

Chapter 12

Barriers to Sustainable Health Promotion and Injury Prevention in the Northwest Territories, Canada

Audrey R. Giles, Lauren A. Brooks-Cleator, and Catherine T.R. Glass

Abstract In this chapter, we examine barriers to providing sustainable health promotion and injury prevention programs in Northwest Territories (NWT), Canada. In the context of increasing healthcare costs in Canada, developing sustainable healthcare programs is especially relevant. Using a multiple case study methodology and a framework developed by Schell et al. (Implement Sci 8(15): 1–9, 2013), we evaluate the sustainability of two health promotion and injury prevention programs: Elders in Motion (EIM) and the NWT Aquatics Program. We apply Schell et al.'s (Implement Sci 8(15): 1–9, 2013) nine domains of capacity for sustainability to each program to illustrate the challenges of developing health programs in northern Canada. Our results suggest that largest barriers to sustainable health promotion and injury prevention programs in the NWT relate to program content and delivery, financial issues, and staffing. These findings can inform future health promotion and injury prevention strategies that are intended to improve health outcomes in northern Canada.

Keywords Health promotion • Injury prevention • Sustainability • Elders • Drowning

12.1 Introduction

In studies completed in northern Canada, the term “sustainability” is typically used to refer to resource development. Yet, sustainability in reference to public health is an area that is also deserving of attention. In this chapter, we examine the capacity for sustainability in programs that involve two aspects of public health, health promotion and injury prevention, in Canada’s most populated territory, Northwest

A.R. Giles (✉) • L.A. Brooks-Cleator • C.T.R. Glass
University of Ottawa, Ottawa, ON, Canada
e-mail: agiles@uottawa.ca; lbroo049@uottawa.ca; cglas007@uottawa.ca

Territories (NWT). The World Health Organization (2015) defines health promotion as “the process of enabling people to increase control over, and to improve, their health. It moves beyond a focus on individual behaviour towards a wide range of social and environmental interventions” (para 1). Injury prevention on the other hand, includes activities to prevent, reduce, treat, and/or ameliorate injury-related death and disability (Hemenway et al. 2006). Sustainable health promotion and injury prevention efforts are especially necessary given rising healthcare costs that are occurring in Canada, and in light of increasing fiscal restraint and the retreat of the welfare state. Using a qualitative multiple case study and the framework developed by Schell et al. (2013), we assess the capacity for the sustainability of two NWT programs that involve health promotion and injury prevention components: Elders in Motion (EIM) and the NWT Aquatics Program.

12.1.1 Sustainable Public Health in the North

Sustainability within the realm of public health can be understood as a collection of contextual and organizational factors that allow for a program to be maintained over time (Schell et al. 2013). Scheirer and Dearing (2011) identified sustainability outcomes as a program’s ability to maintain its activities, benefits to clients, organizational practices, community level partnerships, and salience of the program’s core issue. In order to achieve these outcomes, Schell et al. (2013) developed a new framework of public health capacity for sustainability that was based on a comprehensive literature review and concept mapping process. This framework identifies nine domains of capacity for sustainability:

- **Political support:** the political environment that impacts program support, activities, and acceptance
- **Funding stability:** the ability for long term planning based on stable funding sources
- **Partnerships:** the relationships between the program and target communities
- **Organizational capacity:** the resources required to manage and run program activities
- **Program evaluation:** collecting data and evaluating program outcomes and activities
- **Program adaptation:** the ability to respond and modify program to ensure efficacy
- **Communications:** the dissemination of program activities and outcomes with decision-makers, stakeholders, and the public
- **Public health impact:** the program’s impact on a target community’s health perceptions, attitudes and behaviours
- **Strategic planning:** the process that dictates program content, delivery, and outcomes

Researchers, funders, and practitioners can apply the nine domains to small, community-level projects or larger programs. These domains are important to consider, as programs that are sustainable are more likely to produce healthier communities and long-lasting effects (Schediac-Rizkallah and Bone 1998).

