



ORIGINAL ARTICLE

Major initiatives related to childhood obesity and physical inactivity in Canada: 2014 year in review

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Childhood obesity and physical inactivity are important public health priorities across multiple jurisdictions in Canada. To catalogue and profile important work being done, this manuscript briefly reviews 15 significant initiatives from 2014. Initiatives were selected based on a survey of stakeholders (N=74), a comprehensive review of related websites, and authors' awareness of sector activities. Highlighted initiatives include: the physical literacy movement; Mind, Exercise, Nutrition, Do it (MEND); ParticipACTION campaigns and events; Active At School; 60 Minute Kids' Club; RBC Learn to Play; Healthy Canada By Design; development of the National Recreation Framework; Children's Fitness Tax Credit; National Health and Fitness Day; the Global Summit on the Physical Activity of Children; The Play Exchange; the Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth; Canadian Physical Activity Levels Among Youth Survey; and the Canadian Health Measures Survey. Many initiatives are underway across Canada in an attempt to address the current childhood obesity and physical inactivity crisis. Continued, enhanced, sustainable and scalable efforts must continue to be pursued to preserve the health of Canadian children.

Key words: overweight, physical activity, exercise, sedentary behavior, policy

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INTRODUCTION

The prevalence of overweight and obesity among Canadian children and adolescents has increased significantly over the past several decades [1, 2]. Most recently, objectively measured data from the 2009-11 Canadian Health Measures Survey (CHMS) identified that overweight and obesity remain a major concern with nearly a third of children and adolescents (5-17 year-olds) classified as overweight or obese [3]. Further, objectively measured physical activity data show that only 4% and 9% of Canadian girls and boys respectively are meeting the new Canadian Physical Activity Guidelines [4] and are spending the majority (62%) of their waking hours being sedentary [5]. Important to note is that physical inactivity is not synonymous with sedentary time, with both representing distinct aspects of the inactivity spectrum. Physical inactivity refers to the absence of physical activity while sedentary behaviours refer to acts involving very low energy expenditure while sitting or reclining during waking hours [6]. The high rates of overweight and obesity are of great concern given that evidence repeatedly shows that they are associated with a greater likelihood of morbidity and mortality that tracks into adulthood [7, 8].

Given the high prevalence and associated adverse outcomes, childhood obesity is an important public health concern that requires a comprehensive multi-sectoral

response [9]. It is important that major initiatives related to childhood obesity and physical inactivity (and sedentary behaviours) in Canada are highlighted and catalogued to provide a consolidated source of information for those looking either for examples of current strategies for implementation in other jurisdictions or for the development of new initiatives. As a result, the objective of this review is to highlight 15 major initiatives that demonstrate the breadth and depth of recent and ongoing efforts targeting childhood obesity and physical inactivity (including sedentary behaviours) in Canada in 2014. This is the third installment of this quadrennial review with two similar "year in review" papers published based on initiatives in 2007 and 2011 [10, 11].

METHODS

To identify major initiatives in Canada for the prevention of childhood obesity and physical inactivity three review procedures were employed: a scan of related national websites; results from a nationally distributed stakeholder survey; and the authors' knowledge of national initiatives. A deliberate effort was made to highlight initiatives across a range of potential influences (e.g., programs, research, policy), initiated by public, private and not-for-profit organizations and in a variety of contexts (e.g., sport, school, community). Childhood was considered 0 to interventions, action plans, strategies, campaigns, research



or surveillance activities that were prominent in 2014 in Canada. This project received ethical approval from the Children's Hospital of Eastern Ontario Research Ethics Board (#14/182X) and the Ottawa Health Science Network Research Ethics Board (#20140855-01H).

Website reviews

A comprehensive scan of websites was conducted. The scan included reviewing: 1) websites that were profiled in the previous "year in review" papers [10, 11]; 2) websites that appeared in the first two pages of a Google search of "Canadian childhood obesity initiatives" and "Canadian childhood physical inactivity initiatives"; and 3) all websites known by the authors as representing leading Canadian organizations in the area.

