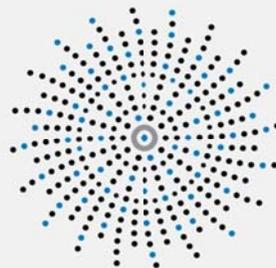


FACILITATED APPROACHES TO HEALTHY  
EATING AND ACTIVE LIVING IN SCHOOL  
SETTINGS

REVIEW OF LITERATURE

OCTOBER 2012

Prepared for the Champlain Cardiovascular Disease Prevention Network



**PROPEL**  
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The Propel Centre for Population Health Impact is a collaborative enterprise that conducts solution-oriented research, evaluation and knowledge exchange to accelerate improvements in the health of populations. With more than 34 years of experience in impact-oriented science, our vision is to help transform the health of populations in Canada and around the world. Supported by a Canadian Cancer Society Research Institute (CCSRI) major program grant (2011-2016), the University of Waterloo and more than 30 grants and contracts from federal and provincial governments and NGOs, Propel's niche is relevant and rigorous science that informs policies and practice to prevent cancer and chronic disease. Propel was founded by the Canadian Cancer Society and University of Waterloo.

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## 1.0 School Facilitation

### 1.1 Introduction

Considerable literature exists regarding school health promotion, including the approaches of comprehensive school health or coordinated school health. However, few sources discuss the role of the school health facilitator, also known as the school health coordinator. It is difficult to compare programs to determine the most effective or efficacious ways to implement school health facilitation. However, some guidelines have been prepared by agencies such as the Centers for Disease Control and Prevention (CDC, 2011)<sup>1</sup>, the American Cancer Society (ACS, 2012)<sup>2</sup>, and the International Union for Health Promotion and Education (IUHPE, 2009, 2010)<sup>2</sup>. The purpose of this review is to gather the evidence base for facilitated approaches in schools as a means to improve school environments and the physical activity and eating behaviours of school-aged children. Search terms used to prepare this review are described in Appendix A.

### 1.2 Comprehensive School Health

Comprehensive school health (CSH) programs take an integrated approach to health promotion that goes beyond the classroom, involving school environments, policies, parents and communities (Fung, 2012; Veugelers, 2010). Based on the *Ottawa Charter for Health Promotion*, comprehensive school health programs are found in numerous countries around the world. In the United States such programs are referred to as “Coordinated School Health” and in Europe and Australia these programs are known as “Health Promoting Schools”. The four pillars of CSH have been identified by the Joint Consortium for School Health as: teaching and learning; social and physical environments; healthy school policy; and partnerships and services (JCSH, 2008). The Ontario Healthy Schools Coalition articulates CSH with a slightly different set of pillars: high quality instruction and programs, community partnerships (services), supportive social environment, and healthy physical environment (OHSC, 2010).

Multifactorial interventions, particularly those involving school environments have been found to be effective in promoting healthy eating and active living (Stewart-Brown, 2006). Students attending CSH schools are more likely to be active and to report healthy eating habits, and less likely to be overweight, (Veugelers, 2005; Day 2008). A whole school approach is cohesive, collective, collaborative action in and by a school community that has been strategically constructed to incorporate a healthy culture through structures, policies and procedures for staff, students and community to model and promote health and well-being (Bassett-Gunter, 2012). While sustained, whole-school approaches work, there is limited evidence related to which elements contribute to an effective health promotion program, and little

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1 CDC guidelines are specific to healthy eating and physical activity

2 ACS and IUHPE guidelines are for school health in general

research has been done on cost-effectiveness (Stewart-Brown, 2006). A summary of what the IUHPE has found to work in health promoting schools is presented in Appendix B.

### **1.3 Facilitated Approaches**

The Annapolis Valley Health Promoting Schools project was the first Canadian CSH project to be recognized as a best practice (PHAC). The program served as a model for the Alberta Project Promoting active Living and healthy Eating (APPLE) schools. Another program, Action Schools! BC, has also been included in PHAC's list of best practices. The latter two programs as well as programs from Newfoundland, Maine, and New Zealand that involve school health facilitators or coordinators are described in Appendix C.

In 2006, 61% of U.S. schools had a school health coordinator (CDC, 2011b) who normally worked in conjunction with a school health team and a district-wide school health council. These councils act as planning, advisory and decision-making bodies and often include representation from health and physical education teachers, nutrition service staff members, students, families, school administrators, school nurses, other health care professionals and civic leaders (CDC, 2011b). The school health coordinator is a trained professional in school health who helps schools to improve the programs and policies that can impact the health of students (ACS, 2012).

In 1999 the ACS launched the National School Health Coordinator Leadership Institute to enhance school health by training school health coordinators to act as agents of change. The Institute was comprised of three week-long summer training sessions, supplemented by shorter, midyear booster sessions. Participants came from different backgrounds including classroom teachers (37%), health educators (37%), nurses (21%), and others (5%) (Ottoson, 2004). Evaluation of the Institute found progress was being made in the development of clear, written position descriptions and in the existence of functioning school health councils (Ottoson, 2004). While coordinators were moving to enhance infrastructure for school health coordination through planning, setting priorities, and assessing needs, they identified the need for greater emphasis on funding for school health coordination, and the lack of program evaluation skills among coordinators.

Many states offer school health leadership training based on the ACS's National School Health Coordinator Leadership Institute. Some school districts in California consider school health coordinators to be one of the four structures essential to coordinated school health programs (Stolz, 2009). In 2002, California created its School Health Coordinator Leadership Institute to increase coordinated school health program structures including the designation of a school health coordinator. Literature on the activities of school health coordinators is also available for Miami-Dade County, Florida (Hlaing, 2005) and Wyoming (Winnail, 2005).

In France and some 500 communities around the world, the Ensemble Prevenons l'Obesite Des Enfants (EPODE) program is being used to promote healthier lifestyles and prevent childhood obesity (Borys, 2012). This program includes and goes beyond the school to involve the whole community. Instead of a school coordinator, a local project manager mobilizes community stakeholders. Project managers come from various backgrounds depending upon the country and the focus of the initiative. Project managers

have come from the fields of public health, education and government. EPODE communities may also include an active school component that may also include facilitation (Borys et al., 2011).

#### **1.4 Evidence Base**

Appendix C outlines different approaches to school health facilitation that have proven to be effective in improving physical activity and eating behaviours of school-aged children. While physical activity and healthy eating have been the behaviours of primary focus, a comprehensive approach might also deal with other topics such as positive mental health or tobacco control. Since schools and school districts vary in areas such as curriculum demands, socio-economic factors, and levels of community support, a standard protocol for implementing comprehensive school health initiatives is not feasible (Veugelers, 2010). Instead, implementation needs to be tailored to individual school communities. However, a dedicated position to help guide and develop healthy school initiatives has been linked to successful implementation (Austin, 2006; Fung, 2012, Obrien, 2010).

