

Foundations for School Nutrition Initiatives in

Alberta

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Prepared by the

**Alberta Coalition for Healthy School Communities
and Dietitians of Canada – Alberta and Territories Region**



Alberta Coalition for Healthy School Communities



Dietitians of Canada
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Table of Contents

Acknowledgements	3
Executive Summary	4
1. Introduction	5
2. Why is school nutrition important?	6
3. What are the facts about overweight and obese children and youth?	6
4. What are the eating patterns of Canadian and Alberta children and youth?	7
5. What is happening in school nutrition?	9
6. SUCCESS: Comprehensive school health and nutrition	13
7. What are the barriers to SUCCESS?	18
8. How do we take action on school nutrition?	19
9. How do we monitor and evaluate school nutrition initiatives?	20
10. What are the next steps for Alberta?	22
References	23
Appendices	
Appendix 1 – What is Comprehensive School Health?	28
Appendix 2 - Environmental Scan of School Nutrition Initiatives across Canada	29
Appendix 3 - Rationale, Evidence, Implementation Strategies for SUCCESS	55

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Executive Summary

Quick Facts

- Children and youth are highly influenced by the foods that are readily available to them (Kennedy, 2004), therefore schools have an important role in promoting healthy eating among school-aged children and youth.
- A healthy diet has a positive impact on nutritional status which results in better school attendance and improved capacity for active learning while at school (Pollitt & Mathews, 1998, cited in Cueto, 2001).
- For children, household income seems to be a determinant of obesity as diet quality and opportunities to be physically active may be compromised as income declines (Raine, 2004; Powers & Tarasuk 2006).
- The prevalence of **overweight** children in Canada has doubled from 1981 to 1996 with the rates in boys having gone from 15% to 35.4% and similarly, in girls from 15% to 29.26%. (Tremblay, Katzmarzyk & Willms 2002).
- Between 1981 and 1996, the rates of **obesity** in Canadian children aged 7 to 13, have risen from 5% to 16.6% in boys and from 5% to 14.6% in girls. (Tremblay & Willms, 2000).
- 60% of Canadian youth aged 12-19 eat less than the minimum five servings of vegetables and fruit per day (CCHS, 2000/01).

Keys to Nutrition SUCCESS in Comprehensive School Health

S = School food and nutrition guidelines are developed to provide context and direction

U = Use foods served in school to reinforce nutrition guidelines and curriculum

C = Curriculum involves experiential nutrition education that is fun, culturally relevant and developmentally appropriate

C = Community programs, resources and services are engaged in healthy eating initiatives in schools

E = Encourage parent and family involvement in healthy eating at home and at school

S = Student and youth are engaged as leaders and decision makers regarding healthy eating at school

S = School staff support and participate in healthy eating initiatives in school

Barriers to SUCCESS

1. Inadequate support from all stakeholders (parents, school administration and staff, district decision makers and governmental policy-makers).
2. Lack of awareness, including what foods are considered healthy and the link between nutrition and health/performance/behaviour.
3. Lack of financial support (from governmental policy- and decision-makers, school district policy- and decision-makers, fund-raising projects and vending contracts).
4. Lack of human resources and support for program implementation.

Next Steps

Comprehensive school health approaches to nutrition in Alberta need to be multifactorial, involve activity in more than one domain (curriculum, school environment and community), intensive, adequately resourced and sustained.

1. Introduction

Health promotion in the school setting is gaining momentum around the world as teachers, parents, health professionals, justice officials and many others seek ways to address health and social issues of school-aged children and youth. Schools have traditionally focused on children's academic development, however research demonstrates that schools play an important role in promoting physical and social health. Hand in hand with this evidence, population health research also shows that the status of children's health affects their ability to learn.

The goal of this paper is to provide a foundational document for discussion and action on one aspect of school health promotion – school nutrition. It is hoped that the document will provide information and rationale on the role of school nutrition on the health of students and provide examples and strategies to support schools in developing a comprehensive approach to school nutrition. A comprehensive school health approach is the most promising practice in school health promotion today and it forms the basis for the recommendations outlined in this document. Please see Appendix 1 for a description of the comprehensive school health approach.

Children spend a great deal of time at school. As a result, the health of children and youth are impacted by the food eaten at school. However, it must be noted that school environments are only part of the very complicated puzzle when it comes to nutrition. That is, we cannot rely on schools to "do it all"!

Section 1 of this paper presents why school nutrition is important -- focusing on the impact on child and youth learning and academic achievement. Evidence will be presented that explains the relationship between nutrition and student learning.

In sections 3 and 4 we discuss the alarming prevalence of overweight and obesity in Canadian children and youth and describe eating trends in this age group in Alberta and Canada.

Section 5 presents a portrait of what is currently being done internationally, nationally, and provincially in regards to a comprehensive approach to school nutrition. Links to important initiatives and resources to support a comprehensive approach to school nutrition are provided.

Section 6 describes a comprehensive school health approach to nutrition. Rationale will be provided as to why certain elements are crucial when aiming to create an environment that supports healthy eating. These keys to school nutrition SUCCESS will be addressed.

Section 7 addresses the common barriers to achieving school health nutrition success. These barriers will be linked to the essential elements of creating a supportive school nutrition environment.

In section 8, implementation strategies are addressed relating to 7 areas of creating a comprehensive school nutrition environment. This "how to" section will identify which key stakeholders should be involved, and how to develop a plan.

Section 9 discusses evaluation as an integral part of nutrition program development. Links to a few useful evaluation tools for school nutrition initiatives are provided to facilitate access and encourage use.

This paper concludes with a summary of the SUCCESS model for school nutrition and a call to action among stakeholders in Alberta to plan, implement and evaluate comprehensive approaches to school health nutrition.

2. Why is school nutrition important?

It is recognized that schools are an important setting for influencing the health behaviours of children and youth. Most children spend as much time at school as in any other environment and consequently foods eaten at school can contribute to the quality of the total diet. Given that children and youth are highly influenced by the foods that are readily available to them (Kennedy, 2004), it can be surmised that schools have an important role in promoting healthy eating among school-aged children and youth.

It is widely accepted that healthy children learn better. Nutrition is an important factor in enhancing and maintaining both physical and mental health. Pollitt and Mathews developed a model that demonstrates an association between nutritional intake and education. The model asserts that a healthy diet has a positive impact on nutritional status which results in better school attendance and improved capacity for active learning while at school (Pollitt & Mathews, 1998, cited in Cueto, 2001). For example, participation in a School Breakfast Program can improve academic, behavioural and emotional health and reduce tardiness and absenteeism (Taras & Potts-Datema, 2005; Papamandjaris, 2000). Thus, schools need to create an environment that supports overall academic success and school nutrition can be one part of this process.

Well-nourished children and youth are more likely to be better prepared to learn, be active and maintain their health. Nutrition impacts cognitive performance (Bryan et al, 2004) and much of the research in this area has been linked to the benefits of breakfast consumption. In addition, inadequate nutrition can have detrimental effects on children's learning ability as well as on their physical development (Papamandjaris, 2000).

Data from the *National Health and Nutrition Examination Survey III* (1988-1994) demonstrates lower standardized math scores among iron-deficient school aged children and adolescents, including those with iron deficiency without anemia (Haltermann *et al*, 2001). A recent review of nutrition and its relationship to school performance found that correcting iron deficiency anemia could lead to improvements in cognitive functioning (Taras & Potts-Datema, 2005). This same review noted that among severely malnourished populations, it has been found that school breakfast programs may improve academic performance and cognitive functioning.

Evidence has demonstrated that the intake of specific nutrients can impact the structure of the developing brain and the function of neurotransmitters, both of which may impact an individual's capacity for learning. As well, recent research suggests that the frontal lobes of the brain, which control the executive functions such as problem solving, continue to develop well into adolescence (Bryan et al, 2004).

There is a need for further research in the area of nutrition and the brain to fully understand the complex relationship. Nonetheless, nutrition does have an impact on both the structure and function of the brain, therefore, the case for creating opportunities for optimal nutrition for our children and youth is even more convincing.

3. What are the facts about overweight and obese children and youth?

The alarming rate of obesity in children is constantly making headline news. According to the World Health Organization (WHO) being overweight due to poor nutrition and lack of physical activity is one of the greatest health challenges and risk factors for chronic disease in the 21st century.

Promoting healthy weights and the nutritional health in children is a complicated issue affected by many factors including genetic make up, individual decisions regarding nutritional choice, and physical activity. There is also a growing appreciation for the important role that social, cultural, physical and economic environments plays.

For children, household income seems to be a determinant of obesity as diet quality and opportunities to be physically active may be compromised as income declines (Raine, 2004; Powers & Tarasuk 2006). Another study shows that children in disadvantaged neighbourhoods were twice as likely to be obese as their peers in wealthier communities (Veugelers & Fitzgerald, 2005a). Higher income households appear to have better access to more nutritious food choices. That is, as income increases households are more likely to purchase lean meats, poultry and fish, breakfast cereals, low fat milk, fruits and vegetables.

There is also research to suggest that the influence of the familial environment and varying socio-economic conditions on the development of obesity in children goes beyond the influence of dietary or physical activity behaviour. One prospective cohort study followed 2,913 children aged 0 to 8 years at baseline, over a six-year period. The study found that children raised with lower levels of cognitive stimulation in the home environment have more than double the risk of becoming obese than those who received the highest levels of cognitive stimulation. The mechanism by which cognitive stimulation works to protect against obesity is as yet unknown (Strauss & Knight, 1999).

The overall rates of overweight and obese children in Canada have changed significantly over the past two decades.

- The prevalence of **overweight** children in Canada has doubled from 1981 to 1996 with the rates in boys having gone from 15% to 35.4% and similarly, in girls from 15% to 29.26% (Tremblay, Katzmarzyk & Willms 2002).
- Between 1981 and 1996, the rates of **obesity** in Canadian children aged 7 to 13, have risen from 5% to 16.6% in boys and from 5% to 14.6% in girls. (Tremblay & Willms, 2000).
- Youth who are obese are at an increased risk for obesity-related illnesses including heart disease, diabetes, high blood pressure, gallbladder disease and osteoarthritis and they are more likely than their peers to be absent from school, experience low self-esteem and become obese adults (National Governor's Association, 2003).
- The increasing incidence of chronic disease and obesity is also affecting health care costs. In 2000/2001, obesity cost Canada's healthcare system an estimated \$4.3 billion dollars (Dietitians of Canada News Release, 2005).

The increasing prevalence of obesity and related health issues in Canadian children and youth calls for innovative programs. These programs must create school environments that support student wellness with an emphasis on healthy eating and active living.

4. What are the eating patterns of Canadian and Alberta children and youth?

Eating Patterns of Canadian Children and Youth

Comprehensive data on the eating patterns of Canadian children and youth is not plentiful. However, the *Food Habits of Canadians* (Jacobs-Starkey et al., 2001) study found:

- 28.6% of teenage boys and 44.1% of teenage girls did not meet the minimum number of recommended servings for grains according to *Canada's Food Guide to Healthy Eating*.
- For vegetables and fruits it was 57.2% and 44.1%, for milk products, 53.6% and 59.1% and for meat and alternatives, 38.1% and 57.0% respectively.
- The top ten contributors to energy and other nutrients not only included foods that are good sources of nutrients, but also foods of low nutrient density such as cakes, cookies, pastries, carbonated beverages, sugars, jams, syrups, and salty snacks. On a given day, 33% of energy was from the "other" group for teens aged 13-17.

We can also glean important information from the *Canadian Community Health Survey* (CCHS, 2000/01). It shows that 60% of Canadian youth aged 12-19 eat less than the minimum five servings of vegetables and fruit per day. In addition, youth who eat vegetables and fruit five or more times per day, are less likely to be overweight or obese than those whose intake is below recommended minimums.

In British Columbia, a pilot study investigating the average intake of vegetables and fruits of children in grades 5 and 6, found they consumed only 3.49 servings per day, well below the recommended minimum of five servings per day. Only 25% of participants in this study met the recommended minimum servings per day (Action Schools! BC, 2005).

In Nova Scotia, 42% of children did not meet the recommended minimum number of servings for milk and milk products, 50% had inadequate intakes for vegetables and fruits, 54% for grains and 74% for meat and alternatives. As a result, intakes of calcium and fibre were insufficient compared to nutrient recommendations while the intakes of fat and sodium were higher. (Veugelers, Fitzgerald & Johnson, 2005).

Another Canadian study found that children who purchased lunch at school were 39% more likely to be overweight or obese than students who brought lunch from home. Other key findings were that children who regularly ate supper with their families (at least three or more times per week) were less likely to be overweight or obese (Veugelers & Fitzgerald 2005a).

Sweetened drink consumption has been linked to increased rates of obesity in children. Research suggests that for each additional serving of a soft drink consumed each day, children's risk of becoming obese increases by 60% (Ludwig, Peterson & Gortmaker, 2001).

It is clear that Canadian children are not meeting the minimum nutrient requirements needed for adequate growth and development. This could be a major contributor to chronic health problems in later years. Schools can play a pivotal role in ensuring children meet their nutrition needs now and develop healthy eating behaviours for a lifetime.

Eating Patterns of Alberta Children and Youth

There is limited data on the eating patterns of children living in Alberta. Two projects, however, merit discussion. The *Beyond an Apple a Day* project (BAAAD), utilized a University of Alberta online survey for grades 6 - 9 students (Taft & McCargar, 2004). The results of the BAAAD study indicate that in the junior high group,

- Females were not meeting the minimum number of servings for three of the four food groups (vegetables and fruit, meats and alternatives, and milk and milk products) in the *Canada's Food Guide for Healthy Eating*.
- Males are meeting the minimum servings from all the food groups.
- More than 45% of respondents consumed foods from the "other" food group daily, foods that are mostly sugar, mostly fat or a combination of the two.

Breakfast has been considered a key meal to assist children in meeting their nutritional needs. The BAAAD study revealed that approximately 75% of boys stated that they ate breakfast every day, while only 50% of girls ate a daily breakfast. It should be noted that 2% of boys and 4% of girls stated that they never ate breakfast.

In terms of energy (or total calories) the intakes for both males and females in this age group, appear to be lower than previously reported. Since it is known that body weights in this age group have actually increased, it is not clear if this is due to under-reporting of energy intakes or decreased activity levels, or a combination of both. Macronutrient (carbohydrates, fat and protein) distribution is within the recommended ranges for both genders. However micronutrients (vitamins and minerals such as calcium and iron) remain a concern especially for older teenage girls where low intakes are noted in iron, calcium, and folate.

In another study of senior high populations, 2600 Alberta and Ontario students were surveyed from grades 9 and 10 in the 2002-2003 school year. For food group intakes, the older age groups did not meet the minimum servings of vegetable and fruits or dairy groups. In terms of the "other" food group, on average males consumed 6 servings per day and on average, females consume 4 ½ servings per day. For micronutrients, median intakes are low in both sexes. On average males were low in the intakes of calcium, folate, and zinc and females are low in iron, calcium, folate and zinc (McCargar et al, 2005).

The population health approach recognizes that there are other factors affecting the eating patterns of Alberta children such as the social determinants of health. In a paper commissioned by the Alberta Coalition for Healthy School Communities (2006) it was found the "socioeconomic disparity has a negative impact on healthy lifestyle such that disadvantaged youth are more at risk due to high prevalence of obesity and smoking" (p1). The profound interaction between socio-economic status and health and education outcomes among school-aged children and youth cannot be ignored when planning and implementing school nutrition initiatives. More attention to this interaction needs to be present in discussions about moving health promotion forward in Alberta.

5. What is happening in school nutrition?

School nutrition initiatives are receiving widespread attention and there are rapid developments in jurisdictions around the world. The following is a snapshot of school nutrition initiatives taking place internationally and in Canada.

United Kingdom

A Children's Food Bill is before the British parliament with final reading and a vote set for June 16, 2006. The Bill seeks to provide a legal framework for the regulation of marketing food and the provision of food, in schools. This bill will address 5 key issues:

- food vending in schools
- providing healthy meals
- ending 'junk food' marketing to children
- teaching cooking and healthy eating skills
- promoting fruit and vegetable consumption

The United Kingdom is a leader in the area of comprehensive school health as illustrated in the Leeds Active Programme Promoting Lifestyle Education in Schools (APPLES) initiative. APPLES was a multi-disciplinary, multi-agency program designed to reduce risk factors for obesity. The target audience was students from ages 8 to 10 and their entire school community. The program took place in Leeds, United Kingdom and was a randomized controlled trial that focused on nutrition and physical activity.

