

# SCOPE and the Live 5–2–1–0 initiative – implementation and impact of a community based participatory project on childhood obesity prevention

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## Abstract

Childhood obesity is a wide-spread problem often accompanied by an array of co-morbidities influencing the quality of life of children. Addressing this issue, Sustainable Childhood Obesity Prevention through Community Engagement (SCOPE) was established as a community-based participatory organization to disseminate an interdisciplinary, multi-sided prevention initiative — referred to as the Live 5–2–1–0 initiative. Since its inception, Live 5–2–1–0 has formed numerous partnerships with local community organizations to implement programs and activities to engage children across British Columbia. Moreover, the impact of SCOPE within communities has been facilitated on an individual level in the form of ‘champions’, or local stakeholders/coordinators who maintain Live 5–2–1–0 momentum. Taken together, the Live 5–2–1–0 initiative represents a movement that has demonstrated an outstanding ability to engage individuals within communities to work together to improve child health.

## Introduction

Physiological diseases typically observed in adulthood have become increasingly commonplace in obese children — examples include diabetes, cardiovascular disease, and cancer.<sup>1</sup> Moreover, many social and psychological illnesses have been shown to be rising in prevalence due to childhood obesity.<sup>2</sup> These illnesses impact childhood well-being, thereby disadvantaging the child early in life. These challenges extend beyond the individual and into society by increasing demands on healthcare expenditure and resources. To complicate matters, traditional treatment strategies (e.g., short-term behavior therapies, pharmacologic treatments, or bariatric surgery) for obese children have been shown to be largely ineffective, thereby necessitating preventative strategies.<sup>3</sup> As such, childhood obesity has been identified as a complex public health problem in need of a strategic, multi-focused, and interdisciplinary preventative approach.

Community-Based Participatory Research (CBPR) is a partnership-based approach to disease prevention and health promotion between community members, public health officials, and researchers. The equitable sharing of information between stakeholders from diverse backgrounds amounts to a robust knowledge-base that is well equipped to investigate public health issues. In addition to local studies demonstrating the benefits of CBPR on other public health issues, international studies have identified it as an effective approach to tackling the complexity of childhood obesity.<sup>4,6</sup> Based on these revelations, SCOPE (Sustainable Childhood Obesity Prevention through Community Engagement) was created to translate CBPR-based principles to local prevention strategies for childhood obesity.

## SCOPE—Overview, Implementation/Principals, and Impact Overview

SCOPE ([www.live5210.ca](http://www.live5210.ca)) represents the backbone organization of the Live 5–2–1–0 initiative. It is rooted in CBPR-based childhood obesity prevention strategies in a manner that partners with communities across British Columbia (BC) to promote healthy living in children.

Central to the organization, and based out of BC Children’s Hospital, is the SCOPE team. The team works to coordinate, coach, and support community members and stakeholders—which includes local mayors, city council, school administrators, and health care professionals—in an effort to disseminate the Live 5–2–1–0 initiative.<sup>7</sup>

## Live 5–2–1–0 Initiative

Live 5–2–1–0 is a SCOPE initiative that integrates all members of a community to advocate for healthy behaviors in children.<sup>7</sup> Part of the initiative is the evidence based, easy to understand Live 5–2–1–0 message, which stands for the following daily lifestyle recommendations: five or more fruits/vegetables, two hours or less of screen time, one hour of physical activity, and zero drinks high in sugars. This message originated from the report of the Childhood Obesity: Assessment, Prevention, and Treatment Expert Committee,<sup>8</sup> a publication that reviewed evidence-based healthy living recommendations from scientists and clinicians from over 15 professional organizations. Since its publication, the findings have been formally endorsed by the Canadian Pediatric Society and integrated into local obesity prevention strategies as the Live 5–2–1–0 message.

## SCOPE and Live 5–2–1–0 Implementation

SCOPE functions as a ‘Collective Impact’ model, which is defined as a “long term commitment of a group of important actors from different sectors to a common agenda for solving a specific societal problem.”<sup>9</sup> The model is composed of five key pillars: 1) common agenda; 2) mutually reinforcing activities; 3) continuous communication; 4) backbone support organization; and 5) shared measurement system.

With the support of SCOPE, the Live 5–2–1–0 initiative was implemented in two phases. Phase I (2009–2012) piloted the program in two large communities, mapped community resources, engaged community members, and implemented initiatives. Phase II (2012–2014) strengthened existing programs by identifying needs and how best to address them.