Success in school health facilitation can be measured in at least two dimensions, changes in the school environment (policies, culture, school spirit) and changes at the level of the student (gains in healthy eating, physical activity, academic achievement and self-esteem). APPLE (Alberta) schools reported implementation of nutrition and physical activity policies in its schools and documented improvements in fruit and vegetable intake, activity levels, and reduced likelihood of obesity (Fung et al., 2012). Future evaluation of APPLE Schools will look at cost effectiveness, including links to health care utilization and academic achievement (Propel, 2012a). Action Schools! BC showed increases in their students' heart health, bone health, dietary requirement awareness, and academic performance (Propel, 2012b). That academic performance increased is a reassuring finding, because adding physical activity may allow less time for other curriculum.

Further afield, Coordinated School Health Program (Maine) schools increased their offerings of physical activity, intramurals, and healthy foods. Students reported lower levels of soda consumption and inactivity. The APPLE (New Zealand) students had lower body mass index than those not in the program and consumed less soda and more servings of fruit. Healthy eating and active living programs have also been found to improve students' self-esteem (Wang, 2009)

#### **1.5 Facilitator to School Ratio (i.e., Dose)**

The CDC states that a full-time or part-time school health coordinator is critical for the success of a coordinated approach to school health (CDC, 2011a). The ACS has been advocating for the position of School Health Coordinator for the past 12 years and, as mentioned earlier, has helped develop a training institute being used by a number of states to build capacity and leadership skills in school health coordinators (ACS, 2012).

The programs reviewed in this report had a facilitator to school ratio that ranged from 1 per school to 1 per school district. The initial phase of the APPLE Schools (Alberta) program used 1 facilitator per school. The second phase is experimenting with .2, .5 and .8 FTE facilitators. Future results from the evaluation of APPLE School's second phase should provide evidence on how facilitator dose is related to success in promoting healthy eating and active living.

In comparison, APPLE (New Zealand) used .5 FTE action coordinators; Coordinated School Health (Maine) reported results on schools using health coordinators for at least 20 hours per week; and Healthy Students, Healthy Schools (Newfoundland) had one health consultant per school district. Project Energize (New Zealand) (Rush, 2012) employed "energizers" to support between eight and ten schools. Technically, Action Schools! BC used trainers as opposed to coordinators (about 1 per 20 schools). In this model each generalist teacher is expected to participate in health coordination.

An evaluation of the Healthy Schools Program in the United States found that schools that accessed and participated in more training and technical assistance were more successful in implementing programs and policies that support healthy eating and active living (AFAHG, 2012). More intensive training, such as one-on-one assistance from a program expert, was significantly associated with schools making meaningful changes.

Findings from the field of primary care practice facilitation indicate that more frequent visits and fewer practices per facilitator amplify the effects of the facilitation (Baskerville, 2012). In this study the number of practices per facilitator clustered between 8 and 12 and the intensity of facilitation time was about 15 hours to reach the overall effect size. Impact does seem related to dose which in turn is related in part to the FTE available. On the other hand, since CSH addresses the environment in order to impact individual behaviour, and also mobilized resources in the school setting, primary practice results may not be entirely applicable to CSH programs.

## **1.6 Role of the Facilitator**

The role of facilitator varied in the five programs reviewed in this report. Some commonalities were participation on school health teams, development of work plans, influence on school policy and culture, promotion of in-class physical activity, preparing resources about healthy food choices, teacher professional development, and communication with parents and other stakeholders/partners.

Facilitator roles may vary in terms of their relative focus on specific content such as healthy eating and physical activity. Differences also exist in the extent of facilitator coordination of community programming, and involvement in curricular versus non-curricular activities.

APPLE (Alberta) school health facilitators customize healthy eating and active living strategies to the unique promotion needs, priorities and barriers in each school. In the early phase, facilitators were recruited from outside, but in the later phase they were recruited from within schools. In the pilot, facilitators were recruited from diverse backgrounds including nutrition, physical activity, education and management and were employed by the School of Public Health. In the expanded program, existing teachers were seconded to work as school health facilitators.

Training also evolved from being more front-end loaded (six week comprehensive course) to a more on-going approach. A community of practice (or professional learning community) was established as an ongoing, sustainable entity that includes teachers, facilitators, and outside partners such as Alberta Health Services.

Some examples of activities coordinated by facilitators include cooking clubs, after school activities, weekend events and parent newsletters. At APPLE schools, the facilitators often initiated involvement in the school by “doing” activities, but eventually did more planning and facilitation of groups and teams to lead the activities themselves for greater sustainability.

Action Schools! BC uses trainers as opposed to facilitators to support the efforts of generalist teachers. Generalist teachers are empowered to provide their students with physical activity and healthy eating opportunities and receive resource guides and equipment. Teachers receive release time in order to attend a Classroom Action training session (half-day professional development). Students receive an additional 15 minutes of physical activity throughout the school day to achieve 75 minutes of extra physical activity per week (in addition to two 40 minute PE classes). As well as learning about healthy eating, students are given the opportunity to taste fruits and vegetables in the classroom as part of this initiative.

Due to the childhood obesity epidemic, much research on healthy eating and active living has occurred since the CDC published *Guidelines for School and Community Programs to Promote Lifelong Physical Activity Among Young People* (1997) and *Guidelines for School Health Programs to Promote Lifelong Healthy Eating* (1996). *School Health Guidelines to Promote Healthy Eating and Physical Activity* (2011) was developed in collaboration with specialists from universities and voluntary agencies and reflects recent scientific evidence and best practices combining healthy eating and active living. This document includes guidelines for the role of school health coordinators. Guidelines for coordinators from both the CDC and ACS are presented in Appendix D. Many of the roles suggested in these guidelines indicate teacher involvement, but are not explicitly highlighted, even though it is known that building capacity within schools will help to sustain CSH efforts in schools.

