274 participant success. The length of time between sessions was found to challenge participants to  
275 remain motivated and engaged, contributing to attrition. After the first sessions, many  
276 participants withdrew due to lack of interest and momentum in the program. Recognizing that  
277 two months between sessions was too long, given that participants were dropping out, one of the  
278 regions chose to have coaches connect with participants every few weeks by telephone. It was  
279 noted that additional contact with participants helped to maintain momentum in the program.

280

281 *Key Lessons Learned*

282 Key informants identified several key lessons learned through the implementation of the  
283 program (Table 4) in two areas: infrastructure support and program implementation. Sites that  
284 experienced success with program implementation often already had infrastructure support (i.e.,  
285 primary care). Other important facilitating factors included: training (in-person and on-going),  
286 additional support at program onset for both participant and implementation team, access to  
287 consultation and mentorship through creation of a community of practice (team members who  
288 would engage in a process of collective learning), and secure invested interest from the site and  
289 its team members to implement the program. While the beginning of program implementation  
290 faced its challenges, key informants suggested that with more experience, the logistics of  
291 program implementation became more efficient and saw less drop outs of participants.

292

293           Participants who expressed satisfaction with the program viewed their relationship with  
 294 their coach as key to their motivation, to program accountability, and to their ability to change  
 295 their health behaviours. In fact, many participants expressed this accountability had a ripple  
 296 effect to other family members. Barriers included ensuring adequate time was allotted for  
 297 sessions to allow participants and coaches the opportunity to develop rapport; without this  
 298 established relationship, participants felt their participation was primarily as a research  
 299 participant. Identified constraints imposed by research protocols that affected the program  
 300 implementation centered around the need for attention to detail and data collection requirements  
 301 which resulted in additional paperwork that was often perceived as redundant. Prior to program  
 302 implementation, data collection methods should have been reviewed with staff and participants  
 303 to ensure they were inline with the objectives of the program. To facilitate technological uptake,  
 304 it was suggested that the implementation team provide participants with all available resources  
 305 and support for the program early in the program and promote this regularly during session visits  
 306 to encourage uptake and understanding of its use and importance to support behaviour change.

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**Discussion**

309           We developed HealthSteps as an evidence-based, pragmatic lifestyle program to address  
 310 diabetes prevention and management of diabetes. The participant focused approach of the  
 311 program allowed for empowerment of participants to make change and through the development  
 312 of rapport with their coaches, which is an integral component of program implementation (Lewis  
 313 et al., 2014). Another integral component of the program was that all members of the health care  
 314 team understood the program objectives and had access to ongoing support and training

315 throughout program delivery; these types of factors have been identified as important for  
316 program efficacy and sustainability in primary care settings (Lee, Hillier, & Weston, 2014).

317  
318         The HealthSteps program supported the development of interprofessional collaborations  
319 by requiring teams to work together on a common goal of improving communities' lifestyles,  
320 nevertheless a key barrier continually found revolved around administrative processes due to  
321 competing interests that often resulted in scheduling issues (Stoutenberg et al., 2015). This  
322 reflects similar lessons learned from other programs' experiences (Blonstein et al., 2013; Josyula  
323 & Lyle, 2013; Lewis et al., 2014). Specifically, ensuring adequate facilities and space for  
324 programming (Blonstein et al., 2013) as well as dedicated health promotion resources that  
325 include personnel and materials for implementation (Josyula & Lyle, 2013; Lewis et al., 2014).  
326 Moreover, strong multifunctional teams with diverse functional backgrounds were observed as  
327 being pivotal towards program implementation, including the role of centralized support to help  
328 move the program forward (Bunderson, 2003). The importance of the role of centralized support  
329 was often overlooked as local level support was often preferred. This might explain why many  
330 informants expressed a lack of initial support at the beginning of program.

331  
332         Perceived constraints with implementation of the research components included  
333 burdensome paperwork and underutilized resources. In many cases, this resulted in a heavier  
334 workload for the delivery sites, which restricted the adaptability of the program. Implementation  
335 as a community program without research requirements, will allow increased flexibility and  
336 support program goals to place less burden on both the implementation team and participants.  
337 Consistent with the factors identified, and regardless of site readiness, it was identified that

338 increased support at the beginning of program implementation was critical. To increase  
339 participant adherence and promote long-term success, additional motivational strategies to  
340 engage participants may be needed (Blonstein et al., 2013). Adequate and periodic meetings  
341 between sites and the central research team may further facilitate successful program  
342 implementation to address sites concerns, collaboration, and facilitate learning from different  
343 sites' experiences (i.e., communities of practice). This might include a training portal where team  
344 members can openly discuss their successes and challenges experienced. While people living in  
345 rural areas may be less likely to access internet resources (Hale et al., 2010) to support  
346 participants and how technological resources are used, further discussion and its use during one-  
347 on-one sessions might further facilitate uptake and decrease participant attrition as the use of  
348 education and technology tool supports health changes (Stuckey et al., 2011).