The development of sustainable health promotion and injury prevention efforts is essential for decreasing health care spending in Canada, particularly in the North, where health care costs are the highest (Canadian Institute for Health Information 2013). A study by the Canadian Institute for Health Information (2013) that documented health expenditures from 1975 to 2013 found that NWT has the second highest (behind Nunavut) per capita cost at \$10,686 or 9.0 % of the total health expenditure-to-territorial GDP ratio. As such, the creation of sustainable public health is key for the financial sustainability of the territory.

12.1.2 Elders in Motion

In 2009, the NWT Recreation and Parks Association (NWTRPA) partnered with the Canadian Centre for Activity and Aging (CCAA), which is based out of Western University in London, Ontario (CCAA n.d.), to establish Elders in Motion (EIM). To implement this program in NWT, community members rely on the NWTRPA for training, partial funding, and support with program development. Staff members from the NWTRPA train program leaders from NWT to deliver EIM in their communities, so that once implemented, the program can be maintained in the communities with little to no involvement from the NWTRPA (CCAA n.d.).

Typically, program leaders are recreation coordinators, community health representatives, Elder coordinators, and/or home support workers. EIM can be led in a recreation facility or home-based setting and aims to be inclusive of older adults with various ranges of independence and mobility. EIM consists of multiple activities and programs that are designed to help older adults lead active, healthy lives. A significant part of EIM is the Active Living Exercise Program that was adapted from the CCAA's Home Support Exercise Program for older adults in southern Canada, and which consists of 10 easy, but effective exercises for older adults (CCAA n.d.). To adapt the Home Support Exercise Program for EIM, the NWTRPA modified the CCAA's program documents, materials, and audio/visual material to include northern people, images, voices, music, and themes. Other activities included in EIM are Balls and Balance Exercises, band exercises, Nordic walking, and walking bingo.

The NWTRPA's Active Communities Coordinator visits the communities involved with EIM throughout the year to help program leaders plan events; to give them ideas on motivating Elders to attend and on new activities to include; and to provide continuous support to the program leaders (NWTRPA n.d.). There is also an annual Training Gathering for EIM that includes training opportunities, best practices tips, Active Elder Awards, and discussions among participants (NWTRPA 2009). To help finance EIM program costs, program leaders can apply for a \$2500 grant from the NWTRPA. EIM is supported financially by the Government of NWT

Departments of Health and Social Services, and Municipal and Community Affairs. EIM can be considered both a health promotion and injury prevention program because it helps Elders to become more physically active or maintain physical activity, which can play an important role in decreasing the risk of injuries.

12.1.3 NWT Aquatics Program

People have used NWT's bodies of water for recreation, transportation, and subsistence since time immemorial. The NWT Above Ground Pool Program (now NWT Aquatics Program) began in 1967 when the territory's first above ground pool was constructed in Fort Simpson. The program grew a great deal and soon seasonal swimming pools were constructed in municipal garages, arenas, and curling rinks across the North during summer months and seasonal waterfronts began operating in communities without pools. The NWT Aquatics Program quickly became a popular and prominent part of NWT's recreation programming. Originally a NWT government initiative, each summer, hundreds of southerners, typically college and university students, would apply for positions to run pools and waterfronts across the North (for further history, see Giles et al. 2007).

The program's initial goal was to have southern-based lifeguards and swimming instructors train local Aboriginal people to eventually run pools and waterfronts themselves, which would provide northern youth with the opportunity to learn and practice leadership skills. Shortly after the program's inception, drowning prevention was added as an additional goal (Giles et al. 2007). In its peak year of operation, 1997, the Program operated 41 aquatics programs in NWT (including what is now Nunavut): 21 pools, eight seasonal waterfronts, seven short-term waterfronts (where staff would visit the community to offer lessons rather than staying there), and five programs where people were bussed to neighbouring communities to access aquatics activities (Szabo 2002).