## 1.7 Supports/Conditions for Success

Various supports or conditions for success have been identified in relation to facilitated school health programs:

- Comprehensive multi-component approaches that target policy, culture and behaviour (both curricular and non-curricular) are most likely to succeed (Fung, 2012; O'Brien, 2010; Propel, 2012a; Veugelers, 2012).
- Flexibility to adapt to local context is key (Propel 2012a, Propel 2012b, Veugelers, 2012).
- Buy in at all levels is necessary, including administration, teachers, students and community (Propel, 2001a; O'Brien, 2010).
- The support of principals is especially important to ensure time is set aside for healthy activities and to help facilitate discussion on health-related opportunities. Principals in APPLE (Alberta) schools were required to demonstrate commitment to the initiative by completing a commitment letter and mapping out what a comprehensive approach will look like in their school (Propel, 2012a).
- Central support facilitates consistent training, tool kit development and resource allocation (Propel, 2012a; Propel 2012b). In the case of Action Schools! BC, JW Sporta, a BC based consulting and marketing company, is the central management team and technical support unit for the entire initiative. APPLE schools staff develop resources centrally during summer months and disseminate resources to participating schools and facilitators. It is anticipated that facilitators will adapt materials for each school to ensure relevance to the school community context (Propel, 2012a).
- In class, physical activities may require some investment in equipment and nutrition programs such as fruit and vegetable tasting may need to be subsidized (Propel, 2012b).
- Interventions should be targeted to all students, not just those in need of health improvement (Propel, 2012a).
- Evaluation results are critical to ensure continued funding and stake-holder buy-in (Propel, 2012a; Propel, 2012b).
- Partnerships with other organizations interested in health add value (Propel, 2012a).
- CSH initiatives benefit from collaborations with governments to coordinate policy and funding from the health and education sectors (PCJCSH, 2010).
- Stronger programs involve parents and community members in programming (Propel, 2012b; Card, 2008).
- CSH programs need long term funding because of the slow nature of policy and culture change and the need to take advantage of a continuous learning approach that allows ongoing refinement and improvements (Propel, 2012a; Stewart-Brown, 2006).
- The role of the school health facilitator must be clearly defined (Propel, 2012a).
- Communication between facilitators, teachers and community is important so that success stories and lessons learned can be shared (Propel, 2012a).

- Teacher training, regular support and adequate resources are required for sustained implementation (Propel, 2012a; Propel, 2012b).
- Facilitators can involve students in changing school policies and environments (O'Brien, 2010).

## 1.8 Cost Effectiveness

Stewart-Brown's 2006 systematic review of school health promotion found that no reviews evaluated the cost-effectiveness of the programs or interventions. There continues to be a need for studies that demonstrate the cost effectiveness of CSH programs (Fung, 2012). However, there is some literature relevant to the cost effectiveness of facilitated school health programs. McAuley (2009) reported on the economic evaluation of the APPLE obesity prevention program in New Zealand. The cost of the program was NZ\$1,281 per child over 2 years. The estimated weight gain prevented was 2 kg at 15 years of age.

Ohinmaa (2011) reports on the costs of implementing and maintaining the Annapolis Valley Health Promoting School Program and suggests that no prior studies had looked at the costs associated with CSHs. Public funding per student during the 2008/09 year was \$22.67. In addition, grants, donations and fundraising amounted to \$8.37 per student. Each of the AVHPS schools reported to be supported by volunteer time of staff and teachers, although separate federal funding was received to support a physical activity coordinator. The value of volunteer support was also calculated, bringing the total cost per student to \$39. This cost figure is similar to those of the Planet Health Study (Wang, 2003) and CATCH (Brown, 2007) at \$US 14 and \$US 35 respectively. Planet Health was an interdisciplinary curriculum aimed at obesity prevention which involved adding intervention material into language, math, science, social studies and physical education classes. The CATCH (Coordinated Approach to Child Health) program had physical education, an eat smart program, classroom curriculum and home team components.

The costs of various programs can be compared only if they offer services that are basically identical. If services are similar then costs and standardized outcomes can be considered to judge cost effectiveness. When considering cost effectiveness of a school facilitation program several factors are important to consider. Is the program being delivered to all schools in a district or only to special needs schools? Is the entire population of a school the target of the intervention, or just a special population within the school? What range of health behaviours are being targeted? The New Zealand study mentioned above targeted physical activity; whereas the Annapolis Valley study focused on nutrition. Programs also will have different levels of contact with facilitators – which is the major cost in most school facilitation programs. Some programs also have a focus that extends beyond the school to stimulate activity in the community.

Several facilitated school health models have been described in this report. However, these models are too heterogeneous for conclusions to be drawn about cost effectiveness. It is clear that more research is required in this area. A summary of program costs and inputs is provided in Table 1.

**Table 1. Costs of Selected School Health Facilitation Programs**

Program	Costs	Level of Facilitation
APPLE Schools (Alberta)	\$20 M private donation (\$5 M for pilot – 10 schools, and \$15 M for project expansion – 30 additional schools)	Pilot program used 1.0 FTE facilitator per school. Phase two experimented with .8, .5 and .2 FTE facilitators.
Action Schools! BC	\$14.5 M (2010) – All K-7 and Middle Schools in BC	Two master trainers and 75 regional trainers for 1,500 schools
Coordinated School Health Program (Maine)	Facilitators worked with 2 to 3 schools	0.5 FTE facilitator
APPLE (New Zealand)	NZ\$ 1,281 per intervention child over 2 years	0.5 FTE facilitator
Healthy Students, Healthy Schools (Newfoundland and Labrador)	The size of school districts ranges between 16 and 119 schools	One School Health Promotion Liaison Consultant in each of the province's five school districts

## 1.9 Learnings from Primary Care Practice Facilitation

Facilitation has been used as a means of promoting evidence-based guidelines in the clinical practice of primary care physicians. Practice facilitation, also known as outreach, is a multifaceted approach using a number of intervention components and approaches. Skilled individuals work to enable others to deal with the challenges of implementing evidence-based guidelines within primary care settings (Lemelin, 2001; Harvey, 2002).

A systematic review of primary care practice facilitation studies found that key components of successful facilitation included audit with feedback, practice consensus building, and goal setting. Many studies also included in-person or virtual collaborative meetings (Baskerville, 2012)

The advantages of primary care practice facilitation were found to include the following:

- Primary care practices that used practice facilitation were almost 3 times more likely to adopt evidence-based guidelines compared to control practices
- Practice facilitation tailored to the needs and context of the practice was more effective than non-tailored facilitation

- More frequent facilitation visits and fewer practices per facilitator were associated with larger effect sizes (Baskerville, 2012).

While school health facilitation is not directly comparable with primary care practice facilitation, some lessons may be shared between the two contexts.

## **Conclusions**

Facilitated approaches can help schools improve their environments and the physical activity and eating behaviours of school-aged children. These approaches operate in different ways, but often refer to hiring a facilitator or coordinator who has training to help schools improve the programs and policies that can impact the health of students. Facilitators or coordinators often have a background in public health or education. Training of facilitators varies in Canada; many U.S. states offer school health leadership training.

Common roles for facilitators include participation on school health teams, development of work plans, influence on school policy and culture, promotion of in-class physical activity, preparing resources about healthy food choices, teacher professional development, and communication with parents and other stakeholders/partners. It is important for facilitators to work with schools and their school health teams recognizing their local context and needs. Success has been linked to the use of a dedicated position to help guide and develop healthy school initiatives with school communities.

Success in school health facilitation can be measured in at least two dimensions, changes in the school environment (policies, culture, school spirit) and changes at the level of the student (gains in healthy eating, physical activity, academic progress and self-esteem). Supports or conditions for success have been identified and may help school health facilitators to have greater impact. The programs reviewed in this report had a facilitator to school ratio that ranged from 1 per school to 1 per school district. It is difficult to draw conclusions about which programs are most cost effective or which aspects of successful programs are most critical. It is clear that the costs and benefits of school health facilitation is an area requiring further research.