The intervention included teacher training, modification of school meals and the development of school action plans targeting physical education curriculum, tuck shops, and playground activities. The program was successful in increasing knowledge and producing changes in school culture and children's attitudes towards health. The effect on children's behaviour was a modest increase in vegetable consumption. The lack of parental involvement and the short duration of the study were identified as significant limitations. Evaluation included formative, process and outcome evaluations. More information on APPLES can be found at http://www.hhrc.net/bpt/pubs/hhrc_best_prom_schl_v100.pdf

United States

The United States has initiated a national legislated policy with regards to school nutrition. Under the terms of the Child Nutrition and WIC Reauthorization Act, by July 1, 2006 every school that participates in the school lunch or school breakfast program must have a Local School Wellness Policy in place. The new policy will establish nutrition standards for all foods sold in school,

including vending machines, *a la carte* lines, and school stores. The policy must use a coordinated approach and include an evaluation component. Schools are to set up a school health advisory council involving parents, students, and community members, as well as have a designated coordinator.

The comprehensive approach to school nutrition promoted by the Center for Disease Control (CDC) is recommended to State and school boards as they work on their Local Wellness Policy. The CDC outlined 6 approaches for improving school nutrition:

- Establish nutrition standards for foods sold in school (not part of national school program)
- Influence food and beverage contracts to reduce foods of low nutritional value
- Make more healthful foods and beverages available
- Adopt marketing techniques to influence children's choices of healthier foods
- Limit student access to competitive foods
- Ensure healthy choices are used in fundraising initiatives and as rewards

The CDC has excellent resources on their website to support the creation of Wellness Goals at the school board level (<http://www.fns.usda.gov/tn/Healthy/wellnesspolicy.html>). The state of Kansas also has notable policy guidelines in nutrition, physical activity and tobacco reduction and are available at

http://www.ksde.org/kneat/SNP/SNPDocs/Wellness/Wellness_Policy_Guidelines_Booklet_Final.pdf

Finally, a very recent development in the US provides impetus for enhanced school nutrition. The Alliance for a Healthier Generation (a joint venture of the American Heart Association and the William J. Clinton Foundation) has negotiated a recent landmark agreement: high calorie beverages will not be sold in most U.S. schools in the coming years. Major beverage distributors have agreed to sell only water, unsweetened juice, low-fat and fat-free milk, diet pop, and unsweetened sports drinks and teas, in American schools. The companies that have agreed to follow these guidelines will implement the changes by 2009.

Canada

The Government of Canada conducted an extensive review of the health knowledge and behaviours of Canadian youth (Heath Canada, 2001) and as a result, the Scientific Review Committee for Nutrition Recommendations made the following suggestions regarding school nutrition.

Provincial, territorial and municipal governments are encouraged to:

- fully integrate nutrition into curricula at all levels of the formal education system, including teacher education programs.
- recommend that food served in Canadian schools be consistent with *Canada's Food Guide for Healthy Eating*.
- initiate coordinated comprehensive food and nutrition policies in schools.

There are national and regional associations dealing with various aspects of a comprehensive school health approach to nutrition. See Appendix 2 for a detailed environmental scan conducted in May 2006 by the Joint Consortium for School Health Secretariat and used in this document with permission.

The provinces are at different phases of school nutrition initiative development but most are committed to the process. Many provinces have started with the development and dissemination of school food and nutrition guidelines and others are working on enhancement of school environments and curriculum.

Specific provinces in Canada such as British Columbia, Manitoba, Nova Scotia, New Brunswick, and Ontario are in the development phase of creating comprehensive approaches to school nutrition. Some noteworthy details of their plans are highlighted below.

British Columbia

- *Making it Happen: Healthy Eating at School* was developed in partnership with the BC Knowledge Network to provide on-line resources for parents, teachers, and policy makers.
- In 2005, the government stated an intent to increase by 20% the proportion of British Columbians consuming the recommended daily level of vegetables and fruit; to decrease by 20% the proportion of the population who are overweight or obese, and to 'eliminate junk food' in schools in the next four years. To support this, a *Fruit and Vegetable Pilot Program* was announced in March 2005. The Ministry of Health Services provided \$300,000 for a pilot study in 10 elementary schools. One serving of BC grown fruits or vegetables was provided twice a week to every child. The program is administered by the BC Agriculture in the Classroom Foundation and partnerships were formed with supermarkets and distributors.
- The province has released *School Food Guidelines*. These guidelines refer to foods sold in schools but do not refer to foods brought to school by students. They emphasize that foods that are higher in nutrients be served in schools and categorize foods as "choose most often", "choose sometimes", "choose least", and "not recommended". See http://www.bced.gov.bc.ca/health/guidelines_sales.pdf
- Each school is required to complete a school food sales and policies report that will provide a baseline of what is currently being provided in BC schools and what policies are in place.
- Dietitians of Canada, BC Region, received a grant from the BC Ministry of Health Services to increase awareness and understanding of best practices that can assist BC schools and school districts support healthy eating among children and youth. This report is entitled *Feeding the Minds and Bodies of BC Students*. A fact sheet was created regarding this project which can be found at www.dashbc.org/sfnp/dc/overview.html

Manitoba

Manitoba is taking action on food and nutrition in schools through the Healthy Schools initiative (Manitoba Education, Training and Youth, and Healthy Child Manitoba) and through a continuing partnership with Manitoba Council on Child Nutrition, regional health authorities, and other agencies. The Manitoba government supported consultations with Manitoba schools regarding desired approaches to food and nutrition guideline development. The resulting handbook acts as a resource and guide for schools and school divisions to develop their own nutrition policies. A draft copy is available at <http://www.gov.mb.ca/healthyliving/handbook.html>.

Ontario

- December 2004, the Ministry of Children and Youth established *Nutrition Guidelines for Student Nutrition Program* as part of the new service delivery model for the program. The guidelines are intended to assist student nutrition program providers in selecting nutritious foods for breakfasts, lunches, and snacks in order to promote healthy eating habits among children and youth across the province. They outline which are healthier, more nutritious food options to be served. <http://www.edu.gov.on.ca/extra/eng/ppm/135.html>
- Healthy Foods and Beverages in Elementary School Vending Machines is the subject of a Ministry of Education Policy/Program Memorandum, effective October 2004 that places restrictions on what can be vended in elementary schools. Detailed criteria have been developed for evaluating the nutritional value of foods and beverages based on nutrition label reading. http://www.dietitians.ca/news/downloads/DCRpt1_Eng_OntarioSchoolFood.pdf

Nova Scotia

- The *Healthy Eating In Nova Scotia* (HENS) strategy was released March 2005. Developed by multisectorial stakeholders, it will serve as a planning framework to guide coordinated, evidence-based actions, decisions and resource allocations on nutrition and healthy eating. The 4 main priority areas are breastfeeding, children and youth, fruit and vegetable consumption and, food security.

- From the children and youth priority area, has come the development of the comprehensive *Food and Nutrition Policy for Nova Scotia Public Schools* (FNPNSPS). http://www.ednet.ns.ca/healthy_eating/pdf/school_food_consultation_draft.pdf This policy has undergone extensive consultation and focus group testing. It outlines standards for foods and beverages served and sold in schools (K-12) (e.g., "suitable to sell daily", "suitable to sell occasionally", "not suitable to sell"), promotes nutrition education curriculum, encourages community partnerships, and provides supportive environments for healthy choices (e.g., fundraising and classroom rewards ideas). It is intended to increase access to and enjoyment of health-promoting, safe, and affordable food and beverages served in schools.
- To support the HENS strategy, NSHP (Nova Scotia Health Promotion) has provided a variety of funding opportunities (\$360,000 to hire an additional public health nutritionist for each of the nine district health authorities, \$60,000 local HENS implementation funding, \$250,000 FNPNSPS implementation, \$500,000 Health promoting Schools programs, and \$750,000 expansion of elementary school breakfast programs (Amero & Murton, 2006)

New Brunswick

- The province's 14 school districts have received funding totalling \$231,564 from the Healthier Foods in School program in 2005-06 to promote healthy eating for students in grades 6-8. The money will go toward promoting the availability and consumption of vegetables and fruit by the students.
- These grants, together with the [Healthier Foods and Nutrition in Public Schools policy](#), help the school community learn the benefits of making healthy food choices.

Alberta

Although there is no provincial framework for comprehensive school health or a comprehensive approach to school nutrition, work has been done in several areas. In March 2004, the Canadian Cancer Society in collaboration with many partners prepared a report on a project called *Action in Schools for Physical Education and Nutrition (ASPEN)*. ASPEN provides a detailed description of recommendations to improve physical education and nutrition in schools, possible implementation strategies, and promising practices associated with each of the recommendations. See http://www.cancer.ca/vgn/images/portal/cit_86751114/30/21/820566220niw_ab_Aspen-Report-Final.pdf.

The key recommendations from ASPEN are as follows:

- Adopt and support the comprehensive school health model as a framework to promote wellness, active living, and healthy eating behaviours among Alberta's school age children.
- Ensure that health and physical education subjects are delivered by knowledgeable teachers who are enthusiastic about wellness and equipped to effectively deliver both programs of study.
- Require the involvement of all stakeholders – school staff, parents, students, interdisciplinary professionals and community members -- in creating healthy school environments. Support this involvement with ongoing opportunities for interdisciplinary professional and public education, related to physical activity and nutrition at the school, board and ministry levels.

The Alberta Coalition for Healthy School Communities Strategic Plan (2003-2007) has an objective that states: "The ACHSC network provides school communities with the support they need to develop and implement healthy school policies." One strategy articulated to address this is: "In collaboration with network partners, explore the development of position papers to address areas for improvement and areas where new policies should be considered." This paper addresses this objective and builds toward the outcome that "School communities have the support they need in developing, implementing and evaluating healthy school policies."

The *Education Act of Alberta* and the Alberta Education Programs of Study are the policy documents governing education in Alberta. These documents set the learning outcomes for

Kindergarten to Grade 12 and become the criteria for all learning strategy materials. The Ministry has developed learning outcomes for the health curriculum from Kindergarten to Grade Nine and has also incorporated health curriculum into the Grades 10 to Grade 12 Career and Life Management curriculum (CALM). Nutrition is a component of this health and CALM curriculum but is not mandatory and is not necessarily taught to all children and youth in Alberta.

In addition, Alberta Health and Wellness produced a *Framework for a Healthy Alberta* and in that document it was identified Albertans need to eat more healthy foods and they use vegetable and fruit consumption and healthy weights as performance indicators. Furthermore, work is currently underway to develop a provincial *Healthy Alberta School Initiative*. To facilitate this work, a School Health and Wellness Manager position has been created and co-funded by the Ministry of Health and Wellness and Alberta Education. School nutrition policies/guidelines may be included in the Healthy Alberta Schools plan and consultation with other ministries and education and health sector stakeholders will determine priority strategies and policies.

Several school nutrition initiatives were funded through the Public Health Agency of Canada's Population Health Fund in 2003-2005. Programs used various health promotion strategies such as

- developing personal skills through cooking classes,
- raising public awareness
- influencing school environments through policy development,
- engaging the wider community through family gym nights, summer camps, and intersectoral steering committees.
- addressing cultural and economic barriers.

Some of these initiatives were sustained following the grant by various agencies such as the school board in Peace Country, Family and Community Support Services in Vermilion, and the Palliser Regional Health Authority.

Some regional health authorities support comprehensive school health and school nutrition initiatives in a formal and systematic manner, notably, David Thompson Health Region and the Calgary Health Region. Creating a culture throughout Alberta that supports comprehensive school health and school nutrition initiatives would ensure all Alberta children grow and learn in the healthiest environment possible.

6. What is SUCCESS in Comprehensive School Health and Nutrition?

"Rethink school health away from kits and projects to solve problems and use the school as an ongoing setting where health is created, supportive environments are built, partnerships are made and many skills are learned" (St. Leger, 2004).

The comprehensive school health approach is considered the best or promising practice in promoting school health. See Appendix 1 for the Alberta Coalition for Healthy School Communities description which was formulated by reviewing the literature and models from authoritative sources such as the World Health Organization (http://www.who.int/school_youth_health/gshi/hps/en/), the Canadian Association for School Health (<http://www.schoolfile.com/cash/consensus.htm>) and the Center for Disease Control in the US (<http://www.cdc.gov/HealthyYouth/CSHP/> ; <http://www.cdc.gov/mmwr/PDF/RR/RR4509.pdf>).

The SUCCESS model for school nutrition initiatives indicated below was developed through review of the key references for comprehensive school health and through the knowledge and experience of the writers and reviewers of this paper. The acronym and the key elements support all aspects of comprehensive school health approaches to school nutrition.

Keys to Nutrition SUCCESS in comprehensive school health

S = School food and nutrition guidelines are developed to provide context and direction

U = Use foods served in school to reinforce nutrition guidelines and curriculum

C = Curriculum involves experiential nutrition education that is fun, culturally relevant and developmentally appropriate

C = Community programs, resources and services are engaged in healthy eating initiatives in schools

E = Encourage parent and family involvement in healthy eating at home and at school

S = Student and youth are engaged as leaders and decision makers regarding healthy eating at school

S = School staff support and participate in healthy eating initiatives in school

S = School food and nutrition guidelines are developed to provide context and direction

Schools need to establish school food and nutrition guidelines to help make healthy choices easy for the school community. Guidelines should be broad enough to address more than one aspect of the school food environment.

The *BC Interior Food Policy* (2005) initiative proposed that guidelines be comprehensive in order to have impact on a majority of factors that affect the school food environment. Guidelines could include the following factors:

- Vending machines
- Foods available at special events, special lunch/snacks, in-class parties, field trips, staff lunches
- Foods available in cafeterias and canteens
- Pricing and promotion of foods
- Alternatives to using candy as reward in classrooms
- Choosing healthy options for fundraising
- Food security
- Ensuring students have adequate time and space for eating breakfast and lunch
- Teachers and parents as role models
- Handling common food allergens
- Catering contracts and events
- Food Safety
- Food packaging

School food and nutrition guidelines provide a context for the implementation of nutrition changes and improvements and help direct future program development. It communicates to all key stakeholders the importance of nutrition and suggests how various elements interrelate to provide a comprehensive school health approach to achieving healthy eating behaviours.

School food and nutrition guidelines that have been created by various provinces (e.g., Ontario, Saskatchewan and British Columbia guidelines are reviewed in Appendix 2) have similar aims in that they are intended to assist stakeholders at the school level to make decisions regarding specific foods that should be offered within the school. Guidelines aim to minimize or eliminate foods with minimal nutritional value such as foods that are high in fat, added sugar, salt, caffeine and/or calories. Emphasis is placed on offering foods that demonstrate maximum or moderate nutritional value based on vitamin and mineral content, are generally low in added fat, sugar and or salt and are found within one of the food groups in *Canada's Food Guide to Healthy Eating*. As well, increased water consumption can be part of the guidelines.

U = Use foods served in school to reinforce nutrition guidelines and curriculum

Make healthy food choices available in schools in order to facilitate healthy eating. Studies have shown that the availability of food has an impact on food selections (Dietz & Gortmaker, 2001; Kubik, Lytle, Hannan, Perry & Story, 2003). Success stories about food changes in schools are numerous (see for example CDC's Making it Happen (2005) www.cdc.gov/healthyyouth; School Nutrition Handbook, Calgary Health Region at www.calgaryhealthregion.ca/nutrition).

Stakeholders want information to understand what are considered healthier food choices and obtain clear direction and guidance about food selection. Guidelines about appropriate foods offered in schools is critical to increase access to nutritious foods within the school. One of the barriers frequently cited in the literature and by local Alberta schools is that there is a lack of understanding about what constitutes a healthier food choice (McKenna, 2003). Presently, the decisions about offering specific foods are not defined and questions about the suitability of particular foods are not well addressed. For instance, in some schools in Alberta chocolate milk is not allowed while at other schools it is considered a healthy choice. Schools are left to make specific food decisions on their own.

In some cases, dietitians, food service personnel or other health professionals are consulted and in other cases they are not. However, there may not always be agreement with regard to the suitability of all foods even among health professionals. This type of inconsistency is widespread and does not necessarily advance positive nutrition behaviour. Therefore, it is important to come to some consensus on school nutrition guidelines.

Pricing is an important consideration for children and youth when purchasing healthy foods at school. Research has shown that higher priced healthy options do not necessarily sell while pricing healthy options competitively or lower than unhealthy ones may improve sales (French et al, 1997). It is important to ensure that healthy food choices are priced competitively or even lower than unhealthy choices to encourage sales.

There are several examples in Alberta schools where vending machine choices or cafeteria menu options have been adjusted to reflect healthier choices and sales data and student survey results indicated satisfaction with the healthier options. Also, consider all venues that sell foods in the school and ensure consistency if possible (for example vending machines and canteens). School food and nutrition guidelines can also address where food is consumed. There should be sufficient time and appropriate space allotted at mealtime to ensure that food is consumed.