Despite its long duration in NWT, the program has struggled to produce northern aquatic leaders, and the number of aquatic facilities and programs has decreased dramatically since the program's peak years. Additionally, the drowning rate in NWT still remains six to ten times the national average in any given year (Canadian Red Cross 2013). The NWT Aquatics Program's focus on water, boat, and ice safety renders it an injury prevention program, while the non-structured activities offered at aquatic facilities provide NWT residents with opportunities for physical activity and thus health promotion.

12.2 Methodology

We used a multiple case study approach to understand issues related to sustainability in Elders in Motion and the NWT Aquatics Program. A case study is "both a process of inquiry about the case and the product of that inquiry" (Stake 2005:444).

A multiple case study approach is used to jointly examine a number of cases to understand a population, phenomenon, or general condition (Stake 2005). This approach is useful when the chosen cases will lead to better understanding about a larger collection of cases (Stake 2005); in this instance two public health programs in the North.

12.3 Methods

To investigate the capacity for sustainability of the programs, we employed a variety of qualitative research methods. For EIM, we used semi-structured interviews and archival research. For the NWT Aquatics Program, we used semi-structured interviews, focus groups, and archival research. The data that we gathered for this chapter were originally gathered for larger research projects by A. R. Giles (2006–2014) and L. A. Brooks-Cleator (2012–2014).

12.3.1 EIM

To examine EIM, Brooks-Cleator conducted nine semi-structured interviews: two with NWTRPA staff (Executive Director and Active Communities Coordinator), and seven with EIM program leaders from five different NWT communities, for a total of nine interviews. The program leaders included two Community Health Representatives, one Home Support Worker, and four Recreation/Health Promotion workers. The interview questions focused on the challenges and successes program leaders faced when implementing and sustaining EIM, the cultural relevancy of the program, the effectiveness of EIM, and their experiences with EIM training and activities. She also conducted archival research that included reviews of NWTRPA annual reports from 2009 to 2013, an evaluation of EIM that occurred in 2010, booklets about the Balls and Balance exercises and the Active Living Exercise Program, and training manuals for program leaders (Caseñas and Kalsbeek 2006).

12.3.2 NWT Aquatics Program

To examine the NWT Aquatics Program, Giles and her research assistants conducted semi-structured interviews with 120 residents from seven NWT and Nunavut communities (formerly part of NWT). Interview participants included past and current program staff, as well as community youth, adults, and Elders. Giles also conducted archival research with newspapers, territorial government documents, and municipal government documents. For both research projects, participants were given the option for their own names to be used or to remain anonymous.

12.3.3 Analysis

To analyze the data we used Braun and Clarke's (2006) approach to thematic analysis. Braun and Clarke (2006) described a six-step approach to thematic analysis. Giles analyzed the data related to the NWT Aquatics Program and Brooks-Cleator analyzed the data related to EIM. First, we familiarized ourselves with the transcribed interview data by (re)reading it and taking note of initial ideas. Second, we generated initial codes to systematically identify and organize all the data. We developed these codes by searching for ideas and quotes that related to the sustainability of the programs, such as funding, motivation of participants, community support, etc. Third, we arranged the codes into potential themes and reviewed the results to ensure that they fit in both their original context as well as the generated theme. Fifth, we concisely labelled the themes to reflect the message that we wanted the analysis to deliver. Finally, in the sixth step, we selected the most appropriate and compelling quotations from the data that supported the generated themes and that related to the research questions and literature reviewed, including Schell et al.'s (2013) nine domains of capacity for sustainability. To support the rigour of the study, the authors consulted each other on the results for this chapter and selected those with the greatest overlap.

12.4 Results and Discussion

After using Braun and Clarke's (2006) six stage approach to thematic analysis, we then identified three main themes in the data that were found to affect the sustainability of both EIM and the NWT Aquatics program: program content and delivery, financial issues, and staffing. All of these factors are especially relevant to the sustainability of programs in the NWT as they each relate to Schell et al.'s (2013) core domains that affect a program's capacity for sustainability. Below, we discuss how each theme pertains to each program and the key core domains that relate to each theme.