## REFERENCES

- Alliance for a Healthier Generation. Technical Assistance Matters: Schools Need Support to Become Healthier. (2012). Accessed October 24, 2012 at <http://www.rwjf.org/content/dam/farm/reports/evaluations/2012/rwjf402203>
- American Cancer Society. The Role of the School Health Coordinator. (2012). Accessed October 1, 2012 at <http://www.cancer.org/Healthy/MoreWaysACSHelpsYouStayWell/SchoolHealth/WhatsSchoolHealthAllAbout/the-role-of-the-school-health-coordinator>.
- Austin, S.B., Fung, T., Cohen-Bearak, A., Wardle, K., Cheung, L.W. (2006). Facilitating change in school health: A qualitative study of schools' experience using the School Health Index. *Preventing Chronic Disease*, 3(2).
- Baskerville, N.B., Liddy, C., Hogg, W. (2012). Systematic review and meta-analysis of practice facilitation within primary care settings. *Annals of Family Medicine*, 10(1), 63-74.
- Bassett-Gunter, R., Yessis, J., Manske, S., Stockton, L. (2012). *Healthy School Communities Concept Paper*. Ottawa, Ontario: Physical and Health Education Canada. Available at <http://www.phecanada.ca/programs/health-promoting-schools/concept-paper>
- Borys, J.M., Le Bodo, Y., Jebb, S.A., Seidell, J.C., Summerbell, C., Richard, D., De Henauw, S., Moreno, L.A., Romon, M., Visscher, T.L., Raffin, S., Swinburn, B. (2012). EPODE approach for childhood obesity prevention: Methods, progress and international development. *Obesity Reviews*, 13, 299-315.
- Brown, H., Perez, A., Li, Y.P., Hoelscher, D., Kelder, S., Rivera, R. (2007). The cost effectiveness of a school-based overweight program. *The International Journal of Behavioral Nutrition and Physical activity*, 4:47.
- Card A., Doyle E. School health coordinators as change agents. *Health and Learning*. 2008;7:3-11.
- Centers for Disease Control and Prevention. (2011a) How Schools Can Implement Coordinated School Health. Accessed October 1, 2012 at <http://www.cdc.gov/healthyyouth/cshp/schools.htm>
- Centers for Disease Control and Prevention. (2011b). School health guidelines to promote healthy eating and physical activity. *MMWR* 60(5), (1-76).
- Day, M.E., Strange, K.S., McKay, H.A., Naylor, P.J. (2008). Action schools! BC--Healthy Eating: Effects of a whole-school model to modifying eating behaviours of elementary school children. *Canadian Journal of Public Health*, 99(4), 328-31.
- Fung, C., Kuhle, S., Lu, C., Purcell, M., Schwartz, M., Storey, K., Veugelers, P.J. (2012). From "best practice" to "next practice": the effectiveness of school-based health promotion in improving

- healthy eating and physical activity and preventing childhood obesity. *International Journal of Behavioral Nutrition and Physical Activity* 9:27.
- Harvey, G., Loftus-Hills, A., Rycroft-Malone, J., Titchen, A., Kitson, A., McCormack, B., Seers, K. (2002). Getting evidence into practice: the role and function of facilitation. *Journal of Advanced Nursing*, 37(6), 577-588.
- Hlaing, W.M., Siegel, K.A. (2005). School health promotion activities in Miami-Dade County, Florida. *Florida Public Health Review*, 2, 23-29.
- International Union for Health Promotion and Education. (2009). Achieving Health Promoting Schools: Guideleines for Promoting Health in Schools. Accessed October 1, 2012 at [http://www.iuhpe.org/?page=516&lang=en#sh\\_guidelines](http://www.iuhpe.org/?page=516&lang=en#sh_guidelines)
- International Union for Health Promotion and Education. (2010). Promoting Health in Schools: From Evidence to Action. Accessed October 1, 2012 at [http://www.iuhpe.org/?page=516&lang=en#sh\\_advevid](http://www.iuhpe.org/?page=516&lang=en#sh_advevid)
- Joint Consortium for School Health. (2009). JCSH Comprehensive School Health Framework. Available at <http://www.jcsh-cces.ca/index.php/school-health>
- Lemelin, J., Hogg, W., Baskerville, N. (2001). Evidence to action: a tailored multifaceted approach to changing family physician practice patterns and improving preventive care. *Canadian Medical Association Journal*, 164(6), 757-763.
- McAuley, K.A., Taylor, R.W., Farmer, V.L., Hansen, P., Williams, S.M., Booker, C.S., Mann, J.I. (2009). Economic evaluation of a community-based obesity prevention program in children: The APPLE project. *Obesity*, 18(1), 131-136.
- Naylor, P., Macdonald, H.M., Zebedee, J.A., Reed, K.E., McKay, H.A. (2006). Lessons learned from Action Schools! BC – An 'active school' model to promote physical activity in elementary schools. *Journal of Science and Medicine in Sport*, 9, 413-423.
- Naylor, P., McKay, H.A. (2009). Prevention in the first place: schools a setting for action on physical inactivity. *British Journal of Sports Medicine*, 43, 10-13.
- O'Brien, L.M., Polacsek, M., MacDonald, P.B., Ellis, J., Berry, S., Martin, M. (2010). Impact of a school health coordinator intervention on health-related school policies and student behavior. *Journal of School Health*, 80(4), 176-185.
- Ohinmaa, A., Langille, J., Jamieson, S., Whitby, C., Veugelers, P.J. (2011). Costs of implementing and maintaining comprehensive school health: The case of the Annapolis Valley Health Promoting Schools Program. *Canadian Journal of Public Health*, 102(6), 451-454.
- Ontario Healthy Schools Coalition Handout. (2010). Available at [http://draftohsc.files.wordpress.com/2011/11/csh-hps\\_ohsc\\_handout-may2010.pdf](http://draftohsc.files.wordpress.com/2011/11/csh-hps_ohsc_handout-may2010.pdf)
- Ottoson, J.M., Streib, G., Thomas, J.C., Rivera, M., Stevenson, B. (2004). Evaluation of the National School Health Leadership Institute. *Journal of School Health*, 74(5), 170-176.