C = Curriculum involves experiential nutrition education that is fun, culturally relevant and developmentally appropriate

The *Guidelines for School Health Programs to Promote Lifelong Healthy Eating* recommends that instruction for students "provide nutrition education through developmentally appropriate, culturally relevant, fun, participatory activities that involve social learning strategies (CDC, 1996). Nutrition education is critical to a comprehensive school health approach and behaviour change in children correlates with the amount of nutrition instruction received (American Dietetic Association, 2003).

There are synergistic gains in the area of learning if the formal curriculum is integrated into the approach where all components address the whole school nutrition environment. Time and partnerships are needed to build a shared understanding of both curriculum and health promotion concepts (IUHPE 2006).

As noted earlier, Alberta Education sets the learning outcomes for Kindergarten to Grade 12 and the Ministry has developed learning outcomes for the health curriculum from Kindergarten to Grade

Nine including nutrition. However, the health and CALM curriculum is not mandatory and is not necessarily taught to all children and youth in Alberta.

The barriers such as lack of support materials in the classroom and competing interest for time with other “required” curriculum reveal that there are opportunities to improve on existing nutrition education practices by promoting resources that have been created in Alberta and perhaps integrating nutrition education into other areas of the curriculum in addition to health. Experience working with school communities indicates the need for ongoing support to school communities to identify and use nutrition resource materials.

Non-classroom settings where food is purchased are also opportune venues for children to learn the knowledge and skills required for lifelong healthy eating. For example, Conklin, Cranage, and Lambert (2005) report that nutrition information provided at points of food selection (e.g., cafeteria, vending machines) among high school students has had impact on nutrition awareness and knowledge and on foods chosen.

C = Community programs, resources and services are engaged in healthy eating initiatives in schools

Communities are very influential to the health of school-aged children and youth. Communities shape the school environment and thus have influence over students’ nutritional habits and could reinforce nutrition education. Community involvement provides a broader base of support and may be helpful in promoting a consistent message in the curriculum and school environment.

Strong partnerships between schools and regional health authority community nutritionists and health promotion staff are essential to support school nutrition environment changes. These partnerships are crucial as is recognition that resources must be adequate to form and maintain linkages. Other associations can also be fostered between agencies such as Breakfast for Learning Alberta, Alberta Milk, food and beverage suppliers who may also support nutrition programming. Offering in-service opportunities and workshops to learn about a comprehensive school health approach to nutrition can help to clarify goals and lead to more effective partnerships.

In addition, non-governmental organizations such as the Heart and Stroke Foundation and the Dietitians of Canada provide valuable resources and services for schools. For example, Nutrition Month provides an opportunity to link school programs with an annual community education initiative. The value of such synergistic efforts demonstrate the ongoing value of communication among administrators, teachers, health agencies and the community at large to identify and address school needs.

In some cases, local businesses such as the grocery store or a local vendor may have innovative solutions to quandaries that schools encounter when making changes to the school food environment. See Appendix 3 for ideas of how the businesses community has helped to create solutions to barriers in the school nutrition environment.

The community can also partner with schools to provide training to the staff/volunteers in the school. Professional development is needed to: increase nutrition knowledge of educators, provide orientation to a health promotion approach, encourage children’s nutrition education, and to develop and deliver healthy menus. Staff development may encompass three categories:

- in-service workshops for teachers
- nutrition training for food service staff
- nutrition education for parent/volunteers and or student/volunteers.

Many nutrition education programs utilize a behavioral approach that may require teachers to practice before implementation in their classrooms. Studies have shown that training in the use of programs encourages familiarity with the methods used and results in more consistent program usage (Contento et al, 1992). In addition to initial orientation, staff benefit from regular refresher

training that integrates new materials in the ever-changing field of nutrition. Currently, this is an area of need in that the health curriculum is implemented with little educational support to teachers.

E = Encourage parent and family involvement in healthy eating at home and at school

Involving parents and families affords opportunities to encourage and reinforce healthy behaviours that children learn at school, and may contribute to longer lasting changes through reorientation of family attitudes and habits. Parents serve as role models and may need to be supported in their knowledge of nutrition and skills in order to assist their children at home (CDC, 1996; Nader et al., 1996). As 'gatekeepers' and role models, parents provide opportunities and reduce barriers for their children practicing healthy food choices.

Alternately, children may become change agents for their families as a result of the nutrition practices that they learn at school. In addition, parents provide a unique perspective in terms of the challenges and opportunities that may be present in the home setting. Research has shown that interest and support provided by parents is highly influential for youth (OPHEA, 2002).

Parents and families may prefer involvement with home activities rather than through school meetings (Hosig & Rodibaugh, 1998). Suggested methods to directly reach parents include information letters, nutrition homework activities and requests that healthy snacks and lunches are sent to school with children. Consistent contact reinforces the value of parent and family involvement. Thus, the home environment provides a setting outside of school to reinforce nutrition education, encourage the adoption of new behaviours and make eating changes.

Parents can also bring a perspective about the broader community that may be missed if they were not involved (Nader et al, 1996). For instance, it may become apparent through feedback that students do not eat lunch because of insufficient time allotment for lunch. They may have important feedback about the willingness of parents to allow children to buy foods at school when considering changes to vending or cafeteria offerings. In addition, they may know of community supports and services that would be of benefit to the school with respect to food and nutrition and may identify needs for meals programs. Many breakfast and meal programs in schools also rely on the volunteer support of parents. Parent involvement in school food initiatives is essential for sustainable success.

S = Students and youth are engaged as leaders and decision-makers regarding healthy eating at school

Active and meaningful involvement of children and youth in school nutrition initiatives relates to a fundamental principle of health promotion: The involvement of those whose health is to be influenced is essential. There seems to be both a personal and a communal benefit to participation.

Research relating to youth involvement and the promotion of healthy eating indicates that students who consider themselves highly involved in a peer education program eat more healthful foods than their non-involved counterparts (Hamdan, Story, French, Fulkerson & Nelson, 2005). Addressing peer pressure that discourages healthy eating and harnessing the power of positive peer examples can reinforce healthier behaviours. Children and youth may transfer lessons learned about healthy eating at school to their peers at school and outside of school. There may also be the added benefit of children and youth transferring lessons learned to their home environment.

It makes sense that changes to the school food environment will be more successful if all stakeholders, including students, are involved in decision making -- be it choices for the vending machines or menu options for the cafeteria.

S = School Staff support and participate in healthy eating initiatives in school

Schools with successful comprehensive school health approaches to nutrition have identified the importance of having school administration and staff support (Hansford, 2005; British Columbia Interior Food Policy Project, 2004). Support and leadership is necessary to establish a shared vision for creating a healthy school nutrition environment and maintain the commitment to action.

The support of administration and staff is essential in the area of staff time and monetary resources to develop and sustain permanent nutrition changes in schools (Dietitians of Canada, 2005). When staff is supported with time and resources to support healthy eating initiatives in their school, school nutrition is tailored to meet the needs of the student population, and sustainability of initiatives is achieved.

Involvement is also vital because staff serve as role models for school-aged children and youth. This role modeling can be seen in such strategies as having students see teachers and staff eating nutritious foods at school, staff refraining from talk about dieting and food likes or dislikes in front of students, serving only nutritious foods in the classroom, and choosing rewards that are non-food rewards. Encouraging children to eat breakfast and lunch and modeling the same, are key roles for staff.

Schools are a major employer in Alberta. School staff includes teachers, administrators, administrative support, janitors, volunteers and food service personnel. There is evidence supporting the importance of workplace wellness initiatives in promoting healthier behaviours by staff. Programs that support improving the nutritional health of staff could make a significant difference in their health outcomes.

7. What are the barriers to SUCCESS?

In developing the School Health Pathway for *Practice-based Evidence in Nutrition* service, the Dietitians of Canada examined the results of a literature review, an environmental scan, focus group feedback from various school stakeholders in British Columbia, and a survey of 162 school principals in Alberta. Four primary barriers to placing nutrition and healthy eating as a priority in schools were identified:

1. Inadequate support from all stakeholders including parents, school administration and staff, district decision makers and governmental policy-makers.
2. Lack of awareness, including what foods are considered healthy and the link between nutrition and health/performance/behaviour.
3. Lack of financial support from governmental policy- and decision-makers, school district policy- and decision-makers, fund-raising projects and vending contracts.
4. Lack of human resources and support for program implementation.

Understanding these barriers early in the planning process and developing strategies to address them effectively is critical to ensuring successful implementation of school nutrition guidelines.

Sometimes the barriers encountered have to do with beliefs such as:

“Students do not like to eat healthy foods and healthy foods will not sell”

Response: Many schools throughout Canada and the United States have successfully implemented nutrition policies that emphasize healthier choice and have seen improved sales and positive responses from students.

Or

“Not offering student the option to purchase junk food takes away their freedom to choose”

Response: Schools have a responsibility to provide healthy food choices, providing only unhealthy choices also does not allow students the freedom to choose

Or

“We rely on revenues from fundraisers to supplement important school activities”

Response: It is shortsighted to fund our schools at the expense of our children’s health. In the long run we are sure to spend more on diet-related health care costs than we can raise selling sodas and junk food in schools.

Increasingly, nutrition guidelines and handbooks include compelling rebuttals to arguments against fostering a healthier food and nutrition environment at school.

8. How do we take action on school nutrition?

“The health promoting school approach was found to have a beneficial effect on: the social and physical environment of the school, staff development, provision of school lunch, provision of exercise programmes, and the school’s social atmosphere.” (Stewart-Brown, 2006)

Planning a school nutrition initiative is a gradual process at the individual, school and community level. It may begin by targeting a single activity and continue to expand to other activities as support and resources allow. It is recommended to begin with a small initiative that will demonstrate success in a relatively short amount of time while striving for additional changes to create a comprehensive school health approach to nutrition.

It is important to begin by engaging key stakeholders and by assessing the priority areas for nutrition in the school. Financial support may be necessary to initiate and maintain nutrition change and program improvement. Healthy eating at school takes time and can often be difficult to measure, especially in the short term. Changing the school environment is not a short term project and the changes to transform a school community can take 2-3 years to attain specific goals and sustaining efforts may take as long as 5-7 years (IUHP 2006).

Using effective implementation strategies for school nutrition interventions can be a way of challenging the barriers. There is a convergence of thinking about critical steps that are necessary for beginning a comprehensive school health nutrition initiative. They are summarized as follows:

1. Find a Champion.

Change generally comes about when someone sees a need for change and is willing to take action and lead. This champion can come from any level of “decision-making” in the school community and can be a parent, teacher, superintendent, a group of parents, a group of students or staff, or a school health advisory committee.

It appears to be very important that the principal of the school supports the initiative. Involving the student population is also critically important as the power of peer interaction cannot be underestimated.

2. Create a team.

A good first step is to bring together a group of interested people and discuss shared concerns. The team should consist of those willing to make a commitment to participate actively and stay involved.

Representation on this team should include all stakeholders – administration, staff, parents, students and community. Building community capacity and using a CSH model allows the entire school community to work together to set the direction and to strategize on school nutrition initiatives.

3. Conduct an assessment.

Although this may seem tedious, it will help to identify what services are currently available and doing well, and where gaps may exist. An assessment should be completed of the school food environment, the school nutrition curriculum, the food services available and the existing community links. An good example of a School Healthy Eating Assessment tool developed in BC can be found at www.knowledgenetwork.ca/makingithappen.

4. Develop an action plan.

Once the priorities have been identified and what actions the team wishes to take, a plan needs to be developed. It is critical that schools write guidelines and make decision based on what is most relevant to their school. There is no “cookie cutter” approach to creating a comprehensive school health approach to nutrition.

5. Put the plan into action.

A plan that starts with small steps leading to quick success is often most effective. All members of the team should be involved to build support and create sustainability. Research has demonstrated the need for dedicated and adequate time and resources to develop, implement and evaluate nutrition initiatives (Hansford, 2005; McKenna, 2003).

6. Evaluate.

This will provide important information on the effectiveness of programs and activities and can be used to enhance programming and to influence decision makers and funders. It is important to monitor progress and allow for ample time to show changes.

7. Celebrate successes!

Communicating activities and successes to the school community is one of the best ways to support the message for improving school nutrition. It is also a viable tool to help bring in additional team members and gain support for the initiative.

One recommended resource for facilitating the process of school health promotion initiatives is the Queensland Departments of Health and Education (2001). *A toolbox for creating healthy places to learn, work and play*. This is an excellent manual and includes an audit tool with a short section on nutrition. See <http://www.chdf.org.au/> for entire toolkit or http://www.chdf.org.au/i-cms_file?page=824/hpsbook07.pdf to link to audit tool.

9. How do we monitor and evaluate school nutrition initiatives?

"Programmes on healthy eating and physical activity are [also] among the most effective health promotion programmes" (Stewart- Brown , 2006)

Appropriate and practical methods and tools are needed to monitor and evaluate the process and outcomes of school food and nutrition initiatives. Finding a balance between conducting an evaluation and harnessing the time and resources can be challenging. It is useful, however, for schools that are implementing nutrition initiatives (e.g., guidelines, curriculum supports, healthy food choices, family and youth involvement) to track and report on successes and challenges.

Questions naturally arise regarding whether the initiatives make a difference in the eating patterns of children and youth. Research has been conducted to study such things as consumption data, food sales data, and physiological measures such as Body Mass Index. Measuring and reporting on these types of outcomes are rarely achievable for local school communities without considerable support from the research community and a long-term commitment from stakeholders.

There is a growing body of evidence to suggest that when school food and nutrition initiatives are implemented in a comprehensive manner, positive outcomes can be achieved with respect to child health. For example, Veugelers and Fitzgerald (2005b) reported lower rates of overweight and obesity among children in schools that implemented comprehensive school health approach to nutrition versus schools with little or no nutrition programming.

Stewart – Brown (2006) recently wrote one of the most important articles to be published in school health promotion. This systematic review commissioned by the World Health Organization - Health Evidence Network regarding the effectiveness of health promoting schools states the following:

"The school health promotion programmes that were effective in changing young people's health or health-related behaviours were more likely to be complex, multifactorial and involve activity in more than one domain (curriculum, school environment and community). These are the features of the health promoting schools approach, and to this extent these findings endorse such approaches. These findings of the synthesis also support intensive interventions of long duration. These were shown to be more likely to be effective than interventions of short duration and low intensity. This again reflects the health promoting schools approach, which is intensive and needs to be implemented over a long period of time." (p 17)

Utilizing the findings from studies such as this can help build the case for school nutrition initiatives. However, published studies do not adequately support local school community initiatives. Finding and using practical methods and tools for monitoring and evaluating school nutrition initiatives that fit for each school community is important to identify effective processes and outcomes and to communicate successes and learnings. Notable methods and tools to monitor and evaluate school food and nutrition initiatives are highlighted below:

- A practical Canadian tool that captures both the process and impact of school food and nutrition initiatives was developed by the *Interior BC School Food and Nutrition Policy* project. Process and outcome evaluation tools were designed to track the project's successes and challenges and assess if the project achieved its' goals and objectives. The toolkit is available online at www.dashbc.org/aboutnp/sfnp.html and includes the following elements:
 1. Questions for the School Food Advisory Committees
 2. Focus Group Questions for Students, Parents, Teachers and Staff
 3. Classroom Nutrition Activity and Experience Logs
 4. Access To Healthy Foods (Pre and Post) Report Card
 5. School Food Sales Log
 6. Parent/Caregiver Questionnaire
- The Act Now! BC and Knowledge Network from British Columbia created a valuable tool on the *Making It Happen. Healthy Eating at School* website. The website has assessment tools and a three question "Check Point" on school nutrition policy. http://www.knowledgenetwork.ca/makingithappen/school_nutrition/index.html
- Another promising tool is from Australia created by the Children's Health Development Foundation. *SMART: School Mapping and Reviewing Tool* is a new survey tool that allows schools to 'Map' their learning and health activities. This information can be used to identify areas for development, and to monitor change. <http://www.chdf.org.au/>

- Other interesting websites to explore are from The Centre for Nutrition and Advanced Marketing which has compiled a listing of tools to measure change in school environments. http://socialmarketing-nutrition.ucdavis.edu/Tools/SomarkToolsList.php?key_m=6; Team Nutrition USDA <http://socialmarketing-nutrition.ucdavis.edu/Tools/Downloads/ChangingSceneISNE.pdf> and the Centre for Disease Control and Prevention, School Nutrition and Physical Activity Environmental Audit Form, Vending Machine Audit http://depts.washington.edu/dohuwmps/MountVernon/env_audit.pdf

10. What are the next steps for Alberta?

The intent of this paper is to provide a foundation for strategic directions for school nutrition initiatives in Alberta. Successful school food and nutrition initiatives appear to require a comprehensive approach, that is, establishment of policy or guidelines, influencing the social and physical environments, strengthening health education, and developing positive partnerships in the community. The following points summarize the SUCCESS approach articulated in this paper:

- There is evidence that **school food and nutrition guidelines** can be effective in improving the health of school-aged children and youth. Some school boards and schools in Alberta have developed their own food and nutrition guidelines however the extent to which these are in place is unknown.
- Alberta Education has developed nutrition outcomes for all grade levels and an experiential **curriculum**. It would be advantageous to build on the health curriculum and support enhanced focus on nutrition through augmented classroom resources and teacher education.
- **Involvement** of children, youth, parents and school staff in creating a comprehensive school health approach to nutrition is critical for effectiveness and sustainability. There are many Alberta success stories and these need to be shared widely across the province.
- Strong **community partnerships** need to be formed with organizations, institutions and businesses. Increased access to community/public health nutritionists is one strategy being implemented in other jurisdictions. Businesses and non-governmental organizations can play an instrumental role through such activities as providing healthy breakfast and lunches, and supporting healthy vending machine options.