12.4.1 Program Content and Delivery

EIM Many of the program leaders discussed how the content of the EIM program is not relevant, in terms of the activities, language, etc., for all of the Elders in their communities. The leaders thought this irrelevance may have resulted in Elders being less likely to attend the program. One of the program leaders, Roslyn Firth, mentioned how "*the culture makes people a little bit reluctant to join in to something that is like a standardized series of exercises. It's a bit difficult to engage those people*" (personal communication, 19 June 2013). Another program leader noted,

“we had to really try hard to encourage most of them...A lot of them lead traditional lives too, so they are out on the land and hunting and fishing and whatever” (Anonymous, personal communication, 19 June 2013).

With the delivery of the program, it seems that a significant factor for the sustainability of the program is dependent on where the program can be held. In most of the communities, the program can only be held if a recreation or community centre space is donated or if there is another common area for Elders to meet. One program leader discussed how it is difficult to sustain the program because the community centre for the older adults was closed down: *“actually, we used to have it here at the [seniors centre], the old folks home, but now they closed the centre down...That’s one of the reasons why we quit too because we don’t have any space to do it and everybody just lost interest”* (Anonymous, personal communication, 19 June 2013).

NWT Aquatics Program The NWT Aquatics Program’s content is largely dictated by the curriculum produced by organizations that offer nation-wide water safety programs (such as the Canadian Red Cross Society and the Lifesaving Society of Canada) and by federal boating regulations produced by Transport Canada. The content of these programs and regulations are typically developed by and for those who live in the Canadian South, and taught by those who work in NWT on a seasonal basis.

We found that programs and regulations often do not reflect content that many northerners deem important, and those who offer the programs often have little or no knowledge of water, boat, and ice safety in a northern context or of traditional knowledge. For example, residents of Pangnirtung, Nunavut, noted that Transport Canada’s pre-departure checklist does not include a harpoon, ammunition, or a knife, all of which they deem crucial for safety (Giles et al. 2013). Similarly, residents of Fort Simpson, NWT, described the importance of the Dene practice of making an offering of tobacco to the water prior to using it, which also is not included in water safety curricula. Community members in Taloyoak, Nunavut, detailed traditional Inuit knowledge that they have about resuscitation of a drowning victim that refers to the practice of not wiping away bubbles that form around a person’s mouth, and noted that this practice is not included in water safety instructional materials (Giles et al. 2007). In all of the communities in which we conducted research, members noted that swimming lessons are often too similar to school in their structure and that this is a deterrent to local children’s participation.

The issues associated with program content and delivery for both programs relate to three of Schell et al.’s (2013) core domains that affect a program’s capacity for sustainability: organizational capacity, which relates to the resources required to deliver the program; program adaptation, which is how the program is adapted to ensure effectiveness; and partnerships, which involve the connections between the program and the community in which it is offered. NWT is unique with its 11 official languages, and because each community in NWT differs significantly in terms of its resources, infrastructure, size, geography, and demographics (Education, Culture, and Employment 2015; [Municipal and Community Affairs n.d.](#)). Not every

community has the same organizational capacity or adaptability needed to run a program; the consequent variations in activity success rates can lead to challenges in territory-wide program sustainability. As a result, it is difficult to organize programs and adapt resources in ways that address diverse languages, cultures, and local capacity in the territory. To support greater sustainability, both EIM and the NWT Aquatics Program need to form stronger partnerships with communities and need to adapt to address each community's specific needs.