- Pan Canadian Joint Consortium for School Health . (2010). Facilitating Health and Education Sector Collaboration in Support of Comprehensive School Health. *Canadian Journal of Public Health*, 101(S2), S18-S19.
- Propel Centre for Population Health Impact. (2012a). Case Profile: APPLE Schools. Waterloo, Ontario: Propel Centre for Population Health Impact, University of Waterloo.
- Propel Centre for Population Health Impact. (2012b). Case Profile: Action Schools! BC. Waterloo, Ontario: Propel Centre for Population Health Impact, University of Waterloo.
- Public Health Agency of Canada: Canadian Best Practices Portal <http://cbpp-pcpe.phac-aspc.gc.ca/>
- Reed, K.E., Warburton, D.E., Macdonald, H.M., Naylor, P.J. & McKay, H.A. (2008). Action Schools! BC: a school-based physical activity intervention designed to decrease cardiovascular disease risk factors in children. *Preventive Medicine*, 46, 525-531.
- Rush, E., Reed, P., McLennan, S., Coppinger, T., Simmons, D., Graham, D. (2012). A school-based obesity control programme: Project Energize, two-year outcomes. *British Journal of Nutrition*, 107, 581-587.
- Schwartz, M., Karunamuni, N. D., & Veugelers, P. J. (2010). Tailoring and implementing comprehensive school health: The Alberta Project Promoting active Living and healthy Eating in schools. *Physical and Health Education Academic Journal*, 2(1), 1-15.
- Stewart-Brown, S. (2006). *What is the evidence on school health promotion in improving health or preventing disease and, what is the effectiveness of the health promoting schools approach?* Copenhagen, WHO Regional Office for Europe. Health Evidence Network Report.
- Stoltz, A.D., Coburn, S., Knickelbein, A. (2009). Building local infrastructure for coordinated school health programs: A pilot study. *The Journal of School Nursing*, 25(2), 133-140.
- Storey, K., Spitters, H., Cunnigham, C., Schwartz, M. & Veugelers, P. J. (2011). Implementing Comprehensive School Health: Teachers' Perceptions of the Alberta Project Promoting active Living and healthy Eating in Schools - APPLE Schools, *Physical and Health Education Academic Journal*, 3(2), 1-18.
- Taylor, R.W., McAuley, K.A., Barbezat, W., Farmer, V.L., Williams, S.M., Mann, J.I. (2008). Two-year follow-up of an obesity prevention initiative in children: the APPLE project. *American Journal of Clinical Nutrition*, 88, 1371-1377.
- Veugelers, P.J., Fitzgerald, A.L. (2005). Effectiveness of school programs in preventing childhood obesity: A multilevel comparison. *American Journal of Public Health*, 95(3), 432-435.
- Veugelers, P.J., Schwartz, M.E. (2010). Comprehensive School Health in Canada. *Canadian Journal of Public Health*, 101(S2), S5-S8.
- Wang, F., Wild, T.C., Kipp, W., Kuhle, S., Veugelers, P.J. (2009). The influence of childhood obesity on the development of self-esteem. *Health Reports*, 20(2), 21-28.

Wang, L.Y., Yang, Q., Lowry, R., Wechsler, H. (2003). Economic analysis of school-based obesity prevention program. *Obesity Research*, 11(11), 1313-1324.

Winnail, S.D., Bartee, T., Kaste, S. (2005). Existence of the school health coordinator in a frontier state. *Journal of School Health*, 75(9), 329-333.

## Appendix A: Search Strategy

The searches were approached in a targeted way using the questions from the Champlain Cardiovascular Disease Prevention Network and Propel's previous work as a starting point. Searches were conducted using databases (e.g., PubMed, Scopus), web search engines (e.g., Google scholar) and on relevant websites. Evidence, both scientific and grey, including journal articles, case profiles, program reports and websites were considered for inclusion in the synthesis.

Propel's work:

- Case Profile: Apple Schools - Alberta (Propel)
- Case Profile: Action Schools – BC (Propel)
- Heart Healthy Children and Youth, Targeted Evidence Synthesis: Strategies for Healthy School Communities (Propel 2012)
- Healthy School Communities Concept Paper (Propel 2012)
- Heart Healthy Children and Youth: Overview of Case Profiles (Propel)
- Analysis for Heart Healthy Children and Youth (spreadsheet) – the following include “facilitator” in the program description
  - o Screen Smart
  - o Sip Smart
  - o Peer Nutrition Program

(References from these documents were reviewed and acted as a starting point for citation searches)

Other references from Propel staff:

- Joint Consortium for School Health (JCSH) – Research Repository. References did not include “facilitator” in relation to healthy eating or active living.
- JCSH Healthy School Planner [www.hsp.uwaterloo.ca](http://www.hsp.uwaterloo.ca) – the following include “facilitator” in the program description
  - o Recreation PEI – School Travel Planning
  - o Ever Active Schools (Alberta)

Primary care facilitation material:

- [Pcmh.ahrq.gov](http://Pcmh.ahrq.gov) (Patient Centered Medical Home – Agency for Healthcare Research and Quality)
- Baskerville, N.B., Liddy, C., Hogg, W. (2012). Systematic review and meta-analysis of practice facilitation within primary care settings. *Annals of Family Medicine*, 10(1), 63-74.

Search Terms used in database (Pubmed, Scopus) and search engine (Google Scholar) searches:

- School health facilitator
- School health coordinator
- Comprehensive school health

- Coordinated school health
- Health promoting schools
- School change agent

## Citation Searches:

Card A., Doyle E. School health coordinators as change agents. *Health and Learning*. 2008;7:3-11.

Day, M.E., Strange, K.S., McKay, H.A., Naylor, P.J. (2008). *Action schools! BC--Healthy Eating: effects of a whole-school model to modifying eating behaviours of elementary school children. Canadian Journal of Public Health, 99(4), 328-31.*

Fung, C., Kuhle, S., Lu, C., Purcell, M., Schwartz, M., Storey, K., Veugelers, P.J. (2012). From "best practice" to "next practice": the effectiveness of school-based health promotion in improving healthy eating and physical activity and preventing childhood obesity. *International Journal of Behavioral Nutrition and Physical Activity* 9:27

O'Brien, L.M., Polacsek, M., MacDonald, P.B., Ellis, J., Berry, S., Martin, M. (2010). Impact of a school health coordinator intervention on health-related school policies and student behavior. *Journal of School Health, 80(4), 176-185.*

Reed, K.E., Warburton, D.E., Macdonald, H.M., Naylor, P.J. & McKay, H.A. (2008). Action Schools! BC: a school-based physical activity intervention designed to decrease cardiovascular disease risk factors in children. *Preventive Medicine, 46, 525-531.*

Schwartz, M., Karunamuni, N. D., & Veugelers, P. J. (2009). Tailoring and implementing comprehensive school health: The Alberta Project Promoting active Living and healthy Eating in schools. *Physical and Health Education Academic Journal, 2(1), 1-15.*

Storey, K., Spitters, H., Cunnigham, C., Schwartz, M. & Veugelers, P. J. (2011). Implementing Comprehensive School Health: Teachers' Perceptions of the Alberta Project Promoting active Living and healthy Eating in Schools - APPLE Schools, *Physical and Health Education Academic Journal, 3(2), 1-18.*

## Web sites reviewed:

Centers for Disease Control and Prevention- [www.cdc.gov](http://www.cdc.gov)