The next steps in developing school food and nutrition initiatives in Alberta need to be determined in consultation with government departments, school boards, school communities, and health authorities. The time is now for taking action on improving school-ages child and youth health.

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Appendices

Appendix 1 – What is Comprehensive School Health (CSH)?

A comprehensive school health (CSH) approach to health promotion in the school setting is recognized around the world as best or promising practice. The World Health Organization, International Union for Health Promotion and Education, and the Public Health Agency of Canada are three organizations that advocate for CSH.

Numerous initiatives across Canada, Australia, United Kingdom and United States are reported in the literature and indicate promising outcomes (Stewart-Brown, 2006). The term *Comprehensive School Health* is used in Canada, *Health Promoting Schools* is used in Europe and Australia, and *Coordinated School Health Program* is used in the United States. All generally recognizes the following interrelated components as advocated by the Alberta Coalition for Healthy School Communities (ACHSC Strategic Plan, 2006):

- A 'whole' school approach is adopted where students, teachers, parents, school staff, community groups, agencies, and institutions work together on key priorities for improving health and educational attainment.
- Priority health issues are addressed and capacity is strengthened through integration, coordination, and enhancements to:
 - a) curriculum and teaching methods,
 - b) social and physical environments, and
 - c) home, school, and community partnerships and services.
- Identified champions of the CSH approach provide leadership in schools.
- Facilitation of coordinating processes in schools helps assure success.
- Strategies or interventions that are implemented are evidence-based or have a strong indication that they are best practice.

Components of CSH are clearly and unequivocally linked to the Ottawa Charter for Health Promotion (Health Canada 1986) and are designed not only to affect individual health behaviours, but also to modify environments in which children and young people live and learn. The Ottawa Charter is a key document in the advancement of health promotion literature. It was a catalyst that broadened health promotion approaches from lifestyle factors to considerations for the social and physical environment in which we live (WHO, 1986). Comprehensive school health calls for an integrated approach that encourages health for students, families and the school community. This approach includes:

1. Understanding of the broad factors that affect health: not simply risk factors such as poor diet and lack of exercise but also *risk conditions* such as lack of financial resources and lack of sense of belonging.
2. Emphasizing proactive approaches that work to address root causes of poor health by focusing on the conditions and environments in which people live, learn, work, and play.
3. Ensuring the participation of individuals and communities whose health is to be influenced.
4. Strengthening collaboration through broad-based, multidisciplinary, and intersectoral partnerships (e.g., health, education, children's services, and community development).
5. Respecting skills, values, and experiences of diverse people and cultures.
6. Developing policies that are supportive of health.
7. Pursuing social justice to reduce health disparities.
8. Recognizing that "it takes time".

Appendix 2

An Environmental Scan of Pan-Canadian Activities related to Schools and Nutrition

Completed by the Joint Consortium For School Health Secretariat

May 29, 2006

Introduction:

The responsibility for school health lies with the provincial and territorial governments and school boards. Provinces and Territories play a critical role in promoting and supporting healthy eating at the community level, including in schools. National and provincial/territorial agencies and non-governmental also make significant contributors to promoting and supporting a comprehensive school health approach to healthy eating. The federal government, particularly Health Canada and the Public Health Agency of Canada is committed to helping Canadians maintain and improve their health and recognizes the important role that nutrition plays in the health of children and youth. In recent years there has been considerable effort and gains made in the area of nutrition and schools.

This environmental scan is a work in progress that overviews the relevant past, current and planned activities that the provincial, territorial and federal governments as well as national and PT non-governmental organizations and agencies are undertaking. The information was collected primarily from a Web-based search, existing relevant sources of data (e.g. other environmental scans that have been done by different jurisdictions) and through a review process involving JCSH School Health Coordinators and their colleagues. This preliminary draft of the environmental scan is designed to inform delegates of the National School Health Conference, May 23-26, 2006 to be held in Vancouver, BC. A more inclusive, though “evergreen” version will be posted on www.jcsh-cces.ca and shared with interested parties. Special thanks are extended to those who have contributed to the scan thus far and who will do so in the future.

This Pan-Canadian environmental scan captures information related to national and provincial and territorial activities. Regional and local level activities, while not solicited, may have been provided by key-informants and hence a small sampling of what is currently ongoing has been included in this draft. Clearly much could be gained by expanding the search to the regional and community levels. Resource limitations dictated a pan-Canadian scan to begin with – upon which others are encouraged to build. Relevant international activities, while numerous and worthy of examination, are also beyond the scope of this scan.

In searching for data attention was paid to work underway that demonstrates a more **systems capacities approach to school health**. Elements of such an approach include: coordinated policy development processes that include implementation and evaluation plans and visible support from system leaders; staffing and infrastructure to support coordination and cooperation at all levels; formal and informal mechanisms to facilitate cooperation including formal agreements, shared development of vision and consensus documents, working with voluntary and professional associations and more; explicit procedures to identify emerging issues/trends and to identify shared priorities and urgent concerns; regular monitoring and reporting of child/youth health behaviours/status and health knowledge/literacy as well as local program practices and capabilities; ongoing work force development through changes to pre-service training and sustained professional development activities; active, planned and targeted knowledge development, transfer and exchange activities; explicit plans and procedures to ensure that the school health initiatives, policies and programs are sustainable, evaluated and evolutionary.

The hope is that this scan serves to capture key Pan-Canadian activities in order to provide a closer look at the efforts underway across Canada and to facilitate the sharing and coordination of efforts where possible. The scan is presented using the following four categories:

Part A: Policy Frameworks, Guidelines, Statements and the like

Part B: Surveillance & Monitoring Activities

Part C: School Nutrition Environment and Services

Part D: Curriculum (includes links to curriculum and curriculum support related resources and initiatives)

Part A: Policy Frameworks, Guidelines, Statements and Processes

Many provinces and territories are developing and implementing school nutrition programs and policies, stemming primarily from broader healthy living strategies, and are in varying stages of implementation. Some provinces have policies relating to vending machines, cafeterias and fundraising, while other provinces are taking a more comprehensive approach to encompass aspects such as food security and nutrition education. The following provides an overview of ongoing activities in this area:

There is currently considerable effort under the Healthy Eating initiative of [ActNow BC](#), a provincial health promotion program designed to support individuals in protecting and improving their health. As part of its ActNow BC program, the Province is introducing a series of measures to help improve the health of B.C. students. [Read more.](#)

[Guidelines for Food and Beverage Sales in BC Schools](#) were released in 2005. Schools and districts are encouraged to work with students, teachers, parents and others to develop strategies for implementing these guidelines. [FAQs for Education Professionals](#) http://www.bced.gov.bc.ca/health/health_publications.htm houses a variety of information documents geared to informing schools about healthy eating and supporting implementation of the guidelines.

A Report of the Provincial Health Officer (2003) provides a public health rationale for the school as a setting for health promotion: http://www.healthservices.gov.bc.ca/pho/pdf/o_prevention.pdf.

The Manitoba [Healthy Schools Initiative](#) (HSI) is a partnership between Manitoba Health/Healthy Living, Manitoba Education, Citizenship, and Youth, and Healthy Child Manitoba (which is a partnership of all departments connected to children). Launched in 2003, it has 3 key components: block funding to health authorities in year one and to school districts in year two; development of resource directories (the first being nutrition) and a grant campaign for schools to incite and support school-based activities (for more details on this campaign [click here](#)). Subsequent to the HSI, the [Healthy Schools framework](#) has been developed to guide educators, health professionals, parent councils and others as they work towards comprehensive school health in their communities.

June 2005 the Manitoba [Healthy Kids, Healthy Futures Task Force](#) released a report that included five recommendations around school food and nutrition. The recommendations have been accepted by government and are being phased in over a two-year period beginning in 06/07 school year. All schools will be required to have a written nutrition policy. Support to schools in this process being provided through Dietitians of Canada and [Manitoba Council on Child Nutrition](#). School nutrition guidelines will be provided to all Manitoba schools for the start of the 06/07 school year. A [forum](#) was held to support this process led by the [Dairy Farmers of Manitoba](#) in partnership with Manitoba Health and Healthy Living, Manitoba Council on Child Nutrition and [Dietitians of Canada](#).

The Manitoba [Alliance for the Prevention of Chronic disease](#) released paper on effectiveness of school nutrition initiatives.

Work is currently underway to develop a provincial [Healthy Alberta Schools Initiative](#) using a comprehensive school health approach; this will contain school nutrition guidelines. To facilitate this work, a School Health and Wellness Manager position has been created and co-funded by the Ministry of Health and Wellness and Alberta Education. School nutrition

policies/guidelines may be included in the Healthy Alberta Schools plan; further consultation with other ministries and education and health sector stakeholders will determine priority strategies and policies. The [Framework for a Healthy Alberta](#) identified the need for more Albertans to eat healthy foods using vegetable and fruit consumption and healthy weights as performance indicators.

Coalitions have been created to support work or lead initiatives in the area of comprehensive school health such as [Alberta Coalition for Healthy School Communities](#). (ACHSC), [Alberta Healthy Living Network](#). The Alberta Coalition for Healthy School Communities is currently (May 2006) working with nutrition stakeholders across Alberta to draft guidelines for the development of school nutrition policies.

In March 2004 the Canadian Cancer Society prepared a report on the [Action in Schools for Physical Education and Nutrition \(ASPEN\)](#). This report provides a detailed description of recommendations to improve physical education and nutrition in schools, explaining the rationale behind the recommendations, the possible implementation strategies, and the promising practices associated with each of the recommendations.

Population Health Promotions Strategy for Saskatchewan; [Healthier Places to Live, Work, and Play](#) (2004) includes four priority areas for focus within the strategy including accessible nutritious food. Goals include reducing barriers to and increasing opportunities for healthy eating habits among other issues. Schools are a channel identified in this strategy.

[School^{Plus}](#) is about giving Saskatchewan's children and youth what they need to be successful in school and in life. School^{PLUS} focuses on schools as centres of learning, support and community for all children, youth and their families. There are some links with nutrition as the program progresses.

[Nutrition Guidelines for Schools](#) by Public Health Nutritionists of Saskatchewan Research Centre for the Saskatchewan School Boards Association provides information and guidelines for school boards to consider and their responsibility in promoting school health/nutrition. Other relevant undertakings in Saskatchewan include: Nutrition and Safety recommendations for schools. The Heart and Stroke Foundation of Saskatchewan produced the report [Nutrition in Saskatchewan Schools: Policy, Practice and Needs](#) and as a follow up the [School Policy Nutrition Toolkit](#).

School nutrition policies/guidelines are being developed by the **Regional School Boards in the NWT**. In preparation for this, there is a school nutrition survey being developed for the fall, 2006, coordinated by the Departments of Health and Social Services and Education, Culture and Employment. There are plans to incorporate the recreation sector as well, in light of the GNWT work on the Healthy Choices Framework promotion of healthy eating for health facilities, schools and recreation sectors. For more details contact elsie_deroose@gov.nt.ca.

The Yukon Government's [Health Promotion Unit](#) (HPU) works in partnership with the Department of Education to coordinate school health in the Yukon. [1023 Home Prepared Foods](#) (2005) is a policy document from the Dept of Education related to food safety and the sale of foods in schools.

In 2004, the Ontario Chief Medical Officer of Health released [Healthy Weights, Healthy Lives](#). In this report there were a number of School Health Recommendations including promoting healthy eating by developing guidelines, curriculum enhancement, and teacher training.

In October 2004, the Ontario Ministry of Education released a policy document: [Healthy Foods and Beverages in Elementary School Vending Machines Policy/Program Memorandum](#). The [Dietitians of Canada](#) developed [School Food and Nutrition Recommendations](#)

[for the Ontario Ministry of Education Regarding Snacks and Beverages Dispensed by Vending Machines](#) which accompanied this Policy and Program Memorandum.

The [Ontario Ministry of Education's Healthy Schools](#) plan includes policy direction on daily physical activity, healthy foods and beverages in elementary school vending machines, anaphylaxis, [Community Use of Schools](#), swimming survival programs, health and physical education curriculum and a high school cardiopulmonary resuscitation program.

In 2004, The Ontario Society of Nutrition Professionals in Public Health released [Call to Action: Creating a Healthy School Nutrition Environment](#) which included recommendations related to the importance of healthy eating in the school context .

A position paper by the Ontario Medical Association (2005)

[An Ounce of Prevention or a Ton of Trouble: Is there an Epidemic of Obesity in Children?](#)

L'initiative **Écoles en santé** Québec a comme but le développement optimal, la réussite éducative, la santé et le bien-être des jeunes <http://www.mels.gouv.qc.ca/DGFJ/csc/promotion/pdf/19-7062.pdf> .

École en forme et en santé a comme objectif de donner aux jeunes de saines habitudes tel que l'activité physique et une bonne alimentation.

<http://www.mels.gouv.qc.ca/> . Une nouvelle politique fut adopte au Québec qui limite la consommation des produits néfaste afin d'améliorer la nutrition des élèves dans les écoles.

<http://www.infobourg.com/sections/chemises/afficheChemise.php?idChemise=33&id=10094>

La commission scolaire des Iles a mis en vigueur la politique alimentaire 4.10 qui a comme but de permettre aux jeunes d'acquérir des connaissances et pratiques saines alimentaires

http://www.csdesiles.qc.ca/politiques/4_10%20Politique_alimentaire.pdf

The New Brunswick [Healthy Learners in School Program](#) ((HLSP) initiated in 2000) is a collaborative program of the Departments of Health and Wellness and Education currently allocates 18 FTEs working in each of 14 school districts in the province (1-2 per district); plus 10 FTEs working in 21 high schools. The program develops and supports health promotion efforts that: involve all areas of health which includes physical, emotional and social health; aim to prevent injury and disease; support healthy decision-making and behaviours which will last into adulthood; and encourage successful learning.

[Government of New Brunswick Wellness Strategy](#) (Jan. 06): is a multi-year strategy focuses on four themes related to healthy lifestyles with an emphasis on children and youth: physical activity, nutrition and healthy eating, tobacco cessation, mental health and resiliency. Several key components of this strategy related to schools and nutrition.

The [Healthy Eating Nova Scotia Strategy](#) (HENS: 2005) is a planning framework, based on a population health approach, to guide coordinated evidence-based action, decision, and resource allocation on nutrition and healthy eating. The strategy's four priority areas are: breastfeeding, children and youth, fruits and vegetables and food security.

Within the children and youth priority area, the focus has been on the development of the comprehensive [Food and Nutrition Policy for Nova Scotia Public Schools](#). The final draft of the policy is under review and awaiting final approval by the Ministers of Education and Health Promotion. The policy outlines standards for foods and beverages served and sold in all schools.

The policy promotes nutrition education in the curriculum, encourages community partnerships and provides a supportive environment for healthy choices. The accompanying Food and Beverage Standards for Nova Scotia Public Schools provide criteria and suggestions for decisions about the food and beverages served and sold in schools.

[PEI Healthy Eating Alliance](#) is a group of individuals, non-governmental organizations and government departments working together to improve the eating habits of children and youth.

A Steering Committee provides overall guidance and coordination for the alliance. Groups are working in five key areas: Access to Safe and Healthy Food; Nutrition Education and Promotion; School Healthy Eating Policy; Research and Evaluation and Communication. The Alliance was established in November, 2001 to improve the eating behaviours of Island children and youth through nutrition education and promotion, and through the creation of supportive environments for healthy eating. In December 2002, the HEA released the [Healthy Eating Strategy for Island Children and Youth](#), a three year strategy to guide its work. Since the spring of 2003, the School Healthy Eating Policy Project (an initiative of the PEI Healthy Eating Alliance) has worked with the three school boards of Prince Edward Island to develop healthy eating policies using a consultative process. [PEI School Nutrition Policies](#) for elementary (Grades 1-6) and consolidated (Grades 1-8) schools now exist in all three school boards.