12.4.2 Financial Issues

EIM The most common factor that was identified to be affecting the sustainability of EIM in NWT communities was financial constraints. A lack of finances to rent facilities, to transport Elders to facilities, and financial instability were all constraints highlighted by the majority of program leaders. One program leader discussed the importance of a program like EIM but she noted that *“the main [challenge] was just having to seek funding and that the funding was you know, just enough for a few classes. The challenge part was the financial part. The program itself was awesome”* (Anonymous, personal communication, 24 June 2013). The finances to sustain the program over the long term are just not available. One program leader mentioned that the community was just *“starting to get a little more Elders coming up in the spring, until we ran out of funding”* (Anonymous, personal communication, 24 June 2013). The sustainability of EIM is also significantly influenced by the funding for staff positions. The contract positions that are funded by grants end once the grant is finished, resulting in program termination. One program leader discussed his frustration with the unpredictability of funding: *“it’s kind of always up in the air with the funding and stuff like that. They say it’s a term position from now until March 31st and they say we’ll have to see if we get our funding again”* (Anonymous, personal communication, 12 July 2013).

NWT Aquatics Program Originally, the NWT Aquatics Program was delivered by the Government of NWT. In the late 1990s, the program was transferred to the NWT Recreation and Parks Association, which is a not for profit, non-governmental organization. At the same time, the government devolved increasing financial power to communities. As a result, rather than communities applying for funding specifically for aquatics programming, communities were instead given blocks of funding for which they determined their own priorities (Giles et al. 2007). While increased local control has tremendous benefits for communities, it also creates a situation whereby funding for aquatics programs enters into direct competition for funding with items like roads, water, and sewers.

Participants noted the prohibitive costs of running aquatics programs, particularly swimming pools, which are especially expensive to operate due to the high levels of maintenance. Further, due to a shortage of qualified northern residents,

pools are typically staffed by seasonal workers from the South. Jessie, a former pool employee and Geoff, the NWTRPA's Executive Director noted that it would be more cost effective to hire northerners, as that would eliminate the customary practice of northern communities paying for a southern pool supervisor's flights and accommodations in the North (Jessie, personal communication, 27 June 2006; G. Ray, personal communication, 10 December 2014).

Receiving enough funding to run programs in a way that would meet residents' needs and not result in deficits to other community programs was found to be a significant challenge to sustaining both EIM and the NWT Aquatics Program. This relates directly to three of Schell et al.'s (2013) core domains: funding stability, which involves the stable funding required to make long-term plans; political support, which includes strong relationships between the program's umbrella organization and all levels of government; and partnerships within each community. To sustain the programs and to allow for long-term planning and program development, stable funding sources are necessary and require strong political support. Since aquatics programming is controlled by local community governments, partnerships between local governments could play an important role in reducing costs (for instance, through sharing the cost of bringing in an individual to train northerners). The same is true for EIM, but support would need to be coordinated at all levels of government.

12.4.3 Staffing

EIM Participants reported that not only was funding for staff to run EIM an issue; acquiring and maintaining knowledgeable staff was also a challenge for program sustainability. If the staff were not trained in delivering EIM due to a lack of knowledge or lack of training opportunities during short-term contracts, there would be no one to run the program. One program leader mentioned, "*the regular girl that did the Elder Day Program, she wasn't hired the second year and the girl that got it the second year didn't really do much exercises*" (Anonymous, personal communication, 12 July 2013). Another common issue across many of the communities in NWT is that there are usually only a few individuals who look after delivering recreation and physical activity programs in communities. There is not enough staffing capacity to maintain the programs, especially if they are not a priority in the communities. Roslyn identified this issues when she explained that the challenge of sustaining the EIM program:

is having a staff person who can dedicate their time to delivering the program, 'cause you know we have all of the usual social issues that the communities in the North have...So the people who took the training, myself and the others, we already have full time jobs, so I think where everything broke down was, or one of the big reasons was, we were already working and so it's hard to add another responsibility into our day...There are so many ideas and great programs that come from the NWTRPA...but they don't always work because we don't have the capacity (R. Firth, personal communication, 19 June 2013).

Retaining staff and having adequate human resources available to begin with is a common challenge. One program leader mentioned that the community “*did have an Elders coordinator, but she’s going back to school*” (Anonymous, personal communication, 12 July 2013). While attending school is important, it meant that there was no longer a trained individual available to run EIM, which resulted in the community program’s cessation; this demonstrated how important key individuals are in the small, northern communities for sustaining health promotion programs.