American Cancer Society – [www.cancer.org](http://www.cancer.org)

International Union for Health Promotion and Education – [www.iuhpe.org](http://www.iuhpe.org)

Public Health Agency of Canada, Canadian Best Practices Portal - <http://cbpp-pcpe.phac-aspc.gc.ca/>

APPLE Schools (Alberta) - [www.appleschools.ca](http://www.appleschools.ca)

Action Schools! BC - [www.actionschools.ca](http://www.actionschools.ca)

Annapolis Valley Health Promoting Schools Program – [www.avrsb.ca](http://www.avrsb.ca)

Real Kids website: <http://www.realkidsalberta.ca/overview.php>

## APPENDIX B: WHAT WORKS IN HEALTH PROMOTING SCHOOLS (IUHPE)

- “Developing and maintaining a democratic and participatory school community.
- Developing partnerships between education and health sector policy makers.
- Ensuring students and parents feel they have some sense of ownership in the life of the school.
- Implementing a diversity of learning and teaching strategies.
- Providing adequate time for class-based activities, organisation and coordination, and out of class activities.
- Exploring health issues within the context of the students’ lives and community.
- Utilising strategies that adopt a whole school approach rather than primarily a classroom learning approach.
- Providing ongoing capacity building opportunities for teachers and associated staff.
- Creating an excellent social environment which fosters open and honest relationships within the school community.
- Ensuring a consistency of approach across the school and between the school, home and wider community.
- Developing both a sense of direction in the goals of the school and clear and unambiguous leadership and administrative support.
- Providing resources that complement the fundamental role of the teacher and which are of a sound theoretical and accurate factual base.
- Creating a climate where there are high expectations of students in their social interactions and educational attainments.” IUHPE (2009).

## APPENDIX C: COMPARISON OF FACILITATED APPROACHES TO SCHOOL HEALTH

**Table 2. Comparison of Facilitated Approaches to School Health**

<b>Example</b>	<b>APPLE Schools (Alberta)</b> Fung, 2012; Schwartz, 2010; Storey; 2011	<b>Action Schools! British Columbia</b> Reed, 2008; Day, 2008; Naylor, 2006, 2009	<b>Healthy Students, Healthy Schools (Newfoundland and Labrador)</b> Card, 2008	<b>Coordinated School Health Program (Maine)</b> O'Brien, 2010	<b>APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand)</b> Taylor, 2006, 2007, 2008; McAuley, 2009
Overview	Comprehensive school health program using School Health Facilitators (SHFs)	Physical activity and healthy eating whole school model designed to assist schools in creating individual action plans and support teachers to promote healthy living.	Comprehensive school health program using School Health Promotion Liaison Consultants (SHPLCs)	Coordinated school health program using local school health coordinators (SHCs) – part of Healthy Maine Partnerships	Community-based obesity prevention intervention providing community Activity Coordinators (ACs) at each school.
Target group, location	Elementary school students, parents, teachers, school environments in 40 “high needs” schools	Generalist teachers in more than 1,500 K-7 and middle schools, covering 100% of British Columbia school districts.	Five school districts (children)	Middle and high schools and students grade 6 to 12. 123 intervention schools.	Primary school children at 4 intervention schools
Health behaviours targeted	Preventing obesity and reducing the risk for	Integrate physical activity and healthy eating into the fabric	Healthy eating, physical activity, tobacco control and	Physical activity, nutrition, and	Physical activity and healthy eating

Example	<b>APPLE Schools (Alberta)</b> Fung, 2012; Schwartz, 2010; Storey; 2011	<b>Action Schools! British Columbia</b> Reed, 2008; Day, 2008; Naylor, 2006, 2009	<b>Healthy Students, Healthy Schools (Newfoundland and Labrador)</b> Card, 2008	<b>Coordinated School Health Program (Maine)</b> O'Brien, 2010	<b>APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand)</b> Taylor, 2006, 2007, 2008; McAuley, 2009
	chronic disease	of elementary schools and achieve long-term, measureable and sustainable health benefits.	injury prevention	tobacco use.	
Timeline	A pilot in 10 schools was launched in 2008 and continued through 2011. 30 additional schools were added in 2011 based on the success of the pilot	Original framework developed in 2002, pilot tested in 2003-04 and then rolled out provincially in 2005 (physical activity) and 2007 (healthy eating).	SHPLCs began work at different times. The first position started in 2005.	School health coordinators began in 2001. This study evaluates the impact of the program's first five years	Two year intervention, 2003 to 2005.
Lead organizations	The School of Public Health, University of Alberta, partners with Alberta Health Services, government and other community school health partners	Central management team and technical support unit based at JW Sporta, a BC based consulting and marketing company. The University of Victoria is the lead	Regional Health Authority, Department of Education	Maine Centers for Disease Control and Prevention, Healthy Maine Partnerships	

Example	APPLE Schools (Alberta) Fung, 2012; Schwartz, 2010; Storey; 2011	Action Schools! British Columbia Reed, 2008; Day, 2008; Naylor, 2006, 2009	Healthy Students, Healthy Schools (Newfoundland and Labrador) Card, 2008	Coordinated School Health Program (Maine) O'Brien, 2010	APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand) Taylor, 2006, 2007, 2008; McAuley, 2009
		evaluator			
School Health Facilitator (SHF) to school ratio	The pilot program used 1.0 FTE facilitator per school. In the expanded program different levels of intervention 'dose' are being tested with part time facilitators working at .8, .5 and .2 FTE.	For 1,500 schools there are two master trainers (one physical activity and one healthy eating) and 75 regional trainers, mostly seconded elementary school teachers trained by the Support Team to provide training, support and advice to AS!BC schools and liaise between the Support Team and the School Action Team	One SHLPLC in each of the province's five school districts.	Each Healthy Maine Partnership (HMP) contains between 3 and 12 schools. Some HMPs chose to hire at least one SHC and place them in whichever schools they deemed best. A SHC rarely worked with more than 2 or 3 schools. Results are reported for school districts that employ a SHC for at least 20 hours per week.	0.5 FTE AC per school. ACs spent 8 hours per week providing non-curricular activities. The remainder of their time was spent promoting activity in the community or undertaking administrative duties.
Role of Facilitator	SHFs facilitate the implementation of healthy eating and	The program uses trainers as opposed to facilitators.	Initially the role of the SHLPC focused on changes to schools	SHCs established school health leadership teams and	ACs encouraged all children to be more active by increasing