A key principle to the successful implementation of the Live 5–2–1–0 initiative has been the need for knowledge translation and exchange (KTE).<sup>10</sup> This refers to a linking system such that the SCOPE Central

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Team supplies community-tailored, evidence based information and resources to community coordinators and stakeholders for the purpose of influencing local organizations. This provides a supportive setting for communities to implement and fine-tune their efforts toward childhood obesity prevention. In addition, SCOPE works to connect coordinators and stakeholders from one community to those from another through workshops, quarterly webinars, and an online ‘Live 5–2–1–0 Resource Map’ ([www.live5210/resource](http://www.live5210/resource)).<sup>7</sup> Taken together, engagement within and outside communities ultimately targets childhood obesity from multiple angles.

### SCOPE Impact

The impact of SCOPE can be described based on three levels: provincial, community, and individual.

Provincially, an increasing number of communities across BC have prioritized childhood obesity and sought the support of SCOPE. Specifically, during Phase II of implementation, one such community, familiar with a longer-standing SCOPE community, approached the SCOPE team for inclusion in the initiative.<sup>11</sup> This demonstrated two important points: first, the inherent desire of some communities to improve childhood health, and second, the “spill-over” of Live 5–2–1–0 initiatives from one community to another. In addition, interest from other communities has continued to grow. New partnerships have formed with communities such as Delta, New Westminster, Maple Ridge, Nanaimo, Comox Valley, and the Tri-Cities area.<sup>11</sup> These new partnerships have increased demand on Live 5–2–1–0 resources, evidenced by expanded site visits, increased unique website users from over 68 communities across BC, and more than 26,000 Live 5–2–1–0 resource downloads.<sup>11</sup>

On a community level, an indicator used to measure progress and impact of Live 5–2–1–0 has been the number of new partnerships formed with local organizations, and progression of these organizations from action–planning to action–implementation.<sup>7</sup> Abbotsford, which formed a partnership with SCOPE in 2009 and is the longest-standing community partner, has experienced a consistent increase in the number of local partnerships and a significantly increased number of actions performed by these organizations. This has also been observed in other communities, including Chilliwack, Kimberly, and Hope.<sup>7</sup> Additionally, over 40,000 copies of Live 5–2–1–0 resources have been distributed to local partners in Abbotsford, Chilliwack, and Kimberly.<sup>11</sup> Taken together, these developments illustrate growth in the reach of the Live 5–2–1–0 message.

Finally, a key factor in the success of SCOPE’s Live 5–2–1–0 initiative has been its ability to engage individuals — referred to as ‘Champions’ — that maintain local stakeholder involvement and community momentum.<sup>10</sup> These individuals, who are typically leaders of local or regional organizations, or local family physicians, communicate with the SCOPE central team to provide valuable information on the needs and challenges of each community. With this information, the SCOPE team advises and supports these champions to advance the Live 5–2–1–0 initiative.

### SCOPE Future Directions

Evaluating the impact of the Live 5–2–1–0 initiative on incidence of childhood obesity in participating communities has been challenging due to SCOPE’s limited funding and the time required to achieve population-level or system-wide change. Measurement of individual physiological indicators (e.g, BMI) in children at a population level is a complex, costly, and ethically controversial undertaking that is further complicated by a lack of baseline data in BC for this population. Up to this point, data collection has largely been focused on process indicators, which have illustrated the initiative’s success in sustained community engagement, capacity-building, and implementation of action. However, demonstrating health behavior change in children due to the Live 5–2–1–0 initiative remains a future priority. The SCOPE team is currently investigating the possibility of utilizing existing infrastructure for primary data collection and evaluation of changes in daily healthy behaviours in children related to the Live 5–2–1–0 recommendations.<sup>10</sup>

### Conclusion

The Live 5–2–1–0 Initiative was implemented in response to the rising problem of childhood obesity in British Columbia. Key to its success has been the formation of partnerships between the SCOPE team and local community organizations, stakeholders, and champions. The ability of communities to track their progress via an online Partnership Tracking Tool has shown a growth in the reach of the Live 5–2–1–0 message both locally and provincially. Further, this tool has shown an increase in the number of actions implemented by communities at the policy, practice, and environmental levels to create healthier environments for children. To this end, the Live 5–2–1–0 initiative is increasingly becoming a movement that resonates with community members across the province.

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