The first phase of the nutrition policy development focused on elementary and consolidated schools and schools in the French Language School Board. The next step is to develop policies for intermediate schools, and then high schools. The Healthy Eating Alliance is now working with teams of students at four junior high schools to recommend foods to be offered in cafeterias and vending machines, foods for fundraising, and prices that will encourage healthy choices. Smaller groups will be established in each junior high school to recommend best practices to offer good tasting, affordable and healthy food choices at their schools.

A Healthy Eating Strategy for 2006-2009; is currently being finalized and is expected by June, 2006.

[Prince Edward Island Strategy for Healthy Living](#) provides support to partners as they develop and implement initiatives in the areas of reducing tobacco consumption, improving eating habits and increasing activity levels within their communities. The strategy is a collaborative approach to promoting healthy living based on extensive research and consultation with Islanders.

The Newfoundland and Labrador cross government, multi-sectoral [Provincial Wellness Plan for Newfoundland and Labrador](#) (2006) includes initiatives directed at schools: **Healthy Students, Healthy Schools Initiative**: expanding to create school environments that support healthy living for children, youth and the larger school community. The final draft of the **School Food Guideline document** has been prepared and is awaiting final approval.

Nunavut's Promise to Children and Youth An interdepartmental initiative that links four departments with a mandate for children and youth, including: Education, Health & Social Services, Justice, and Culture Language Elders & Youth.

Nunavut's Promise works to streamline policies, programs and services for children and youth across government. The group also supports community projects and engages Inuit Elders and youth in an advisory role. "**Healthy Living Strategy**" is a collaborative multi-disciplinary effort between the departments of health, education and recreation, to increase awareness and opportunity for healthy lifestyle choices.

Part B: Surveillance & Monitoring Activities

The regular monitoring and reporting of child/youth health behaviours/status and health knowledge/literacy as well as local program practices and capabilities is one of several key systems capacity related to school health. The following captures key relevant activities of this nature.

[The School Food Sales and Policies Provincial Report](#) examines the status of food sales in BC schools; the extent to which 'more healthy' or 'less healthy' choices are offered; and the degree to which nutrition policies have been, or are being, implemented. [French version](#)

[Alberta Child Health Surveillance Report 2005](#): is a comprehensive, cross-ministry report on the health of Alberta's children, with high quality reporting on as many facets of child health as is possible, including those related to child nutrition.

[The Alberta Healthy Schools Initiative: Beyond an Apple a Day](#) (2004) a background paper for health professionals and educators produced by Albert Milk and a multi-sectoral advisory committee. [Reality Check I: The Health of our Youth](#) is a literature review that includes an extensive reference list.

L'institut de la statistique du Québec a fait une enquête sociale et de santé auprès des enfants et des adolescents québécois en 1999 avec objectif de d'écrire les habitudes alimentaires des jeunes québécois entre les ages de 6 et 16 ans afin de déterminer quel groupes cibler avec les futurs programmes d'alimentation.

http://www.stat.gouv.qc.ca/publications/sante/pdf2004/enq_nutrition04a.pdf

The [Wellness Strategy surveillance system](#) is being established in New Brunswick to better understand the variation in the wellness of children throughout the province and to assess the impact of the Wellness Strategy. This longitudinal surveillance/evaluation and research initiative will monitor and measure the progress of children and youth in the areas of physical activity and healthy eating.

In 2001 research was conducted with Nova Scotia students in grades 3, 7 and 11 to determine their levels of physical activity and their BMI. This information formed the basis for the development of the [Active Kids, Healthy Kids Strategy](#). This research will be repeated in 2005-06 to measure progress since the initial research and will introduce a dietary intake component to the study.

[Environmental Scan document \(June 2004\) of Food and Nutrition in NS schools](#)

Nova Scotia contributed to the federal/provincial/territorial (F/P/T) report on chronic disease surveillance completed by the F/P/T Surveillance System for Chronic Disease Risk Factor Task Group and Advisory Committee on Population Health and Health Security. This report, [Enhancing Capacity for Surveillance of Chronic Disease Risk Factors and Determinants](#), provided recommendations on proceeding in the area of chronic disease surveillance. Nova Scotia will use this report in its planning and development of chronic disease surveillance capacity.

The Department of Health and PEI Healthy Eating Alliance are currently finalizing success indicators for the policy development work including such indicators as:

- % schools adhering to specific elements in regulations (e.g. providing 20 minutes for lunch);
- % schools providing only foods from "Foods to Serve Most Often" or "Foods to Serve Sometimes" lists in policy regulations.
- % students consuming healthy/less healthy choices at lunch.
- Use of CCHS data to assess changes in BMI;
- Qualitative assessment of policy acceptance and adherence

The Government of Newfoundland and Labrador has developed a [provincial wellness plan](#) that outlines actions for wellness over the next three years (2006 – 2008). The Plan reflects an increased focus on a shared responsibility for health and provides direction for promoting health, preventing illness and injury and increasing the capacity of individuals, groups, communities and sectors to take action for wellness. An evaluation plan will be developed to monitor the progress and measure the impact of the Provincial Wellness Plan. The development of an evaluation plan will incorporate evaluation as a key component of the Plan. Indicators will be identified, information and data collection mechanisms will be established and a reporting system will be put in place to report annually on the progress of the Wellness Plan.

[Healthier Places to Live, Work, and Play](#): Saskatchewan Health, health regions, and community partners have participated in developing the Strategy and will continue to have a role in implementation and evaluation. **School^{PLUS}** School Indicators Framework has been developed to assist in monitoring progress toward the goals of School^{PLUS} (according to the key informant, this report will not be produced again, but [many of the health status indicators drawn from SaskHealth sources will likely be continued in the SaskEd Indicators reports produced every two years](#)).

[In Manitoba](#), a survey to obtain **baseline information on food and nutrition practices in schools** is underway. Reporting requirements and procedures are under discussion. The goal is to establish a simple reporting system that will demonstrate how schools are moving forward.

A [school survey on nutrition and physical activity](#) (2004) was conducted in the NWT to obtain information about physical activity and food choices. The data is intended, in part, to be used in the development of an active living and healthy eating strategy and communications plan for the promotion of healthy lifestyles.

Part C: School Nutrition Environment and Services Related Efforts

A supportive infrastructure for school health includes dedicated, trained and adequately resourced staff. There are several examples of this across Canada, including:

- The NB [Healthy Learners in School Program](#) (initiated in 2000) currently allocates 18 FTEs working in each of 14 school districts in the province (1-2 per district); plus 10 FTEs working in 21 high schools. The program develops and supports health promotion efforts that: involve all areas of health which includes physical, emotional and social health; aim to prevent injury and disease; support healthy decision-making and behaviours which will last into adulthood; and encourage successful learning.
- In Nova Scotia each district health authority has received **funding to hire an additional public health nutritionist** to support implementation of all priority areas of the Healthy Eating Nova Scotia strategy in their communities which includes breastfeeding promotion, fruits and vegetables consumption, children and youth including healthy foods in schools, and food security.
- The [PEI Healthy Eating Alliance](#) supports implementation of the school nutrition policies by providing all elementary schools with [School Healthy Eating Toolkits](#), a Newsletter called [Healthy EatS Newsbites](#) sent to all elementary and consolidated school staff three times a year, and consultations with schools upon request. School Networking meetings are held several times per year to provide a forum for schools to share information, identify challenges and potential solutions for improving the school nutrition environment. A comprehensive Web site includes: [Information for Parents](#); [Healthy Eating Tips](#); [Information for Students](#) and [Information for Teachers](#)

- Public health nutritionists are available to support schools with their policy and curriculum related needs.
- Access to Safe and Healthy Foods Committee of the PEI Healthy Eating Alliance undertook a pilot school-based fruit and vegetable program: [Evaluation of a Fruit & Vegetable Pilot Program for Elementary School Children in Prince Edward Island: Final Report \[PDF 492.09kb\]](#)
- Breakfast and Snack Programs are offered in the majority of Island schools and there is funding available through the Healthy Eating Alliance, in conjunction with Breakfast for Learning for other schools to start programs where needs are identified. An annual training day is held for coordinators, volunteers, and organizers involved with school food programs. [“Get Caught” Poster Campaign Recognizes Students Who Make Wise Food Choices](#)
- To increase the community health and school related capacity across Newfoundland and Labrador a **provincial school health promotion consultant position** has been assigned for one year and **regional school health promotion liaison positions** are in place and jointly shared in each school district and health region.
- **Community-School Liaison positions** in the NU Department of Education are being staffed in each community to provide a link between schools and families. This position deals with attendance problems, and offers anger management and other social issues workshops to students and families, while not specific to healthy eating, it does exemplify dedicated staffing that supports school health. These positions explore more culturally relevant ways to address students’ school issues. Regional health and social services authorities support school nutrition environments with services (staff and resources).
- Ontario Boards of Health support schools in their health promotion and healthy eating related work in a variety of ways. The Mandatory Health Programs and Services Guidelines (1997) set out the minimum requirements/standards for fundamental public health programs and services. The Chronic Disease Prevention program includes two requirements that call for boards of health to work with the education sector though what this translates to in practice across the health regions varies. For more information see: <http://www.health.gov.on.ca/english/providers/pub/pubhealth/manprog/manprog.html>
- Many jurisdictions indicate that public health staff are available to work with schools. The degree to which this happens varies and while still helpful, committed and ideally embedded (e.g. health department staff working in school district offices/schools) seems to be demonstrates a more promising approach. A report from Nunavut entitled [“Nursing Perspectives on Public Health Programming in Nunavut”](#) includes a section on community health nurses and schools that provides a glance at the balancing of competing priorities for public health staff and how often, without dedicated staffing and supportive infrastructure, public health staff work in school health is unreliable and unsustainable.

Other work ongoing related to creating more supportive environments and services in schools across Canada include:

[Making it Happen – Healthy Eating at Schools](#) is an in-depth, online how-to resource to help parents, policymakers, teachers and the entire school community to review current school nutrition policy and make plans for healthy changes. In addition it offers a series of helpful information resources. http://www.bced.gov.bc.ca/health/health_publications.htm houses a variety of information documents geared to informing schools about healthy eating.

[Directorate of Agencies for School Health](#) (DASH) is a cooperative interagency network representing a broad range of local, regional, and provincial organizations and individuals acting as advocates for prevention activities that enable students to develop to their fullest potential. DASH promotes Comprehensive School Health (CSH). The [CSH model](#), commonly described as "a Healthy School", is a practical framework for students, families, schools, and communities to network and create plans to enhance student health and learning. Directorate of Agencies for School Health (DASH) provides a Framework for action for comprehensive school health <http://www.dashbc.org/sfnp.html>

[School Food and Nutrition Policy Project](#) is an initiative led by DASH who received a grant from the Interior Health Authority. It is aimed at creating supportive school environments for healthy food choices to improve the nutritional intake of elementary, middle, and high school children, and contributing to the primary prevention of chronic disease.

[Feeding the Minds and Bodies of BC Students](#) is an initiative led by the Dietitians of Canada (BC Region) with a grant from the BC Ministry of Health. It is aimed at increasing awareness and understanding of best practices that can assist BC schools and school districts support healthy eating among children and youth. Current school nutrition practices in BC and elsewhere are reviewed to identify common barriers and successes in making healthy choices the easy choices in schools. Communications to target audiences address these common barriers and successes and include suggested courses of action and additional resources.

There are several school food and nutrition initiatives occurring in BC, all working together towards the common goal of improving student health and achievement: [DASH/ Breakfast For Learning BC](#), [Interior Health: Making Healthy Choices Easier](#) and [Feeding the Minds and Bodies of BC Students, Dietitians of Canada, BC Region](#). New versions of "Feeding the Minds and Bodies of BC Students" tools are available "Parents: It's Easier Than You Think" targeted to parents and "Healthy Students Are Better Learners" targeted to school and district decision makers such as administrators, teachers, trustees and superintendents are available.

[Dial-A-Dietitian](#) is a free nutrition information line for British Columbians funded by the B.C. Ministry of Health. Dial-A-Dietitian specializes in easy-to-use nutrition information for self-care, based on current scientific sources.

The [Action Schools! BC](#) Healthy Eating Program is a comprehensive school program targeted to grades K-9. The goal of AS! BC is to provide schools with a framework for action as well as tools and supports to enhance opportunities to promote healthy eating at school. The initiative integrates healthy eating into the fabric of schools and maintains this through partnerships with family and community.

In the fall of 2004, the [BC Cancer Agency's Prevention Program](#) introduced the Healthy Living Schools Initiative, a program designed to recognize those schools that encourage healthy behaviour among the student population.

According to work done by the [Alberta Coalition for Healthy School Communities](#), many other local initiatives have occurred throughout the province with funding through various sources. Several initiatives were started with Public Health Agency of Canada funding (2003-2005) under a strategy to address diabetes or healthy eating and active living in school-aged children. Subsequent funding (2004-2005) focused on sustainability of the initiatives. Projects used various health promotion strategies such as developing personal skills (cooking clubs, workshops), raising public awareness, affecting school environments (policy development), engaging community

environments (family gym nights, summer camps, inter-sectoral steering committees) and addressing cultural and economic barriers. For more information contact the Coalition.

["Healthy Active School Communities"](#) – is a made in Alberta resource which can be used throughout the year to assist your work creating a school environment supportive of healthy active choices. Produced in collaboration with a variety of healthy living partners, the resource identifies the home, school and community as essential stakeholders in addressing three key elements: Active Living, Healthy Eating and Tobacco Reduction. A copy of the resource can be downloaded at: <http://everactive.org/?p=resources>. This resource is also available in French.

[Healthy Eating and Active Living for your 6 to 12 year old](#) (Aug 2005) is a parent-targeted resource that includes school related nutrition and active living information. [Food Serving Sizes for Children 6 to 12 Years](#). Some Alberta regional health authorities have supported school nutrition environments with services (staff and resources), curriculum supports and school nutrition environment support (e.g. [Calgary Health Authority](#)). Other related resources promoted under the [Healthy U campaign](#) include: information to school community members (teachers, parents, children): [Healthy Eating Resources for Teachers](#) ; [Active Living Resources for Teachers](#); [Amazing Little Cookbook for Kids](#) and [Moving Towards a Healthy U](#) — a personal Logbook (a tool for parents and teachers).

Much of the health sector's activity in Saskatchewan is focused on working with schools to support them in developing and implementing their own school nutrition policies using *Nutrition Guidelines for Schools*. Most health regions have identified this as one of the key initiatives in the Population Health Promotions Strategy for Saskatchewan; [Healthier Places to Live, Work, and Play](#) . One health region has hired a nutritionist to work with the schools. Throughout the province, the nutritionists have provided workshops to community schools that are for the food workers in schools. Their focus is on choice of healthier foods, food safety and integration with what is being taught in the classroom.

["Taking Action for Healthy Food in Schools"](#) student leadership award program supports student-led initiatives aimed at improving the options for making healthy food choices in junior and senior high schools in MB. Other activities from Manitoba include: *Healthy Living Challenge 2006* A video clip is available to guide the use of Healthy Living Challenge 2006 calendar/poster. It explains how to use the program and offers suggestions for classroom applications. http://www.edu.gov.mb.ca/ks4/cur/physhlth/h_living/index.html; [At the Heart of Education: A Parent Report on What's New in Physical Education/Health Education](#) is a parent targeted document that includes suggestions for home-based activities.

The Ontario [Eat Smart! School Cafeteria Program](#) is part of an ongoing broader provincial Eat Smart initiative which also includes a restaurant and workplace component. The program endeavours to achieve the goal of contributing to the reduction of food borne illness and chronic diseases through increased availability of healthier food choices, promotion of healthier food choices in the cafeteria and increased awareness and knowledge of healthy eating and food safety. Eat Smart is funded by the Ministry of Health Promotion, administered by the Nutrition Resource Centre and implemented locally by public health units. For further information, go to www.nutritionrc.ca or www.eatsmart.web.net/ .

The ["Living Schools" initiative](#), led by the Ontario Physical and Health Education Association, is designed to provide a comprehensive means to addressing the health issues facing Ontario's children and youth by using a four phase process to address four primary chronic disease risk factors within four key areas. For more details see <http://www.livingschool.ca/Ophea/LivingSchool.ca/livingschoolinitiative.cfm>

The [Ontario Healthy Schools Coalition](#), as per most similar coalitions that exist in other PT's, seeks to collaborate with professional organizations in the fields of education and health and with other related organizations. Raise awareness within the government and the public of the value of and the need for comprehensive approaches to school-based health promotion; advocate that the Ontario Ministries of Education, Health and Long-term Care, and Community and Social Services work together to develop policies and funding that will facilitate the full implementation of comprehensive approaches to school-based health promotion in all Ontario schools; advocate for the inclusion of comprehensive approaches to school-based health promotion in the Ontario Ministry of Health and Long-Term Care Public Health Branch Mandatory Health Programs and Services Guidelines and supports regional 'healthy schools' initiatives in communities across Ontario. Nutrition specific work includes: [OHSC School Council Kit](#), April 2005 and the [Healthy Schools Success Stories](#). The [Ontario Public Health Association](#) provides secretariat support for the Ontario Healthy Schools Coalition.