Example	<b>APPLE Schools (Alberta)</b> Fung, 2012; Schwartz, 2010; Storey; 2011	<b>Action Schools! British Columbia</b> Reed, 2008; Day, 2008; Naylor, 2006, 2009	<b>Healthy Students, Healthy Schools (Newfoundland and Labrador)</b> Card, 2008	<b>Coordinated School Health Program (Maine)</b> O'Brien, 2010	<b>APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand)</b> Taylor, 2006, 2007, 2008; McAuley, 2009
	active living strategies customized to the unique health promotion needs, priorities and barriers in each school. In the early phase, facilitators were recruited from outside, but in the later phase they were recruited from within schools.	Generalist teachers are supported and empowered to provide physical and healthy eating opportunities and receive resource guides and equipment.	based on the School Food Guide. Later they will focus on physical activity and other health concerns. SHPLCs help to create and support regional living healthy teams and develop actions plans. Background of SHPLCs included 2 dieticians, a social worker, a principal, and a PE teacher.	implemented work plans to address health risk behaviors. Improve local community and school policies and environments related to physical activity, nutrition and tobacco use.	non-curricular activity at recess, lunch and after school, with a focus on less traditional sports and more lifestyle based activities. Nutrition education targeted decreasing sweetened drink consumption and increasing consumption of fruits and vegetables
Example of activities	Supplementing the health curriculum and teaching students, both during instructional and non-instructional time, developing cross curriculum links,	The program has six action zones. School Environment, Scheduled PE, Classroom Action, Family and Community, Extra-	Provide in-services on Living Healthy topics for teachers, principals, parents, catering staff, etc., and support Living Healthy events. Assist	Serve as a member of the school administrative team. Organize and facilitate school health leadership teams. Prepare an	Non-curricular activities were promoted including, games from other countries, aerobics, and line dancing. Community activities

Example	<b>APPLE Schools (Alberta)</b> Fung, 2012; Schwartz, 2010; Storey; 2011	<b>Action Schools! British Columbia</b> Reed, 2008; Day, 2008; Naylor, 2006, 2009	<b>Healthy Students, Healthy Schools (Newfoundland and Labrador)</b> Card, 2008	<b>Coordinated School Health Program (Maine)</b> O’Brien, 2010	<b>APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand)</b> Taylor, 2006, 2007, 2008; McAuley, 2009
	facilitating professional development days for teachers and school staff, organizing parent information nights, promoting nutrition programs such as cooking clubs, leading after school physical activity programs, providing weekend events and celebrations, and sending home handouts and newsletters to parents.	Curricular, School Spirit. In the classroom action zone teachers are asked to provide students with 15 additional minutes of physical activity each day by providing opportunities to participate in activities such as skipping, dancing and resistance exercises throughout the school day. Besides learning about healthy eating, students are given the opportunity to taste fruits and vegetables in the	schools with applications for funding opportunities. Strengthen community partnerships. Support implementation of school food guidelines and physical activity policy initiatives. Undertake a baseline evaluation of students’ health and current policies and programs. Assist schools in accessing relevant health promotion resources. Support schools focusing on student and staff wellness.	annual work plan. Collaborate with state-wide entities including the Maine-Harvard Prevention Research Centre and Maine Centres for Disease Control and Prevention to gain information about best practices and other resources. The SHC implements a co-ordinated approach to health issues in schools using the 8 component model adapted from the CDC. The domains covered by these components include education, policy and environmental	included parent and child taekwondo, children’s golf club, beach hikes, and community walks. Resources were developed for teachers to facilitate short bursts of activity in the classroom, called “snacktivity”. Parental and community volunteer involvement in sports and activities was encouraged. Older children were given the responsibility of making sure younger children were included in activities at breaks and lunch

Example	<b>APPLE Schools (Alberta)</b> Fung, 2012; Schwartz, 2010; Storey; 2011	<b>Action Schools! British Columbia</b> Reed, 2008; Day, 2008; Naylor, 2006, 2009	<b>Healthy Students, Healthy Schools (Newfoundland and Labrador)</b> Card, 2008	<b>Coordinated School Health Program (Maine)</b> O'Brien, 2010	<b>APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand)</b> Taylor, 2006, 2007, 2008; McAuley, 2009
		classroom.	Web page and newsletter.	change, and health services. Activities include writing grants, convening school wellness councils, coordinating fund-raising activities for school health, and making presentations to school boards	times. Cool filtered water was provided as an alternative to sweet drinks.
Evaluation Design	Quasi-experimental design. Data collected from grade 5 students (using a provincial tool), parents and administrators. Process evaluation has become a greater focus.	10 pilot schools were randomized into three groups: Liason Schools were provided a dedicated Master Trainer; Champion Schools received similar training from a champion designated from within the school; Usual Practice	Semi-structured interviews and focus groups with 40 key informants from the Department of Health and Community Services and the Department of Education.	Natural experiment comparing physical activity, nutrition and tobacco related policy and student risk behaviour in 123 intervention schools and 205 non-intervention schools. Risk behaviours were assessed using provincial tools.	Students at 4 intervention and 3 control schools were measured for height, weight, waist circumference, blood pressure, diet and physical activity at baseline and one and two years later.

Example	APPLE Schools (Alberta) Fung, 2012; Schwartz, 2010; Storey; 2011	Action Schools! British Columbia Reed, 2008; Day, 2008; Naylor, 2006, 2009	Healthy Students, Healthy Schools (Newfoundland and Labrador) Card, 2008	Coordinated School Health Program (Maine) O'Brien, 2010	APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand) Taylor, 2006, 2007, 2008; McAuley, 2009
		Schools had no intervention from the program's support team. Results were compared between the three groups. A process evaluation was also conducted to measure fidelity to, and acceptability of the implementation model.		Principals and lead health educators were surveyed about schoolwide policies and programs.	
Results	Students in APPLE schools have higher intakes of fruits and vegetables, lower caloric intakes, were more active and were less likely to be obese compared with students elsewhere in the province. 8 of 10 pilot	A positive influence on students' physical activity levels was found in AS! BC schools compared to comparison schools. Students in AS! BC schools showed a statistically significant improvement in their	There were positive responses to school activities including the school led "Commotions" (a celebratory day focused on activity) and the pedometer challenge. The SHPLC was considered	Intervention schools compared to non-intervention schools were more likely to offer physical activity and intramurals (> 3 times), and make healthy nutritional offerings (> 2.5 times). Students in	Body mass index was significantly lower among intervention children compared with control children. However this affect was only seen with normal-weight and not overweight intervention children.