NWT Aquatics Program In its early years and until the early 1990s, the NWT Aquatics Program had little trouble attracting southern seasonal staff to work for the program. As a government employee who used to be affiliated with the program stated:

I think [it] was an allure, you know, the northern frontier...Canada’s Arctic...and to a certain extent you were able to entice university students...to come up North, and, and to get free housing: come work in the land of the midnight sun and play in a pool all summer and we will pay you...and you don’t have any expenses (Anonymous, personal communication, 11 February 2007).

Nevertheless, as wages for aquatics staff in southern Canada became more competitive and as travel to the Arctic became more common, it became harder to attract qualified southerners to work in the North. While perhaps the most straightforward solution would be to train northerners to run the pools and waterfronts, especially given their knowledge of northern cultures and waterways, such initiatives have proven to be extremely difficult to achieve. The certification process to become a lifeguard, swimming instructor, and pool operator is costly and time intensive. It is made all the more difficult by the fact that most pools in NWT are only three feet deep and the skills that lifeguards are required to learn and perfect require deep water. As a government employee noted:

aquatics is a very responsible position when you are 17, 18, 19, 20, you know, the lives of people are in your hands, you’re responsible for them. You can make the same money in pumping gas or mowing lawns or maybe do labour. Sometimes it’s not a hard choice for people to do that (anonymous, personal communication, 18 June 2006).

Further, as a former government employee pointed out, “*it’s really hard to retain any local people that you have recruited because of the huge job market in the NWT*” (Anonymous, personal communication, 11 February 2007).

While many residents we interviewed stated that they would like to see local people hired to work at the pool because they would be familiar with the community, its culture, and its residents, most felt that the most important issue was that the employee was adequately trained. As Mary, a resident of Taloyoak stated, “[*it doesn’t bother me whether it is a person who comes from this community or if the person comes from the South. The most important thing is that the person knows what they’re doing about safety instruction and the person is certified about the pool*” (Mary, personal communication, 25 June 2006).

Both programs demonstrate that even when the funding is available, if qualified staff are not hired and/or retained, it becomes challenging if not impossible for the programs to be sustained. Staffing is directly related to Schell et al.’s (2013) core

domains of funding stability and partnerships, but also to organizational capacity. Recruiting and hiring appropriate staff are issues across many sectors, especially healthcare, in NWT (Health and Social Services 2014). Having stable funds to hire long-term staff not only attracts suitable applicants, but also increases the likelihood of staff retention and program sustainability. For both EIM and the NWT Aquatics Program, hiring local staff is important for improving the communities' economies, incorporating community culture, and developing skills in community members. However, this can only be done through the development of meaningful partnerships between the parent organization of the program and the communities in which the programs are offered. The programs need to be seen as important and worthwhile by community members in order to encourage local people to work with and sustain them. This also directly relates to the core domain of organizational capacity, as appropriate staff with knowledge of the community members and their traditions and cultures are those who are best situated to successfully deliver sustainable programs.

12.5 Conclusion

As we have demonstrated throughout this chapter, discussions of sustainability in a northern context must include public health, specifically health promotion and injury prevention programs. Given the diversity of NWT and the potential impact of these programs to improve the health of northern residents and address the rising costs of healthcare provision in the North, understanding how these programs can be sustained over the long-term is crucial. By examining EIM and the NWT Aquatics Program, we have shown that there are three main factors to consider for improving the sustainability of public health programs in the North: program content and delivery, financial stability, and staffing. We demonstrated through our case analysis and discussion of Schell et al.'s (2013) core domains that northern health and injury prevention programs are susceptible to various sustainability issues. While all of the domains are linked, EIM and the NWT Aquatics Program are specifically affected by organizational capacity, program adaptation, political support, funding stability, and partnerships. Analyzing these two programs allows us to consider how other public health programs in Canada's North can be established, advanced, and maintained to improve northerners' overall health, quality of life, and self-determination in community specific contexts.

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