Stakeholder survey

A brief, on-line, stakeholder survey was developed that asked participants to identify the top five major initiatives related to childhood obesity and physical inactivity in Canada. Participants provided informed passive consent through the completion of the survey. In addition, participants were asked to identify their province of residence, their sector of work/study, and the primary focus of their work/study. The Research Ethics Boards at the Children's Hospital of Eastern Ontario and the University of Ottawa Heart Institute approved the survey protocol with implied consent through the completion of the survey. The survey was distributed through membership newsletters of three Canadian organizations which focus on physical inactivity and obesity in Canada including: the Canadian Obesity Network (N≈10,000), the Canadian Public Health Association (N≈5,000) and ParticipACTION (N≈3,000).

This review highlights 15 initiatives, out of many in Canada, that represent efforts across sectors to combat childhood obesity and inactivity in 2014 (Table 1). Table 2 also lists "honorable mentions" of one provincial/ territorial initiative from each jurisdiction. The inclusion of initiatives in the Year in Review does not constitute endorsement; readers are encouraged to further explore initiatives of interest and seek evaluation evidence indicating efficacy and/or effectiveness.

RESULTS

In searching >30 websites, >15 major initiatives were identified. The response to the survey was low with only 74 stakeholders (89% English; respondents from every province; responses from medical, public health, researcher, student, and policy maker sectors) providing at least one major initiative. A total of 47 unique initiatives were forwarded by survey respondents. The authors identified an additional seven major initiatives that were not identified through the website search or survey. Of the 15 major

initiatives selected, three were from the website search, nine from the survey and six from the authors' knowledge (some initiatives were identified through multiple sources).

The Physical Literacy Movement

The concept of Physical Literacy has emerged in Canada in recent years and has ignited substantial excitement to the extent that it could be called a "movement". Physical literacy is now a core concept and/or priority for many organizations including Canadian Sport for Life (canadiansportforlife.ca/learnabout-canadian-sport-life/physical-literacy), PHE Canada (www.phecanada.ca/programs/physicalliteracy), and the Ontario Society of Physical Activity Promoters in Public Health Advocacy (papromoters.blogspot.ca). Comprehensive assessment batteries have been developed (e.g., Canadian Assessment of Physical Literacy, www.capl-ecsf.ca). The International Physical Literacy Association defines physical literacy as "the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life" (www.physical-literacy.org.uk). While many sectors in Canada have embraced the physical literacy movement (sport, physical activity, education, recreation, public health, health care), a harmonized definition among sectors remains elusive and has created confusion. ParticipACTION has taken the lead to establish a Steering Committee supported by the RBC Learn To Play initiative (discussed in another section) to work towards a multi-sectoral common definition.

ParticipACTION (www.participaction.com)

In 2014, Canada's internationally renowned physical activity social marketing and communications organization, ParticipACTION, launched and continued with several mass media campaigns. The campaigns included: 1) the Longest Day of Play which took place on June 21st and encouraged all Canadians take advantage of the most daylight hours of the year (www.participaction.com/getmoving/longest-day-of-play); 2) RBC Sports Day in Canada was a combined initiative of ParticipACTION, Royal Bank of Canada (RBC), Canadian Broadcasting Corporation (CBC) and True Sport, and promoted the national celebration of sport as an avenue to promote a sense of community and inspire Canadians to move. It was officially held on November 29th and included "community-wide festivals, try-it days, open houses, games, competitions, meet-and-greets, tournaments, fun runs, spectator events and pep rallies that celebrate sport at all levels" (www.participaction.com/programsevents/programs/sports-day-in-canada). It was also preceded by National Jersey Day on November 28th which prompted all Canadians to wear a jersey in support of sport; and 3) Bring Back Play which officially launched in 2012, is a national social change marketing campaign with