349

350 As noted, long-term sustainability of the program requires dedicated and sufficient  
351 resources including: financial, personnel, and facility space. Thus, partner organization's  
352 invested interest becomes of great importance for the adoption and sustainability of the program  
353 with infrastructure support at the site. Encouraged consultation and engagement within the  
354 organization can also reinforce salience of participant health behaviour changes (Josyula & Lyle,  
355 2013). The dedication of these resources within the program setting would also decrease  
356 participant attrition rates as well as improve access to the program. Clear objectives for program  
357 delivery need to be co-created at the beginning to ensure all key informants work as a team  
358 towards a common goal and have adequate access to resources.

359



360 A program “champion” is noted to improve program adoption (Lee et al., 2014; Shaw et  
361 al., 2012). Within the HealthSteps program, two key champions facilitated program  
362 implementation at each site: a site (KS) and program (KB) champion (See Table 1 for detailed  
363 roles). Sites that already had other community health programs in place, when HealthSteps was  
364 added to the existing program the process was more easily implemented since resources were  
365 already in place. Sites where the program was the first community health related initiative,  
366 additional infrastructure support needed to be established and resources identified which required  
367 more time by the site and program champions prior to implementation. Future research by our  
368 team will include program optimization to understand the factors that contribute to longer-term  
369 sustainability for both those who implement the program and participants, and knowledge  
370 translation efforts to support communities and build capacity.

371

#### 372 *Study limitations*

373 Selection bias may exist as participants interviewed had all completed the program.  
374 While attempts were made to have adequate representation of key informants, not all sites had  
375 the same degree of representation from all key informants who started with the program.  
376 Additionally, interviews were completed within two months post program completion, thus, we  
377 do not have information regarding the long-term impressions of the program.

378

379

### **Conclusion**

380 Our findings of the HealthSteps program implementation feasibility in a diverse range of  
381 points of care across Canada, highlight the importance of infrastructure support for  
382 administrative processes and champions to engage the target populations and their providers.

383 Within each site, it was observed that establishment of a detailed plan of implementation  
384 including necessary logistics and resources needed were critical for successful implementation  
385 and completion of the program. The key lessons learned we have observed will inform the  
386 optimization, adoption, and sustainability of future HealthSteps program delivery among  
387 Canadians at risk.

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## LESSONS LEARNED FROM HEALTHESTEPS

493 Table 1: Summary of Roles of Key Informants

Role	Responsibilities
Knowledge Broker (KB)	<ul style="list-style-type: none"> <li>• Liaison (local program and central research team).</li> <li>• Facilitate program implementation (coordinate coaches, schedule appointments and space).</li> <li>• Local data collection.</li> </ul>
Coach	<ul style="list-style-type: none"> <li>• Complete HealthSteps coach training</li> <li>• Implement coaching role with participants (administer fitness tests, assist with goal setting, facilitate use of technological supports).</li> </ul>
Participant	<ul style="list-style-type: none"> <li>• Participate in program (attend sessions with coach).</li> </ul>
Key Stakeholder (KS)	<p><i>Academic Lead</i></p> <ul style="list-style-type: none"> <li>• Oversee local program to ensure program implemented as intended.</li> <li>• Recruitment of Community Partner, Knowledge Broker, and Coaches</li> </ul> <p><i>Community Partner</i></p> <ul style="list-style-type: none"> <li>• Decision-making to partner with program.</li> <li>• Support recruitment of participants through assisting with access to onsite resources and staff.</li> </ul>

494 Table 2: Summary of Factors Identified as Facilitators

Facilitator Factors	Supporting Quotes
<b>Program Design</b> Pragmatic	<p><i>“In the real world it works within an existing work flow quite well. So this isn’t something that requires tons of extra resources or hiring of extra personnel. It can be completed by a dietician or a nurse or a physician within their regular work schedule. We have step units that we’ve built but you can also use any two standardized steps in your office if you don’t have that equipment. So it would be very easy to implement in any health organization across Canada.”</i> [KBID#2]</p> <p><i>“This was a vehicle for training students and all of them were very appreciative of having this opportunity and it’s going to serve them well...it’s that real life application that can’t be replaced by any kind of textbook learning, they feel much more comfortable and confident in heading into a work place situation now, having this under their belt.”</i> [KSID#1]</p>
Participant Focused	<p><i>“...the participant is the expert in their own life, so although we want to communicate the fact that it’s important to exercise and reduce sedentary behavior and eat healthy, the participant is the one who knows how that’s going to fit into their lifestyle.”</i> [KSID#2]</p> <p><i>“...there was someone holding me accountable, and just the way that it was sort of incremental changes made it easy to, like it wasn’t changing my whole life, it was actually one little thing...”</i> [PID#1]</p>
Accountability	<p><i>“...participant retention really depends on the one-to-one experience that the participant has with the coach or coaches.”</i> [KSID#5]</p> <p><i>“I think the biggest determinant of those successes have been the regional knowledge brokers, the time that they’ve committed to actually being available to the coaches and working on implementation. And then the other is the coaches enthusiasm in actually delivering the program. So I think if either one of those two things is low, then you can run into some issues.”</i> [KBID#2]</p>