Example	<b>APPLE Schools (Alberta)</b> Fung, 2012; Schwartz, 2010; Storey; 2011	<b>Action Schools! British Columbia</b> Reed, 2008; Day, 2008; Naylor, 2006, 2009	<b>Healthy Students, Healthy Schools (Newfoundland and Labrador)</b> Card, 2008	<b>Coordinated School Health Program (Maine)</b> O'Brien, 2010	<b>APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand)</b> Taylor, 2006, 2007, 2008; McAuley, 2009
	schools implemented nutrition policies, and all 10 schools adopted daily physical activity policies	heart health, bone health, dietary requirement awareness and academic performance. Significant differences were not found between Liaison and Champion Schools	critical in implementing the School Food Guidelines. There was a challenge of reaching schools in rural areas. Having more SHPLCs would help. The need to measure changes in student health was identified.	intervention schools reported lower levels of soda consumption, decreased amounts of inactivity and less tobacco use.	Waist circumference and blood pressure were also lower among the intervention group. Intervention children consumed less soda and more servings of fruit.
Costs, sources of funding	The program is being funded by a private donation of \$20 million, and some grant funding for research/evaluation. Costs per school are related to the FTE level of the SHF.	Funded by the BC Ministry of Health. \$1-2 M grant funding for evaluation. Classrooms are provided with action bins including equipment (balls, skipping ropes, exercise bands),	Salaries of SHPLCs were paid by the Regional Health Authority. Travel and meeting costs were covered by the Department of Education. Office space was provided	Funding came through Maine's portion of the Tobacco Settlement.	The total cost of the two year project was NZ\$357,490 or NZ\$1,281 per intervention child for 2 years. The cost per kg of weight gain prevented over 4 years ranged between NZ\$664-

Example	APPLE Schools (Alberta) Fung, 2012; Schwartz, 2010; Storey; 2011	Action Schools! British Columbia Reed, 2008; Day, 2008; Naylor, 2006, 2009	Healthy Students, Healthy Schools (Newfoundland and Labrador) Card, 2008	Coordinated School Health Program (Maine) O'Brien, 2010	APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand) Taylor, 2006, 2007, 2008; McAuley, 2009
		videos and teaching resources. Teachers receive \$15.00 a month to purchase fruits and vegetables for the tasting activities.	by School Boards.		1708. Research was funded by the Health Research Council, National Heart Foundation, the Community Trust of Otago, and the Otago Diabetes Research Trust
Structure, partnerships	Strategic partnerships at the overall initiative level and local partnerships within each school community. Each APPLE school has an APPLE Core Committee of parents, students, administrators, teachers and community	Partnership between government, researchers, educators, and the health, recreation and sport sector. School Action Teams are created in each school with teachers, resource staff, administrators, and	The program is supported by the Healthy Students, Healthy Schools provincial committee, regional committee, and school level Living Healthy teams. Partners include government, Department of Health, Department	Partners include Maine Centers for Disease Control and Prevention, Healthy Maine Partnerships and Maine-Harvard Prevention Research Centre. Each school has a school health leadership team.	This program was a time-limited research project involving researchers from the Department of Human Nutrition, , Edgar National Centre for Diabetes Research, and the Department of Preventive and Social Medicine, all at

Example	<b>APPLE Schools (Alberta)</b> Fung, 2012; Schwartz, 2010; Storey; 2011	<b>Action Schools! British Columbia</b> Reed, 2008; Day, 2008; Naylor, 2006, 2009	<b>Healthy Students, Healthy Schools (Newfoundland and Labrador)</b> Card, 2008	<b>Coordinated School Health Program (Maine)</b> O’Brien, 2010	<b>APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand)</b> Taylor, 2006, 2007, 2008; McAuley, 2009
	stakeholders	parents	of Education, Regional Health Authorities and School districts.		University of Otago. Other partners are listed in the section on sources of funding.
Insights, required supports	In school support (e.g., SHFs) is important to facilitate change. Support from school leadership is essential. Need buy-in and clarity of roles for school stakeholders. Changing school culture and policy is a slow inclusive process and takes a minimum of two years.	Value of a phased in approach. Focus on process/implementation to allow continuous improvement. Need for teacher training, regular support and resources for sustained implementation. Need to further involve parents. Outcome data is important for funders. Tasting experiences were	SHPLCs are viewed as effective change agents who can transfer knowledge from other programs directly to schools. Many identified the importance of making the SHPLC positions permanent to sustain changes. The ideal SHPLC is a dynamic person, with a driving vision, passion, and organizational and communication skills.	The work of the SHC may have been important not only in the development of policies, but also in the implementation, enforcement and coordination of policies. The SHC may help improve the success of health education courses by reinforcing those messages through other school environments outside the classroom. SHCs	One school worked with the local fast food store to offer healthier options. Other schools operated healthy food stalls at community activity events and ran edible gardens. After the research project ended, one school found funding to keep their AC (at a reduced level of 0.3 FTE). This speaks to the perceived

Example	<b>APPLE Schools (Alberta)</b> Fung, 2012; Schwartz, 2010; Storey; 2011	<b>Action Schools! British Columbia</b> Reed, 2008; Day, 2008; Naylor, 2006, 2009	<b>Healthy Students, Healthy Schools (Newfoundland and Labrador)</b> Card, 2008	<b>Coordinated School Health Program (Maine)</b> O'Brien, 2010	<b>APPLE - A Pilot Program for Lifestyle and Exercise (New Zealand)</b> Taylor, 2006, 2007, 2008; McAuley, 2009
		essential. Integrating PA across the day was innovative.	A need was identified to have greater communication with parents.	can involve students in changing school policies and environments.	importance of this role to the school.

## APPENDIX D: SCHOOL HEALTH COORDINATOR GUIDELINES

**Table 3. School Health Coordinator Guidelines**

Responsibilities of the School Health Coordinator – ACS	Possible School Health Coordinator Activities- CDC
<p>“Each school/district shall appoint a school health coordinator to assist in the implementation and coordination of school health policies and programs by:</p> <ul style="list-style-type: none"> <li>• ensuring that the instruction and services provided through various components of the school health program are mutually reinforcing and present consistent messages;</li> <li>• facilitating collaboration among school health program personnel and between them and other school staff;</li> <li>• assisting the superintendent/school principal and other administrative staff with the integration, management, and supervision of the school health program;</li> <li>• providing or arranging for necessary technical assistance;</li> <li>• identifying necessary resources;</li> <li>• facilitating collaboration between the district/school and other agencies and organizations in the community who have an interest in the health and well-being of children and their families; and</li> <li>• conducting evaluation activities that assess the implementation and results of the school health program, as well as assisting with reporting evaluation results.” ACS 2012</li> </ul>	<p>“• facilitate collaboration among school staff responsible for the health and safety of students;</p> <ul style="list-style-type: none"> <li>• facilitate linkages between the school’s health-related programs and services and health-related resources in the community</li> <li>• serve as a liaison between the school and those who oversee school health and safety programs at the district level and in other schools;</li> <li>• communicate school health and safety priorities to the principal, staff, parents, community organizations, and students;</li> <li>• help secure funding or other resources to support school building health and safety activities;</li> <li>• manage school health funds;</li> <li>• assist in the development of school health and safety policy materials and in the selection of educational materials;</li> <li>• organize and conduct school health team meetings;</li> <li>• facilitate the provision of professional development activities for school health staff; and</li> <li>• assist with the assessment of student health needs and evaluation of school health policies and activities.”</li> </ul> <p>CDC 2011, p. 14.</p>

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