Table 1. Summary of initiatives highlighted in the year in review

Programs
<ul style="list-style-type: none"> • Physical Literacy Movement • ParticipACTION Campaigns and Events • Mind, Exercise, Nutrition, Do it (MEND) • Active At School • 60 Minute Kids Club • RBC Learn To Play • Healthy Canada by Design
Policy
<ul style="list-style-type: none"> • National Recreation Framework • Children’s Fitness Tax Credit • National Health and Fitness Day
Research and Surveillance
<ul style="list-style-type: none"> • Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth • Canadian Physical Activity Levels Among Youth (CANPLAY) survey • Canadian Health Measures Survey (CHMS)

the objective to inspire parents and caregivers to motivate children to move more specifically through play. In 2014, the campaign included nationally distributed advertisements and an interactive app/web-based tool that offered games for parents to share with their children (www.participaction.com/get-moving/bring-backplay). The app can be accessed through www.bringbackplay.ca.

Mind, Exercise, Nutrition, Do it (MEND)

(www.mendfoundation.org, www.mendcentral.org)

Mind, Exercise, Nutrition, Do it (MEND) is an evidence-based early community intervention program that originated in the United Kingdom [12]. MEND is targeted at families with children with a BMI >85th percentile for age and with no limitations for participating in physical activity or group sessions. There are three MEND programs: one aimed at children aged 2-4 years, one for children aged 5-7 years and the other for children aged 7-13 years old. The programs are free, run 10-weeks in duration and delivered by trained program managers and leaders at participating recreation centres. Topics of the MEND program include developing healthy eating and mealtime habits as a family, how to understand food labels, the introduction of new foods, and

promoting active play. The program is supported by the Childhood Obesity Foundation (www.childhoodobesityfoundation.ca/MEND) and Alberta Health Services (www.albertahealthservices.ca/MEND.asp). Childhood Obesity Foundation (www.childhoodobesityfoundation.ca/MEND) and Alberta Health Services (www.albertahealthservices.ca/MEND.asp).

Active At School (activeatschool.ca)

Active At School is a multi-million dollar grassroots program, consisting of more than 80 partners devoted to providing opportunities for Canadian children to receive one hour of quality daily physical activity at school. The program has had several important developments in promoting daily physical activity for children in 2014. In September 2014, Active At Schools recognized Prince Edward Island as the first province to completely implement the commitment of getting kids active for one hour per day to all schools in the province. In November 2014, Active At School joined forces with the province of Ontario and Ophea (www.ophea.ca) to help implement 60 minutes of physical activity for all children connected to the school day by creating new programs. Also in November, The Learning Partnership (www.thelearningpartnership.ca), Active At School and Canadian Tire Corporation conducted a research study to identify new opportunities to address the issue of physical inactivity among Canadian children and youth locally and nationally. The report provides several conclusions and recommendations including: schools are the best setting for physical activities, but need help from partners; attitudes need to change to emphasize the importance of physical activity; and accountability is important, but problematic [13].

60 Minute Kids’ Club (60minkidsclub.org)

The 60 Minute Kids Club (60MKC) had a successful year in 2013-14. 60MKC is a school-wide program designed to challenge and engage children from kindergarten to grade 8 in making healthy choices, and staying physically active every day. The program follows a balance of real-world and digital approaches to incorporate healthy habits and physical literacy into children’s lifestyles, and to give them incentives and accountability for their participation. Since its pilot program in 2009-10, the 60MKC has expanded throughout the country, reaching 78,500 students in eight provinces and one territory, with an average participation rate of 55% in 2013-14 (bit.ly/18GTZXp). The 60MKC announced new partnerships with the Heart and Stroke Foundation and Active For Life to deliver free online physical literacy resources for parents, coaches, and teachers (activeforlife.com/afl-and-kids-club-partnership). Furthermore, Canadian Sport for Life announced the 60MKC Fundamental Movement Skills Assessment Tool as one of three tools to assess key elements of physical literacy in



youth (canadiansportforlife.ca/resources/physicalliteracy-canada-tools-assessment).