Evidence-Based	<p><i>“I think so many people they just get so caught up at looking at the scale and having that be the real indicator for how you’re doing...The step test was great because you could see those number change and the VO2 max.” [CID#2]</i></p> <p><i>“Tools to self-manage I think is crucial... getting the person let’s say engaged in actually tracking that stuff so they can see are they improving and then based on that you re-do the step test...” [CID#1]</i></p> <p><i>“I liked that there was the STEP test throughout so you could actually measure what’s changing throughout the program.” [PID#12]</i></p>
Knowledge Translation	<p><i>“By the time the program ended I was totally where I wanted to be, I had totally got a new understanding of fueling my body...the program really changed a lot of things for me and even in my lifestyle because it’s a lifestyle change.” [PID#2]</i></p> <p><i>“My main focus is on diet so having HealthSteps training and cutting my teeth with counseling people more specifically on activity really helped me out.” [CID#1]</i></p>
<b>Program Goals</b>	
Aligned with partner organization’s mandate	<p><i>“It fits perfectly and it’s in our mandate or mission statement...helping people live healthier lives, so it falls perfectly in line with what our [organization] is supposed to be doing.” [KSID#1]</i></p>
<b>Access to support</b>	
Transparency	<p><i>“There was open communication, I felt as though I could ask questions and the team got right back to me... directly getting back to me or through [academic leads], so I felt like I was part of the team and felt like I could ask questions and get clarification if needed.” [KSID#2]</i></p>

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Table 3: Summary of Factors Identified as Barriers

Barriers	Supporting Quotes
<b>Process and Resource-Related</b>	
Scheduling and coordinating	<p><i>“It was a bit of a logistical nightmare to do. We were coordinating a staff member, a room booking, and the coach so there was like 3 components to everything, so that was tricky.” [KSID#3]</i></p> <p><i>“If an appointment was cancelled then we had to rebook, find the coach, find the participants, find a good time, find a room, and so that, that in itself was quite a challenge.” [KSID#2]</i></p>
Technological supports	<p><i>“I did go online, but I never really used it and for me the reason I didn’t was probably a time element because I work everyday...” [PID#2]</i></p>
Paperwork	<p><i>“It’s a bit of a challenge to have an exercise lifestyle implementation program folded into a research program because the research side of things wants things extremely well documented and accurate and that sometimes takes away from just being able to run with it...” [KSID#1]</i></p> <p><i>“What kind of got us blind sided I think is especially with the research people who weren’t involved in research its just the inundation with paperwork, duplication, and I felt bad for some of the patients.” [CID#1]</i></p>
Human Resources	<p><i>“...we’ve found that there’s a lot of turnover in the health industry especially in Family Health Teams.” [KBID#2]</i></p>



Initial Supports	<p>“...the training should be a little bit more organized and mandatory before you step in... I had to kind of like, you know, have that learning curve where I learned on my own.” [CID#4]</p>
<p><b>Program-Related</b> Length of time between coaching sessions</p>	<p>“I certainly think the biggest challenge for me was during the initial stages of the study...I really felt the entire program was left on my shoulders...I felt quite overwhelmed a number of times...As time went on it became easier once I had figured out how to organize things appropriately, but having that support right off the bat while our team was getting used to the program would have been really valuable.” [KBID#4]</p> <p>“I think that initially only meeting every two months or so I think that’s too long of a time. It’s a gap, especially for those people that are in the early stages of behavior change. I think they need a little bit more support earlier on... I think it might explain some of the drop off that we’ve had.” [KSID#6]</p> <p>“...if I met with the coaches more often it would keep me more accountable because a lot can happen in a couple of months.” [PID#10]</p>

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Table 4. Key Lessons Learned in the Implementation of a Healthy Lifestyle Program

<p><b>Infrastructure Support</b></p> <ul style="list-style-type: none"> <li>• Have more supports at a local level to facilitate implementation</li> <li>• Create a community of practice</li> <li>• Encourage consultation and engagement</li> <li>• Ensure needed resources (financial, personnel, and space) are in available</li> <li>• Requires an invested site and program champion</li> </ul>	<p><b>Program Implementation</b></p> <ul style="list-style-type: none"> <li>• Frontload coaching sessions and ensure adequate time for follow-up visits</li> <li>• Develop a communication strategy between coaches and participants</li> <li>• Streamline data collection and tracking tools</li> <li>• Provide clear objectives and training on program</li> </ul>
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