[ACT NOW... "the best you can be!"](#) is a multi-risk factor school-based health risk prevention program for students in grades 4-8 that has been operating in 8 public and separate school boards in the Greater Toronto Area since 2002/03. The program enlists Olympic Athletes, student, parents and a range of health professionals, leaders and teachers to deliver and support the program throughout the school year. The program is designed to produce knowledge, attitude and behaviour changes in the areas of healthy eating, physical activity, self esteem, substance use and tobacco use.

Au Quebec, le mois de la nutrition constitue un moment privilégié pour faire le point sur son alimentation et apporter des changements positifs à ses habitudes de vie. Prendre sa santé en main, c'est ce que 2 366 laurentidiens ont décidé de faire en s'inscrivant au *Défi santé 5/30* ainsi que 53 écoles primaires de notre région avec le défi *Moi j'croque 5 fruits et légumes*. <http://www.rrsss15.gouv.qc.ca/com06-11.htm>

Several other initiatives stem from the [Government of New Brunswick Wellness Strategy](#) are aimed at school based nutrition related efforts, including: i) *5-10 a day – It's the Healthy Way* looks at promoting consumption of vegetables and fruit within communities and includes a healthy food grant program in middle schools; ii) a multi-media social marketing campaign will be launched to increase awareness and benefits of healthy and active lifestyles; iii) the [New Brunswick Advisory Council on Youth](#) strives to be a catalyst for increasing youth involvement in society; the Wellness Strategy funding in 2005-06 will assist the Youth Council in building on its consultation process regarding health issues that impact on youth. It will also assist the Youth Council in promoting youth leadership in the areas of healthy eating, physical activity, mental health and tobacco reduction and iv) the [Healthy Eating Physical Activity Coalition of New Brunswick](#) (HEPAC) is a network of community and government organizations and individuals who share a common vision of creating an environment in New Brunswick that supports healthy eating and physical activity.

The Health Promoting Schools (HPS) in NS program stems from the [Annapolis Valley Health Promoting Schools Project](#) (AVHPSP). Funding for the AVHPSP was received from the Canadian Diabetes Strategy and the Public Health Agency of Canada in 2001. NSHP provided funding to the AVHPSP in the 2004/05 school year to help inform the development of the provincial HPS program model. [NS Department of Health Promotion and Protection](#) has committed funding to support partnerships of schools boards and district health authorities in the development and implementation of Health Promoting Schools programs across the province.

Nova Scotia Health Promotion (NSHP) has committed a [variety of funding opportunities](#) in the 2005/06 fiscal year: Funding will be available to partnerships of school boards and district health authorities to support Health Promoting Schools programs that focus on healthy eating and physical activity in schools. To receive the funding, it must be demonstrated that both healthy eating and

physical activity have been considered, recognizing that programs need to build on current strengths.

In Newfoundland and Labrador, **information for parents and teachers** has been prepared as well as a **school food resource manual** that will go out incrementally to the schools and community health regions. A **School Environmental Scan** is being developed to identify areas where support is needed to assist in becoming 'Living Healthy' schools. This includes the areas of food, cafeteria infrastructure, health and safety issues, funding, playgrounds, and community facilities. The NFLD Department of Health and Community Services provides curriculum resources and supports to schools. Regional Wellness Coalitions will continue to strengthen partnerships, build capacity and facilitate action for wellness at the regional and community levels. [Go Healthy Newfoundland and Labrador](#) Web site and collateral promotional items are being produced.

NFLD [Provincial Youth summit](#) (Sept 2005) was a start to engaging the province's youth in living an active and healthy lifestyle and support them in taking the concepts learned from the summit back into their communities, schools and families and to take a leadership role in promoting the benefits of eating healthy, staying active and being smoke free. More info at <http://www.releases.gov.nl.ca/releases/2005/health/0922n01.htm>

The [Nunavut Food Guide](#) which is culturally appropriate and acknowledges the reality of the Inuit diet which combines Inuit foods, such as bone marrow for calcium, fat for vitamin A, and food available at the market. The food guide was developed collaboratively with the Government of Nunavut and various Inuit and community groups.

Drop the Pop is a territory-wide campaign that challenges Grade K-12 students to make healthier drink choices. It originated in NU and is now offered in the Yukon ("[Drop the Pop](#)" Yukon, [Drop the Pop Prizes](#) and [Drop the Pop Poster](#)). A "[Drink to Your Health](#)" campaign was also offered in the Yukon where department of Health and Social Services offers resources and support services (e.g. training workshops) for teachers. [Drop the Pop NWT](#) : the Department of Health and Social Services is doing an evaluation of the Challenge to be used as a basis for future planning and for possible funding to run the Challenge again in 2007, though the intent is to run the program in a broader community context. Regional health and Social Services Authorities in NWT support school nutrition environments with services (staff and resources), however, this is sporadic and there is little currently happening as there are no Regional Nutritionists in these positions at this time.

[Canadian Diabetes Strategy](#) funding has been used by the **Northern Nutrition Association** to run a program in Yellowknife called **Kids in the Kitchen**, which is an after school (and sometimes during school) program to teach children how to cook healthy foods for themselves and their families. The Yellowknife Rotary Club also funds a school food program in one school. One of the NWT Regional Health and Social Services Authorities, in conjunction with the departments of HSS and Early Childhood Education developed school **Active Living Kits** that were piloted in a few schools in 2005 and 2005. A report was provided in the Dept. of Health and Social Service's newsletter series [EpiNorth](#) in 2006.

Child nourishment programs run to varying degrees in all P/T jurisdictions, more often in partnership and with the financial support of [Breakfast For Learning](#). The following provides highlights:

- Nutritional Grants in British Columbia are available for [breakfast and snack programs](#). DASH, in partnership with Breakfast for Learning, administers these grants. The [BC School Fruit and Vegetable Snack Pilot Program](#) was launched in September 2005. The goal of the program is to provide twice-weekly BC fruit or vegetable snacks to elementary

school students, as well as information to teachers, students and their families to increase awareness and consumption of BC fruits and vegetables. Currently, ten schools receive free fruit and vegetables. An evaluation team is conducting a full evaluation of the pilot.

- [Yukon Food for Learning](#) in partnership with Breakfast for Learning and the YK Department of Health and Social Services provides child nourishment programs in all Yukon schools.
- [Breakfast for Learning](#) program in Alberta currently funds 243 schools for breakfast, lunch and/or snack programs which help feed over 10 000 Alberta children healthy meals and snacks daily.
- The **NWT Food First Foundation (FFF)** is the territorial coalition that works closely with, and funds a part time coordinator through Breakfast for Learning. This group is currently working on the development of a website, and uses an allocation of funding from Breakfast for Learning to fund schools in the NWT and Nunavut. The NWT FFF consists of representatives such as nutritionists, Parent Advisory Councils, the Salvation Army and the Women's Centre. Most of the members are located in Yellowknife at this time. This group is also interested in supporting schools in the development of school food policies. The NWT FFF currently funds schools for breakfast, lunch and/or snack programs, fundraises, and conducts advocacy work with Members of the Legislative Assembly to raise awareness of the nutritional needs of children.
- In Manitoba child nourishment related activities include: Breakfast for Learning encourages and funds breakfast clubs (MB has a part- time provincial coordinator). Kids in the Kitchen programs run in some local schools (<http://www.youville.ca/english/links.html>); workshops are offered in the early stages of the programs and manuals available for participants. There is no official host for the program now and information can be accessed on line.
- Schools throughout Manitoba organize School Milk Programs. The school organizes milk delivery with a local dairy driver and a teacher or often parent volunteer co-ordinate activities in the school. Dairy Farmers provides a School Milk kit with activity ideas and incentives that make milk drinking fun. Approximately 75% of schools in MB offer their students milk programs.
- The Ontario Ministry of Children and Youth Services (MCYS) funds the [Student Nutrition Programs](#). In October 2005, the MCYS announced that the investment in student nutrition programs would increase from \$4.5 million to an investment of \$8.5 million annually. It has also moved to a decentralized program model. In 2005 a Nutrition Guidelines Working Group developed nutritional guidelines for the student nourishment program to assist program providers in planning and delivering healthy snacks and meals.
- *5-10 a day – It's the Healthy Way* looks at promoting consumption of vegetables and fruit within communities and includes a healthy food grant program in middle schools in New Brunswick. In addition, the New Brunswick **Healthy Minds School Nutritional Partnership Program** provides funding to elementary schools to use for a variety of child nourishment related initiatives. A related report of interest on the [Healthy Minds Program: a review of the pilot program Oct 1999 - March 2000](#). The Department of Agriculture, Fisheries and Aquaculture, [New Brunswick Farm Products commission](#) runs a subsidized milk program that is available to all NB schools.

- In Nova Scotia there is new breakfast program funding that will ensure that all children at the elementary level will have access to breakfast before they start their school day. Nova Scotia Health Promotion and the Department of Education are working together with other partners including the Breakfast for Learning Advisory Council to determine the most effective way to offer this program. New funding is intended to assist, not replace, existing support.
- [Kids Eat Smart Foundation Newfoundland and Labrador](#) is a non profit charitable organization established to foster the development of sustainable nutritious food programs for school children throughout the province. The government provides financial support to school feeding programs so too does Breakfast for Learning. [Newfoundland and Labrador School Milk Foundation](#) offers a school milk program
- [Club des petit dejeuner du Quebec's](#) (en anglais: Quebec Breakfast Clubs) runs breakfast programs in elementary schools in Canada.

Part D: Curriculum and curriculum support related resources and initiatives

A cornerstone to a comprehensive school based approach to healthy eating, evidence-based curriculum and related resources and other supports is vital to successful, sustained efforts. The following captures the current state related to this area, across Canada:

Many jurisdictions have recently or are in the process of updating their health education related curriculum and related resource materials. While it appears that there are many resources and programs in existence, it is reasonable to state that a repository of evidence-based, curriculum-matched resources and programs would be helpful for those working in school health – including teachers. This section is divided in to two sections: i) jurisdictional curricula and ii) curriculum related resources and supports (e.g. catalyst teachers)

i) Jurisdictional overview of curriculum:

British Columbia's Ministry of Health recently completed an environmental scan of healthy eating and physical activity curriculum-based resources (spring, 2006 - currently in draft form; for more information contact: Lorie.Hrycuik@gov.bc.ca).

[BC Ministry of Education's Integrated Resource Packages for Personal Planning K to 7 \(1999\), Health and Career Education 8 and 9 \(2005\) and Planning 10 \(2004\)](#) A list of some of the nutrition education programs available to students and teachers in BC: see [Nutrition Education Resources](#).

The Government of Yukon is a full partner in the Western and Northern Canadian Protocol (WNCP). This protocol supports the development of common curriculum frameworks for Western and Northern Canada. Within these frameworks, the [British Columbia program of studies](#) forms the basis of the Yukon curriculum. This curriculum is frequently adapted to reflect local needs and conditions. For example, **Yukon-Koyukuk School District** will integrate Alaska Native foods into nutrition lesson plans and activities.

Alberta Education's K-9 Health and Life Skills (2002), K – 12 Physical Education (2000) and Career and Life Management (CALM) programs of studies outline the student learning outcomes for nutrition and health. The K-9 Health and Life Skills and CALM [Guides to Implementation](#) are resources to support student learning the programs. The guides contain information on

comprehensive school health, establishing a positive learning environment, planning, instructional strategies, and assessment. The guide also contains illustrative examples that offer sample learning and assessment activities for each specific learner outcome. Selected outcomes also have supporting Student Information and Student Activity Masters. A number of Teacher Planning Tools are also provided.

The [NWT Department of Education, Culture and Employment](#) has a K-9 School Health Program. Nutrition is one of seven units that make up the program. At the high school level, nutrition outcomes are included in the mandatory “Career and Life Management” course.

Nunavut schools follow the Alberta curriculum. **Aulajaaqtut**, currently being offered in high school Grades 10 and 11, and is being developed for Grade 12, was developed to respond to the need for more culturally relevant curriculum for physical education and health. The modules were developed in consultation with communities and Inuit Elders and focus on physical, emotional and cultural well-being. This new **Inuktitut High School curriculum** is designed to support a positive sense of cultural identity amongst Inuit youth. This curriculum looks at traditional Inuit games and their design to purposefully build the mental, physical and spiritual strength of the individual. It poses questions for youth to consider about lifestyle decisions and healthy living. Materials and curriculum are developed in collaboration with an advisory group of Inuit Elders on staff in the Department of Education.

[Saskatchewan’s Health Education Curricula](#) (Required Area of Study in Grades 1-9)
Health Education (Grades 1-10) addresses healthy eating as an important health-enhancing behaviour. Nutrition content in Elementary Level health education is developmental.

Manitoba Department of Education [K-S2 integrated healthy lifestyles curriculum-based activities](#).
Manitoba Education Citizenship and Youth and/or partner/stakeholders have developed or are developing several resources which are aligned with their new integrated Physical Education/Health curriculum student learning outcomes. The Healthy Schools initiative has provided copies of the Healthy Living Challenge calendar (2006) to all Manitoba students in grades 3 and 4. The project also includes a school component wherein teachers will be encouraged to instruct the students on how to use the calendars with their families. For more information contact: jdorge@gov.mb.ca.

The Ontario Curriculum - Health and Physical Education, 1998 Healthy Living Strand Elementary (Grade 1-8)

Topics taught in the grade 1-8 health and physical education curriculum related to healthy eating include nutrition, eating disorders, body image, and dental health. Students require knowledge to make healthy eating choices. Using this knowledge, they will examine their own food choices and eating patterns, and then make wise decisions and set appropriate goals. In later grades, students will learn more about the factors that affect healthy body weight and lead to eating disorders, and will increase their understanding of a healthy body image. Throughout the healthy living strand, the importance of healthy eating and regular physical activity is emphasized.

Secondary (Grade 9 and 10)

Healthy living addresses the knowledge and skills that students need to make informed decisions related to healthy growth and sexuality, mental health, and personal safety and injury prevention. The topics included in this strand are “healthy growth and sexuality”, “substance use and abuse”, “personal safety and injury prevention”, and “healthy eating”.

The Ontario Curriculum - Social Science and Humanities

Food and Nutrition Science

Grade 9-10

This course explores the factors that affect attitudes and decisions about food, examines current issues of body image and food marketing, and is grounded in the scientific study of nutrition.

Grade 11-12

This course examines various nutritional, psychological, social, cultural, and global factors that influence people's food choices and customs.

The Health and Physical Education curriculum will be reviewed starting September 2007.

[Ontario Health and Physical Education Curriculum Support](#): K-10 comprehensive curriculum support materials are available through school boards (or a fee/grade level). Grade 11 and 12 materials are free of charge. The [Curriculum and School Based Health Resource Centre](#) supported by the Ministry of Children and Youth Services (MCYS) and managed by [OPHEA](#) supports the effective implementation of the Health and Physical Education Curriculum across Ontario and supports the development and implementation of curriculum and school-based programming in various risk factor and health promotion topic.

All the following documents contain curriculum outcomes for New Brunswick as well as learning and teaching suggestions, and appendices that support the outcomes, provide options from which the teacher may select. The documents integrate Comprehensive School Health (CSH) and the four strands of the Health Curriculum and include examples to illustrate potential connections using this model.

[Gr. K-5 Health Education Curriculum](#) (2001) -

<http://www.gnb.ca/0000/publications/curric/healthk-5.pdf>

[Gr. 6 Health Education Curriculum](#) (2005) - <http://www.gnb.ca/0000/publications/curric/hcgr6.pdf>

[Gr. 7 Health Education Curriculum](#) (2005) - <http://www.gnb.ca/0000/publications/curric/hcgr7.pdf>

[Gr. 8 Health Education Curriculum](#) (2005) - <http://www.gnb.ca/0000/publications/curric/hcgr8.pdf>

Francophone Health Curriculum – entitled “Formation personnelle et sociale” is also a required subject for all K-10 students. It consists of 4 domaines: Personal relationships, citizenship, health and consumerism. Curriculum documents are found at the following Web pages:

<http://www.gnb.ca/0000/publications/servped/FPS-Ma2.pdf>

<http://www.gnb.ca/0000/publications/servped/FPS3e-5eannée.pdf>

<http://www.gnb.ca/0000/publications/servped/FPS68version2005.pdf>

<http://www.gnb.ca/0000/publications/servped/FPS741119e.pdf>

<http://www.gnb.ca/0000/publications/servped/FPS10e.pdf>

Nova Scotia's Health Education for Primary-Gr. 9 is part of the core program; comprehensive school health is promoted in the curriculum documents:

[Foundation for Active, Healthy Living: Physical and Health Education Curriculum \(1998\)](#)

[Health Education, Grades 4–6 \(2003\)](#)

[Health/Personal Development and Relationships, Grades 7-9 \(2000\)](#)

[Lets Talk about...Health Education, Grades Primary–3](#)

Prince Edward Island is currently creating a new Health curriculum. The grades 1-3 health curricula are being piloted. Work is set to begin on the grades 7-9 curriculum. PEI Health Curriculum is mandatory and the time allotted for Health Education is 4-6% of a student timetable, which is approximately 15 minutes each day.