RBC Learn To Play Project (www.rbc.com/community-sustainability/community/learn-to-play/about-therbc-learn-to-play-project.html)

In 2013 RBC made a substantial multi-year investment in the RBC Learn To Play project. This multipronged effort aims to facilitate the development of physical literacy skills among Canadian children and youth, with a goal to encourage more kids to get out and play. The RBC Learn to Play project is delivered by ParticipACTION (www.participaction.com/programs-events/programs/rbc-learn-to-playproject) in collaboration with several partners. The project, which gained momentum in 2014, includes a project and community grants program (with supports to build local capacity to develop physical literacy among participants); an effort to align stakeholders understanding of and commitment to physical literacy promotion; development and implementation of an evaluation module to ensure grant recipients and partners are collecting data against a set of common indicators; an assessment of physical literacy levels of children over time using the Canadian Assessment Physical Literacy (www.capl-ecsf.ca) protocol; and a commitment to use the evaluation and assessment results to inform the annual Report Card (see details below) and to develop a toolkit of resources to further advance the development of physical literacy in Canada children and youth. RBC also became the title sponsor of Sports Day in Canada. In 2014, the Public Health Agency of Canada matched most of the funding provided by RBC, essentially doubling the size and scope of the project and bringing the total investment to over \$6 million.

Healthy Canada by Design (hcbd-clasp.com)

Healthy Canada by Design (HCBD) began in 2009 and is funded by Health Canada through the Canadian Partnership Against Cancer's Coalitions Linking Action and Science for Prevention (CLASP) program [14, 15]. The initiative is a partnership "bringing together national health, planning and transportation organizations, regional and local health authorities, non-governmental organizations and university researchers" with a goal to support active transportation and physical activity by incorporating healthy living practices into land use and transportation planning processes. The first phase of the HCBD was funded from 2009-2012, and the second phase was funded from 2012-2014. From 2012 to 2014, HCBD expanded with the addition of six public health organizations including: New Brunswick Department of Health/Office of the Chief Medical Officer of Health; Newfoundland and Labrador Provincial Wellness Advisory Council/Eastern Health Region; Capital District Health Authority, Nova Scotia; Ottawa Public Health; Winnipeg Regional Health Authority; and Regina Qu'Appelle

Health Region. These organizations worked with a trained urban planner to influence land use and transportation processes at the local level and create partnerships between public health professionals and planning and transportation professionals in order to influence built environment policy [16]. In 2014, HCBD underwent a formal evaluation [16] which highlighted its capacity to enable participating organizations to influence local policies required to create built environments that support healthy active living.

National Recreation Framework (bit.ly/1FiH0Cc)

The development of the National Framework for Recreation in Canada was co-led by provincial and territorial governments (Interprovincial Sport and Recreation Council) and the Canadian Parks and Recreation Association. Conversation around the Framework began at the National Recreation Summit in October 2011, was followed by a National Roundtable in May 2013 and finally endorsed by leaders in November 2014. The final framework entitled: A Framework for Recreation in Canada 2015: Pathways to Well-Being was released in January 2015 [17]. The vision of the Framework is that every Canadian experiences accessible recreation that fosters individual, community, and natural and built environmental well-being. The Framework describes five goals: 1) foster active living through physical recreation; 2) increase inclusion and access to recreation; 3) help people connect to nature through recreation; 4) ensure supportive physical and social environments that encourage participation in recreation; and 5) ensure the continued growth and sustainability of the recreation field [17]. The Framework was developed in close consultation with leaders of Active Canada 20/20 (www.activecanada2020.ca) to ensure deliberate alignment of strategic priorities and harmonization of efforts.

Children's Fitness Tax Credit (CFTC) (www.cra-arc.gc.ca/fitness)

Since 2007, a non-refundable tax credit has been available to Canadians to cover eligible fitness expenses incurred as a result of registering a child in a physical activity program. The goal of the CFTC is to encourage physical fitness among children by making access to programs more affordable. Originally, the credit let a parent claim up to \$500 a year for each child ≤ 16 years or ≤ 18 years if eligible for the disability tax credit. Research has shown that under the original CFTC, low income families were significantly less aware and less likely to claim the CFTC than other groups and ultimately appeared to benefit higher income families [18]. In October 2014, the Government announced that it intended to double the CFTC to a maximum of \$1,000 per year starting with the 2014 tax return year and beginning with the 2015 tax year would become refundable thereby increasing the benefits to low-income families (www.budget.gc.ca/efp-peb/2014/pdf/Doubling_the_Childrens_Fitness.pdf).



Table 2. Provincial initiative honorable mentions

Province/Territory	Initiative	Weblink
British Columbia	Action Schools BC!	www.actionschoolsbc.ca
Alberta	APPLE Schools	www.appleschools.ca
Saskatchewan	Saskatchewan In Motion	www.saskatchewaninmotion.ca
Manitoba	Manitoba in Motion	www.manitobainmotion.ca/schools
Ontario	Healthy Kids Community Challenge	www.health.gov.on.ca/en/public/programs/healthykids
Quebec	WIXX Campaign	quebecenforme.org/en/what-wedo/wixx-campaign.aspx
New Brunswick	NB Plays!	www.nbplays.ca
Nova Scotia	Active Kids Healthy Kids (AKHK)	novascotia.ca/dhw/pasr/akhkoverview.asp
Prince Edward Island		
Newfoundland and Labrador	Janeway Lifestyle Program	www.easternhealth.ca/WebInWeb.aspx?d=2&id=1860&p=1861
Yukon Territory	Active Yukon Schools	www.rpayschools.org/active-yukonschools.html
Northwest Territory	NWT Active After School Program	choosenwt.com/programs/active-afterschool-2
Nunavut	Sport and Recreation	cgs.gov.nu.ca/en/SportsIntro.aspx

National Health and Fitness Day (bit.ly/1b7Ryss)

On June 7th, 2014, the 3rd annual National Health and Fitness Day took place across Canada. Communities from West Vancouver to Halifax celebrated this day by providing open houses, free activity trials, and special community events to encourage physical activity. On December 10th, 2014, parliamentarians of all parties voted unanimously to pass Bill S-211, an Act to establish the first Saturday in June as National Health and Fitness Day in Canada, permanently. The initiative spearheaded by Member of Parliament John Weston and Senator Nancy Greene Raine is a call to action to Canadian municipalities and citizens to mark the day with local events to celebrate and promote the health and fitness. The Act now formalized, preserves Health and Fitness Day in Canada, with the goal to make Canada the fittest nation in the world.

Global Summit on the Physical Activity of Children (activehealthykids.ca/global-summit.aspx)

In May 2014, Active Healthy Kids Canada hosted a “Global Summit on the Physical Activity of Children” to provide a forum to share evidence and best practices from around the world and to foster coordinated action and initiatives to address the global childhood physical inactivity crisis. This four day Summit brought together over 750 delegates from 32 countries, including researchers, practitioners, policy-makers and funders from the physical activity, sport, recreation, education, fitness, transportation, early childhood development, public health and medical sectors together to “power a global movement to get kids moving” [19]. Following a harmonized process, Report Cards from 15 countries (including Canada) were released to open the Summit and findings provided unique insight for possible



solutions to global childhood inactivity [20]. The Summit achieved global media coverage, trended on twitter and received excellent participant reviews. The Summit legacy includes a comprehensive journal supplement of published papers and abstracts (JPAH Journal Supplement) and the creation of the Active Healthy Kids Global Alliance (www.activehealthykids.org).