In Newfoundland new secondary school curriculum has recently been released. See links for complete curricula for NFLD:

- [Early Beginnings: A Kindergarten Curriculum Guide](#)
- [Towards a Comprehensive School Health Program: A Primary Health Curriculum Guide](#)
- [Towards a Comprehensive School Health Program: An Elementary Health Curriculum Guide](#)
- [Adolescence: Healthy Lifestyles \(Health and Personal Development Curriculum\)](#) (Gr7-9)
- Government releases new secondary school curriculum focused on healthy eating and exercise <http://www.releases.gov.nl.ca/releases/2004/edu/0916n04.htm>

ii) Curriculum related Resources and Supports

[Nutrition Education Resources](#) A list of some of the nutrition education programs available to students and teachers in BC. Additional curriculum linked resources have been identified under the previous category related to supportive environments and services.

In the spring of 2006, the BC Ministry of Health conducted an environmental scan of nutrition and physical activity curriculum resources are available to support school curriculum across Canada. For more information on this contact: Lorie.Hrycuik@gov.bc.ca.

[Healthy Eating Resources for Yukon Schools](#) - with funding from the Public Health Agency of Canada, Recreating and Parks Association for the Yukon is offering teachers healthy eating resources as well as training and support by a registered dietitian. Teacher training workshops on a new healthy eating curriculum resource package.

The K – 12 Physical Education Guide to Implementation can be found at: <http://www.education.gov.ab.ca/k%5F12/curriculum/bySubject/phised/default.asp> (all guides are available in French as well). This site also contains links to the Physical Education On-line website, a variety of physical activity resources, including those supporting the Daily Physical Activity Initiative and a number of related links. CALM resources can be found at: http://www.education.gov.ab.ca/k_12/curriculum/bysubject/healthpls/default.asp. From the Alberta [Healthy U campaign](#): information to school community members (teachers, parents, children): [Healthy Eating Resources for Teachers](#); [Active Living Resources for Teachers](#); [Amazing Little Cookbook for Kids](#) and [Moving Towards a Healthy U](#) — a personal Logbook (a tool for parents and teachers).

[NWT Food Guide](#) has been adapted from Canada's Food Guide

Saskatchewan Education has advertised for, selected, and provided professional development for [catalyst teachers](#) in order to support the renewal of Health Education at the Middle Level. The role of these catalyst teachers is to:

- internalize the philosophy and practices advocated in the renewed curriculum in order to be an in-school resource as well as a school division and provincial resource
- deliver a range of in-service sessions designed to meet the needs of schools and school divisions in renewing health education
- promote the curriculum in their respective schools, school divisions, and inservice sessions in a variety of ways

- become a mentor for health education teachers
- support comprehensive school health in Saskatchewan.

Saskatchewan Education continues to recommend a local liaison committee to support health education teachers and to facilitate coordinated planning. The role of the committee may vary from one community to another but the basics are to: provide support to the classroom and total school health education program; provide liaison with health-related programming in the community and/or health district and to provide a forum for discussion of parent/student/school ideas and concerns related to health education.

[Saskatchewan *In motion*](#) produced nutrition resources for various sites including schools and workplaces.

Ophea's [School Nutrition Initiative](#) provides a comprehensive framework designed to address the individual and environmental influences on the healthy eating behaviours of Ontario's children and youth from kindergarten to grade 12. The [Menu of Choices Secondary School Resource](#) was developed as part of this Initiative and is directly linked to Ophea's Health and Physical Education Curriculum Implementation support documents. [Two additional curriculum supplements](#) for Ophea's School Nutrition Initiative Menu of Choices Secondary School Resource have been developed for Family Studies and Business Studies and are now available for free download.

[Discover Healthy Eating](#) is a Grade 1-8 curriculum support resource developed by Toronto Public Health, York Region Health Services and Region of Peel Health Department This curriculum support resource offers a choice of teaching activities that correspond to the Health and Physical Education Curriculum (1998).

[Smiling Within:](#) a curriculum linked resource created by local nutritionists and the Nutrition Education Resource Centre at Acadia University in Nova Scotia, is intended for teachers and peer educators working with students between grades primary to 6. This user-friendly guide allows teachers to introduce/supplement body image and healthy lifestyle information (i.e. healthy eating and physically active living) in class without additional searching for information and lesson planning.

Healthy Eating Alliance of PEI produces a list of [curriculum resource and school-based materials](#) and ideas to promote healthy eating in school. Grades 1-3 health curriculum being piloted. Work is set to begin on the grades 7-9 curriculum. Health Curriculum is mandatory and the time allotted for Health Education is 4-6% of a student timetable, which is approximately 15 minutes each day. The Nutrition Education and Promotion (NEP) Working Group of the Healthy Eating Alliance produces [curriculum resources for teachers as well as information and practical tips](#) for schools, families and children. They also produced Eat Right! Stay Fit! 'A Healthy Living Song' DVD in partnership with the PEI Active Living Alliance.

The NFLD [Ticker Tom Valentine Activity](#) interactive school activity builds on the grade four curriculum outcomes and is offered to schools, after-school programs and especially around Valentine's Day.

Part E: Federal Government Departments, National Agencies and Non-Governmental Organizations: Roles and Contributions

Federal Government Departments:

The [Office of Nutrition Policy and Promotion \(ONPP\)](#) of [Health Canada](#) serves as a focal point and authoritative source for nutrition and healthy eating policy and promotion in Health Canada. ONPP supports the nutritional health and well-being of Canadians by collaboratively defining, promoting and implementing evidence-based nutrition policies.

The Office integrates science, policy and intervention activities as well as promotion and protection activities related to nutrition. The Office works in three main areas:

1. [Research, Monitoring, and Evaluation](#)
2. [Policy and Standard Setting](#)
3. [Planning, Dissemination and Outreach](#)

ONPP works closely with its [partners](#) in all areas, from policy making to implementation. Two significant partnership tables are the Federal, Provincial Territorial Group on Nutrition (FPTGN) and the Network on Healthy Eating.

The Canadian Community Health Survey (CCHS) Cycle 2.2 on Nutrition, a joint initiative between [Statistics Canada](#) and Health Canada, will provide population level nutrition data on Canadians of all ages. The [Canadian Institute of Health Research](#) is funding an initiative to provide an enhanced opportunity for expert analysis of CCHS data, including one theme focused on the analysis of nutrient and food intake of Canadian children in relation to chronic disease.

[The Institute of Nutrition, Metabolism and Diabetes \(INMD\)](#) is one of the 13 virtual institutes that make up the CIHR. INMD was designed to link researchers, scientists, community groups, and individuals from around the world who share an interest in enhancing health in relation to diet, digestion, excretion, and metabolism.

[Effectiveness of Physical Activity Enhancement and Obesity Prevention Programs in Children and Youth](#) The purpose of this Health Canada funded systematic literature review is to provide some national policy direction related to the effectiveness of interventions for promoting healthy weight, preventing overweight/obesity and increasing physical activity among school aged children and youth.

Health Canada coordinated the development of a [special supplement to the Canadian Journal of Public Health \(CJPH\)](#), *Understanding the Forces That Influence Our Eating Habits: What We Know and Need to Know*, which was released in June 2005. One of the topics focused on the determinants of healthy eating related to “children and youth”, providing a synthesis of the literature and recommendations on appropriate research needed to fill evidence gaps.

[Canada's Food Guide to Healthy Eating, Using the Food Guide, Food Guide Facts -Background for Educators and Communicators, and Focus on Children 6-12 Years, Background for Educators and Communicators](#): these guidelines underpin nutrition and health policies, standards, programs, services and other nutrition initiatives across the country.

[Public Health Agency of Canada's Division of Childhood and Adolescence](#) key relevant contributions to school Health include:

[Health Behaviour in School-Aged Children Study](#) The Health Behaviour in School-Aged Children (HBSC) Study is a World Health Organization (Regional Office for Europe) collaborative cross-national study. It aims to:

- increase understanding of and monitor over time young people's health and health related behaviours;
- gain insights into the influences the school, family and other social contexts have on young people's lifestyles;
- increase understanding of how young people perceive health;
- influence the development of programs and policies to promote the health of young people;
- promote cross-disciplinary research into young people's health and lifestyles through international networking of health researchers.

Youth engagement related initiatives and resources of interest:

- [Hearing the Voices of Youth: A Review of Research and Consultation Documents](#)
- [Hearing the Voices of Youth: Youth Participation in Selected Municipalities](#)
- [Your Voice Matters](#)
- [Centres of Excellence for Youth Engagement](#)
- [Youth Participation in Public Decision-Making](#)

[Voices and Choices: Planning for School Health \(under review\)](#) is a practical, do-it-yourself, on-line, strategic planning tool for school communities in Canada. It engages young people in identifying their health- and school-related needs and in developing and implementing strategies to address these needs. It includes:

- a Guide to Implementation outlining a seven-stage planning process;
- a quantitative Student Needs Assessment Questionnaire; and
- a School Health Profile by which students' responses to the questionnaire are reported back to the school community.

[Canadian Health Network](#) – a potential reference for educators, students, families and others, this national, bilingual internet-based health information service. The information is provided by a network of Canadian Health organizations. This site aims to provide a wide range of trustworthy health information.

[Joint Consortium For School Health](#) is an inter-governmental pan-Canadian consortium that includes 11 provinces and territories as well as the two federal health portfolios above that participate through a designated School Health Coordinator in the PHAC. The key role of JCSH is to act as a catalyst in strengthening cooperation among ministries, departments, agencies and others and in building the capacity of health, education and other systems to work together on school health overall, including nutrition. Specific to the nutrition and schools area, highlights of the JCSH work include: **Nutrition and Schools Knowledge Summary:** will synthesize the available evidence on nutrition as it relates to school health promotion to inform governments and local agencies, as well as encourage further inquiry and research. Based on this knowledge, provinces/territories, local agencies and professions may develop guidelines or recommendations for their respective constituencies. **Nutrition and Schools Work Group: a mini-network which** brings together representatives from the education and health sectors, as well as NGOs interested in school health and nutrition, and aims to align efforts and stimulate potential partnerships.

National Research related Organizations:

[Canadian Population Health Initiative](#) (CPHI) of the Canadian Institute for Health Information works to advance population health understanding by concentrating on knowledge generation and synthesis; policy synthesis and analysis; knowledge exchange; and knowledge transfer and

reporting. The CPHI provides support to research advancing an understanding of the determinants of the health of the Canadian population and enhancing the articulation of policy options to improve population health and reduce health inequities, with children being one of the theme areas (e.g. the research component of the Annapolis Valley Health Promoting Schools Project).

[Improving the Health of Young Canadians](#) is the first report in the Improving the Health of Canadians 2005-2006 Report Series. It highlights research relevant to understanding adolescent health and development. Analyzing data from the National Longitudinal Survey of Children and Youth (NLSCY) and the Canadian Community Health Survey (CCHS), this report explores the association between positive assets in adolescents' social environments and their health behaviours and outcomes.

[Improving the Health of Canadians: Promoting Healthy Weights](#), the second individual, looks at the features of the environments in which we live, learn, work and play that make it easier - or harder - for us as Canadians to make choices that promote healthy weights.

[Canadian Council on Learning](#) (CCL) is creating five regionally-based knowledge centres, with one focusing on Health and Learning located in B.C. These centres will be responsible for building a national network of experts in each learning domain and for advising CCL on the priorities for research, knowledge, mobilization, monitoring and reporting and knowledge exchange for each domain.

[Canadian School Physical Activity and Nutrition Network](#) (CANSPANN) is a pan-Canadian network which brings together partners from the research, governmental and nongovernmental agency (NGO), and school communities in order to prioritize and conduct research, and share, disseminate, and translate knowledge relative to its mandate.

A social-ecological model recognizing multiple and interacting determinants that influence physical activity and healthy eating in the school context guides CANSPANN'S efforts.

[School Health Research Network](#) (SHRN) brings together researchers, policy-makers, and practitioners who are interested in school-based or school-linked health promotion. SHRN activities include research projects, research dissemination, and networking. Based in Canada, the School Health Research Network includes contacts with the World Health Organization and researchers in several countries. [Links](#) to research related to Nutrition, Healthy Eating, Food Security are provided.

(US) [Task Force on Community Preventative Services](#), Guide to Community Preventive Services. In 2003-04 the Community Guide published a systematic review of the effectiveness of selected population-based interventions addressing nutrition. Links to school nutrition related programs, policies and research are accessible via this source.

National Non-Government Organizations (in alphabetical order):

[Breakfast for Learning](#) is the only national, non-profit organization solely dedicated to supporting child nutrition programs in Canada. The Foundation has commissioned several literature reviews on school-based nutrition programs and child development and nutrition and recently completely an overview of child nourishment programs in Canada. BFL has developed nutrition education resources to help communities operate effective nutrition programs that feed kids nutritious meals and help them learn about healthy eating at the same time. BFL has a series of education resources for use in schools and other venues, such as [Eat Right to Survive and Thrive](#); Mission 5522 is a program for eight- and nine-year-olds which helps children apply Canada's Food Guide to their own lives. For more information, click [here](#).

[Canadian Association for Health, Physical Education, Recreation and Dance \(CAHPERD\)](#); is a national,

charitable voluntary-sector organization with a broad range of members in Canada and internationally. Some of their relevant school nutrition related initiatives include: CAHPERD posts relevant (HE/N) news items and the latest program/resource availabilities <http://www.cahperd.ca/eng/health/>; Quality School Health initiative [QSH Checklist](#) is a guide for schools, the [Making QSH Happen](#) ; providing a comprehensive list of resources available to educators, health professionals and parents through the QSH resource section and our online bookstore. See: http://www.cahperd.ca/eng/health/qsh_resources.cfm/. CAHPERD regularly publishes a Health Education Teaching Tips bulletin entitled "[The Clipboard](#)". A recent edition, *Volume 4, Number 1, Building a Health Promoting Classroom* is a special issue that offers practical ideas and resources for generalist teachers from grades K-6 who are just beginning their career. It will also be useful to more experienced teachers who are looking for new ways to integrate health education into their classroom. CAHPERD regularly produces and publishes the [PHE Journal](#), which contains a variety of articles and activates with regards to many topics including nutrition related health education.

The Canadian Broadcasting Corporation, CAHPERD and HSFC launch “the [Weight of the World Challenge](#)”, a national campaign to counteract obesity. It features a new interactive website and a package that aims to generate awareness about nutrition and fitness that’s offered, free of charge, to schools, community groups, libraries and families. The film can be ordered and the guides downloaded until May 31, 2006.

[Canadian Association for School Health](#) (CASH) is a national association composed of 12 provincial/territorial coalitions whose members promote the health of children and youth through school-related health promotion (Comprehensive School Health). The association through its volunteers and part-time staff, develops and implements projects, activities and services that promote a Comprehensive School Health approach. This approach helps community [agencies](#), [parents](#), educators, health professionals, youth and others to work together using the school as a strategic setting within the community. Over several years of activities, the Association has developed a research and documentation centre, the Canadian Centre on Community and School health. This centre contains over 10,000 selected documents. CASH has also co-developed a [comprehensive gateway website on safe and healthy schools](#). As well, the Association offers and [email listserve](#) that clips media reports, announcements. See [Healthy Eating/Nutrition and Schools Background Information/Summary](#) This section provides background information on how schools can promote healthy eating and safe nutrition. Under CASH’s leadership a Canadian Consensus Statement on CSH was produced in the early 1990’s. It is currently being revised (2006).

[Canadian Cancer Society](#) has 10 CCS divisions across Canada. Examples of their work related to school health include: [Action in Schools for Physical Education and Nutrition Policy Recommendations Summary](#) Canadian Cancer Society (Alberta/N.W.T Division) undertook a project in collaboration with several partners to make recommendations to influence the creation and implementation of policies that facilitate healthy eating and active living within Alberta’s junior high schools (2004). Prevention efforts include public information (for an example related to healthy eating as schools click [here](#)). Series of fact sheets related to healthy eating and a section ‘resources for teachers’. [The 5-to-10-a-day campaign](#): to reduce the risk of cancer and cardiovascular disease, by encouraging Canadians to consume at least five servings of vegetables and fruit a day as part of a healthy diet (as described in Canada’s Food Guide to Healthy Eating), and as part of a healthy lifestyle is a joint venture of CCS, the Heart and Stroke Foundation and the [Canadian Produce Marketing Association](#).