The Play Exchange (www.phac-aspc.gc.ca/media/nr-rp/2014/2014_0222f-eng.php)

Launched in February 2014, The Play Exchange was a national active living challenge spearheaded by the Government of Canada in collaboration with Canadian Tire and LIFT Philanthropy Partners and supported by the CBC. The goals of The Play Exchange were to: 1) engage Canadians a national dialogue around the prevention of chronic diseases specifically through healthy active lifestyles; 2) launch a highprofile national competition to identify innovative healthy living ideas from various groups such as not-for-profit organizations, social associations, businesses, schools, students and families; and 3) ensure value of federal funding in active and healthy living.[21] Throughout 2014, individuals, groups and organizations were invited to submit ideas through the competition website (www.playexchange.ca) about how to get Canadians to lead healthier active lifestyles. All Canadians were able to provide their feedback and vote for the best idea. Six finalists were featured on a CBC Special on January 9th, 2015. Trotibus (www.changemakers.com/project/trotibus), a pedestrian bus service that provides elementary school children the opportunity to walk to school safely under adult supervision received the most votes and was the recipient of up to \$1 million from the Government of Canada for implementation of the project.

Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth (www.activehealthykids.ca)

On May 20th, 2014, Active Healthy Kids Canada released the 10th-year anniversary edition of the Report Card on Physical Activity for Children and Youth. Since 2005, the Report Card has consolidated current research on the physical activity levels of Canadian children and youth in a format that is easily accessible for various stakeholders including governments, media, non-governmental organizations, practitioners and researchers. The 2014 release included report cards from 14 other countries across five continents that were developed using the Active Healthy Kids Canada model. Grades on nine core physical activity indicators were compared across countries with Canada among the leading countries on indicators related to infrastructure, policies and programs (B+ in Community and the Built Environment, C+ in School, C+ in Organized Sport Participation, C in Government Strategies & Investments), but lagging on behavioural indicators (D- in Overall Physical Activity, D in Active Transportation, F in Sedentary Behaviours) [22].

Because 2014 marked the 10th anniversary of the Report Card, the impact of the Report Card over the course of its 10-year history in Canada and abroad was summarized and reported: over 300,000 report cards distributed both in print and electronically, more than one billion media impressions generated, a reach of more than 80,000 key influencers of physical activity for children and youth in 89 countries, and replication of the Report Card in 14 other countries, two provinces, one state and one city [23].

Canadian Physical Activity Levels Among Youth (CANPLAY) Survey (www.cflri.ca/can-play)

CANPLAY is a national survey that the Canadian Fitness and Lifestyle Research Institute has conducted since 2005 to monitor the physical activity levels of 5- to 19-year-olds in Canada. Approximately 10,000 participants from across the country have participated in each cycle of the survey and pedometers are used to measure how many daily steps children and youth are taking. The CANPLAY survey also collects data on organized physical activity and sport participation, active and sedentary pursuits during the afterschool period, and characteristics and disparities that contribute to physical activity levels (e.g., socioeconomic status, parental education levels, age, gender). The most recent cycles of the survey (2011-14) were released in 2014 and provide important updates on the physical activity levels of children and youth nationally along with comparisons between provinces and territories and over time.

Canadian Health Measures Survey (CHMS)(Statistics Canada CHMS)

The CHMS is the most comprehensive, nationally representative, direct health measures survey ever conducted in Canada [24, 25]. The CHMS began data collection in 2007 and is now an ongoing survey administered by Statistics Canada in partnership with Health Canada and the Public Health Agency of Canada. The survey collects and reports directly measured data on Canadians aged 3-79 years, in two year cycles. In 2014 data from cycle 3 were released. The CHMS continues to be the most valid and reliable source for Canadian data on childhood obesity, physical activity and sedentary behaviours, among many other important measures.

CONCLUSIONS

Many initiatives are underway across Canada in an attempt to address the current childhood obesity and physical inactivity crisis. Continued, enhanced, sustainable and scalable efforts must continue to be pursued to preserve the health of Canadian children. Accordingly, it is important that all initiatives have robust and transparent evaluation mechanisms in place to determine and report efficacy, effectiveness and impact.



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AUTHOR DISCLOSURES

The authors declare they have no conflicts of interest.

AUTHOR CONTRIBUTIONS

MST conceived the study, created the study design, collected data, interpreted the data, and drafted and edited the manuscript. SAP, JH, JB carried out the study design, collected data, interpreted the data, and drafted and edited the manuscript. All authors read and approved the final paper.

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