The [Canadian Council of Food and Nutrition](#) (CCFN) was created out of a union of the mandates of the National Institute of Nutrition (NIN) and the Canadian Food Information Council (CFIC) in 2004. On June 16, 2006 CCFN is co-hosting a [Think Tank on School Nutrition and Activity](#). This is a Members only event and for invited experts and stakeholders.

[Canadian Diabetes Association](#) staff and volunteers run a variety of programs and services across Canada focused primarily on diabetes management. For insight in to resources and services offered across Canada, [click here](#).

[Canadian Medical Association's Office for Public Health](#) works with individuals and other organizations to protect and promote health and to prevent illness through efforts that address the physical, mental and environmental health concerns of the population. The CMA supports all initiatives that will encourage healthy eating and physical activity in Canadians. For example, we recommend that: Schools provide a minimum of 30 minutes daily physical education; school boards ban the sale of junk food in schools. [CMA Policy Summary on Obesity and Cardiovascular Disease \(2003\)](#).

[Canadian Obesity Network](#) is bringing together researchers, health professionals, government agencies, non-profit organizations and industry partners to develop “made in Canada” solutions to the obesity epidemic. Work is primarily focused at health professionals, researchers and policy and program related officials.

The [Canadian Public Health Association](#) is a national, independent, not-for-profit, voluntary association representing public health in Canada with links to the international public health community. CPHA's mission is to constitute a special national resource in Canada that advocates for the improvement and maintenance of personal and community health according to the public health principles of disease prevention, health promotion and protection and healthy public policy. A [special supplement to the Canadian Journal of Public Health \(CJPH\)](#), *Understanding the Forces That Influence Our Eating Habits: What We Know and Need to Know*, which was released in June 2005. One of the topics focused on the determinants of healthy eating related to “children and youth”, providing a synthesis of the literature and recommendations on appropriate research needed to fill evidence gaps. CPHA work includes a focus on chronic disease prevention and the promotion of a settings-based approach.

[Dairy Farmers of Canada](#) is active across Canada in the areas of school nutrition by way of producing curriculum support materials, Web-related support, teacher training, conducting scientific research, advising on school-related health policies and programs, offering school and nutrition related reports and literature reviews and coordinating school milk programs. Activities vary per jurisdictions. In partnership with local University research teams, conduct research with students to describe eating and physical activity patterns. (Alberta and Ontario). There are two reports pending that have been submitted to the Canadian Journal of Dietetic Research and the Canadian Journal of Public Health. Act as support and catalyst to schools wishing to establish school milk programs and offer nutrition and health seminars and educational materials for parents. Offer recognition awards for teachers & schools to support quality nutrition education. Also offer periodic continuing education events in nutrition and health for those working within the school health sector (B.C. Manitoba, Ontario). Several jurisdictions within DFC offer nutrition and health education resource materials and supports, including the [Dairy Farmers of Canada – Ontario](#) who offer a series of curriculum matched, evaluated resources and workshop opportunities for Ontario schools. Links to the other PT jurisdictions of DFC are available through ['educational resources'](#). [The Alberta Healthy Schools Initiative: Beyond an Apple a Day](#) (2004) is background paper for health professionals and educators. [Reality Check I: The Health of our Youth](#). Is a related literature review that includes an extensive reference list. Some jurisdictions also offer agriculture in the classroom support and classroom visits by Registered Dietitians. [Download "Healthy Ways - Healthy Weight"](#) from Dairy Farmers of Canada.

[Dietitians of Canada](#) is the nation-wide voice of dietitians. DC brings the knowledge and skills of its members together to inform decisions that affect food, nutrition and health, with impact at the local, regional/provincial, national and international levels. Some relevant contributions to school

health include: [Eat Well Play Well](#) – a place for educators, health intermediaries and parents to explore resources and strategies that will support healthy living for school age children and your where they live, learn and play. [Mission Nutrition](#)* Adventures in learning created by Canadian dietitians. This program supports teachers with credible curriculum-based resources, easy-to-use lesson plans, and fun student activities. [Healthy Eating + Activity Tracker](#) a web-based tool to help Canadians set personal goals and track progress towards achieving healthy eating, physical activity and healthy body weight. A D.C. 2005 consumer research [Speaking of Food and Healthy Living - Children and Healthy Weights: Parents' Perspective](#). [Practice-based Evidence in Nutrition \[PEN\]](#) - Dietitians of Canada is currently developing a new service for members and other health professionals that will provide ready access to evidence-based practice guidance, tools and resources designed around knowledge pathways. A priority topic for the initial launch will be on obesity prevention and management.

[Heart and Stroke Foundation of Canada](#) is a national voluntary non-profit organization whose mission is to improve the health of Canadians by preventing and reducing disability and death from heart disease and stroke through research, health promotion and advocacy. The Heart and Stroke Foundation of Canada is a Federation of 10 independent Provincial Foundations and one National Office. Some relevant contributions to school health include: [yearly report cards on health](#) on hot issues including obesity (2002) and children's health; [The Growing Burden of Heart Disease and Stroke in Canada 2003](#); [School Nutrition Toolkit from HSF Saskatchewan](#). A follow up on their report "Nutrition in Saskatchewan Schools" this toolkit is for schools in helping them get started on making their school a healthier place; to assist Canadian parents in improving the lifestyle and eating habits of their children, the Foundation has implemented a number of programs. The [Teachers Resource section](#) offers curriculum resource materials for grades K-8. The [HeartSmart Family Fun Pack](#)TM incorporates games, tips and information for families on how to adopt a heart healthy lifestyle, including physical activity, proper nutrition and a tobacco-free environment. The Foundation specifically designed its [Health Check](#)TM food labeling program to make healthy food choices at the grocery store easier for time-stressed families. For additional nutrition related resources and fact sheets click here.

Appendix 3

Appendix 3 Comprehensive School Health Approach to Nutrition (SUCCESS)				
SUCCESS Element	Rationale	Evidence Supporting the Key Elements	Overcoming Barriers- or Strategies for successful implementation of SUCCESS	Current Nutrition Initiatives in Alberta and Abroad that illustrate the Success Framework
S- School Food and Nutrition Guidelines	<p>Nutrition Policy allows for consistent messaging in all realms of food and nutrition provision, including curriculum, snacks at school and fundraising activities (Ontario Society of Nutrition Professionals in Public Health, 2004).</p> <p>The development and dissemination of a coordinated school nutrition policy is fundamental to providing the framework for a Healthy School Nutrition Environment (CDC, 1996).</p> <p>Without a nutrition policy, schools risk negating nutrition lessons learned in the classroom by allowing actions that discourage healthy eating behaviours (CDC, 1996).</p> <p>School food practices that encourage eating by students whenever they want and consumption of foods and beverages high in calories and low in nutrients are commonplace and are associated with higher BMI (Kubik, Lytle and Story, 2005).</p>	<p>Multi-component nutrition interventions can result in increased vegetables and fruit intake in students attending elementary schools. (Caballero, B., et al, 2003).</p> <p>A Nova Scotia study showed lower rates of obesity, healthier diets and more physical activity in schools with comprehensive programs than without (Veugelers & Fitzgerald, 2005b)</p> <p>At this time there is insufficient evidence to determine if school nutrition interventions reduce the rates of obesity and overweight in youth. Most studies to date have been short term or inadequately designed to demonstrate outcomes. (The Guide to Community Prevention Services, CDC, 2005)</p> <p>Making guidelines for healthy choices available to those responsible for foods/beverages offered in schools, having public/board presentations to dispel misperceptions about policy/guidelines, legislative control over school eating environment can provide impetus/structure for change (example national food standards for meal programs, district bans, state legislation to improve the nutrition and eating habits of school children etc.) (Hansford, 2005)</p>	<p>To facilitate successful implementation of school food and nutrition guidelines:</p> <ul style="list-style-type: none"> • Ensure adequate leadership from administrators, school districts • Consider Budget impacts, and seek adequate financial support • Obtain adequate human resources and support for program implementation • Seek clarity by all stakeholders regarding the scope of CSH (Stewart, Parker and Gillespie,2000) • Educate stakeholders regarding what foods are considered healthy and the link between nutrition and health/performance/behaviour (Spence, Marshall, 2004) • Ensure buy-in by staff (St Leger, Nutbeam 2000) • Allow sufficient time to achieve outcomes (St Leger, Nutbeam 2000) • Instil a sense of teamwork and pride in staff to ensure positive role modeling 	<p>The United States are making it mandatory that all school boards have School Wellness Policies which take a comprehensive school health approach to nutrition by the September 2006</p> <p>The Holy Family Catholic Regional School Division (Peace River) has adopted a Nutrition Policy outlining guidelines for foods consumed and sold at school</p> <p>The Calgary Board of Education have created a regulation regarding guidelines for Nutritious Choices in School</p> <p>Tools have been developed to aid in guideline and policy development in schools such as the School Nutrition Handbook from the Calgary School Nutrition Advisory Coalition</p> <p>Other tools/activities include:</p> <ul style="list-style-type: none"> • School nutrition checklists for schools to monitor progress • Working with schools to put nutrition initiatives on the school improvement plan • Classroom rewards consistent with nutrition guidelines • Incentives for schools to achieve school/district nutrition standards • In-service provided by health professionals at PD days

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U – Use foods served in school to reinforce nutrition guidelines and curriculum	<p>Children who do not consume food and beverages that provide appropriate energy and adequate nutrition are at risk for a variety of poor outcomes including poor growth, iron deficiency anaemia, poor academic performance and development of psychosocial difficulties (American Dietetic Association, 2003).</p> <p>Environmental changes such as providing healthier choices in vending machines are more effective within the school system because it is not left up to the student to decide whether to modify their habits (Dietz and Gortmaker, 2001).</p> <p>Lunches should be scheduled so that recess is not competing with mealtimes. Research shows that children eat less if they are eager to go outside for recess (Conklin et al, 2002).</p> <p>Allowing students a minimum of 20 minutes to socialize with others at lunch provides a break in routine and refreshes them for afternoon class (Conklin et al, 2002).</p>	<p>Having written guidelines regarding types of foods sold in school tuck shops and vending machines is associated with lower consumption of high energy, nutrient poor foods (Vereecken, Bobelijn, & Maes, 2005).</p> <p>The availability of sweetened beverages (not including 100% juices and flavoured milks) and high fat sugar/sugar/salt snacks at school can result in students having higher fat, salt and sugar intake and lower intakes of nutrients from fruits, vegetables and milk. ((Kubik, Lytle, Hannan, Perry and Story (2003).</p> <p>Price has a strong effect on food choices and lowering healthy food prices will increase sales substantially (French et al, 1997).</p> <p>Working with vending machine companies to provide healthier options, change advertisements on machines and change pricing schemes seems to be a viable and effective strategy (Hansford, 2005).</p> <p>Provide for at least 10 minutes to eat snack, 20 minutes to eat lunch from the time the child sits down (CDC School Health Index, 2004).</p> <p>Recess before lunch leads to better milk consumption, less lunch wastage, and better behaviour in class (Montana Office of Public Instruction, 2004).</p> <p>The most effective school nutrition initiatives took a whole school approach and provided healthy food in school canteens. (Stewart-Brown S (2006).</p>	<p>Recognize that it can be hard to change students’ preferences for unhealthy foods but it can be done.</p> <p>Establish clear definitions or criteria to describe “what are healthier food choices”.</p> <p>Address fears of losing profit by sharing success stories and creating clear expectations for profit and marketing.</p> <p>Offer price breaks as a marketing tool on healthier items to encourage purchases. High pricing influences choice negatively.</p> <p>Ensure children have adequate time to consume their meals and snacks.</p> <p>Ensure school eating environment is conducive to eating by providing space and necessary equipment (i.e. tables, chairs etc.).</p> <p>Pilot and taste test new foods.</p> <p>Include point of purchase nutrition information.</p> <p>Offer fruits and vegetables at school as a way of increasing intake.</p> <p>Schedule a healthy snack time before recess.</p> <p>Ensure foods available in staffroom model healthier choices.</p>	<p>Some provinces in Canada have created healthy eating guidelines for schools to adopt and some are being developed – see appendix 3.</p> <p>Schools in Alberta currently creating healthy eating guidelines include:</p> <ul style="list-style-type: none"> • The Calgary Board of Education has created guidelines for nutritious choices in school. • The Holy Family Catholic Regional School Division (Peace River) has adopted guidelines. • St.Paul School Division adopted a healthy food guideline and school nutrition environment checklist to be completed on schools in the district annually. • The Calgary Separate School District has started a Healthy Choices Initiative to assist school communities with making healthy food choices with vending and school stores and to provide information to staff and parents. • Clandonald school (K-9) eliminates all pop, candy, and sweetened beverage sales in the school and serves only foods and beverages of higher nutritional value. • The School Nutrition Advisory Coalition in Calgary has created the School Nutrition Handbook to help with making food changes at school.

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				<ul style="list-style-type: none"> Palliser Health Region has adopted the Calgary manual and is also making it available to school communities <p>Healthier vending machine options including milk, water, juice and snacks have been trialed and have been successful in Alberta schools.</p> <p>In the United States there is proposed guideline to suggest that greater than 60% if not 100% of fluid needs be provided by calorie-free beverages preferably water. (Popkin et al , 2006)</p>
<p>C - Curriculum involves experiential nutrition education</p>	<p>A sequential, comprehensive nutrition education curriculum should begin in Kindergarten and continue through secondary school (American Dietetic Association et al, 2003).</p> <p>Nutrition education contributes to improved dietary practices that affect the health, growth and intellectual development of children and youth (Ontario Society of Nutrition Professionals in Public Health, 2004).</p> <p>What is taught in the classroom needs to be reinforced by the hidden curriculum through school activities which provide opportunities for students to practice what they learn in the</p>	<p>Integrating nutrition into other subjects such as math and language arts was found to be successful and providing user friendly resources that resulted in reduced teacher preparation time increases use of resources (Contento, Manning & Shannon, 1992).</p> <p>Nutrition Information at point of selection affects foods chosen by high school students (Conklin, Cranage, & Lambert, 2005).</p> <p>The level of acceptance and use of resources is dependent on the teacher, the quality of the educational materials and the support provided by program leaders and staff (Kealey, Peterson, Gaul, & Dinh, 2000).</p> <p>Continuous staff training is important in the success, sustainability and viability of school-based nutrition interventions (Tortu & Botvin, 1989).</p>	<p>Access or develop a clearinghouse of resources and lesson plans to assist with the shortage of support materials for the classroom.</p> <p>Ensure all staff are aware of creative alternatives to using food as rewards and inappropriate use of food rewards.</p> <p>Integrate nutrition into other "required" curriculum.</p> <p>Support adequate professional development by teachers in the area of health curriculum, engage community resource people to assist with program delivery.</p> <p>Training teachers in nutrition may positively affect their nutrition behaviour resulting in personal health benefits while helping them be positive nutrition</p>	<p>Schools have integrated nutrition into other classroom activities (bulletin board displays, active nutrition games, art work, computer class). Examples include:</p> <ul style="list-style-type: none"> Nutrition Games such as Nutrition and Active Living Jeopardy and All Foods Can Fit produced by CHR Mission Nutrition teaching tools available at www.missionnutrition.ca Liquid Candy displays use an innovative way to provide point of purchase information about the amount of sugar in beverages. David Thompson Health Region has developed nutrition activities and resource that compliment the Alberta Curriculum http://www.dthr.ab.ca/resources/documents/nutrition/index.htm

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	<p>classroom (CSPI, 2003b)</p> <p>Nutrition education in the classroom is not reinforced but may be undermined when foods with little nutritional value from the 'Other' food group are emphasized</p> <p>Healthy eating principles are taught in the classroom but the environment of the school can weaken the impact. (For example when the children and youth receive candy rewards in the class or the only schools largely offer soft drinks and chips with few healthier options).</p>		<p>role models for students.</p> <p>Nutrition and food safety training for food service staff can enhance their skills and ability to provide healthy food choices.</p>	<ul style="list-style-type: none"> Hiring of a dietitian by the school district to work with staff and support nutrition initiatives Peers delivering nutrition education A 'celebrity' talks about the role of nutrition, or takes action for change Nutritious food preparation and life cooking skills taught in CTS In-service provided by health professionals at PD days
<p>C - Community programs, resources and services are engaged in healthy eating initiatives in schools</p>	<p>Involving the broader school community allows for innovative nutrition programming in the schools delivered in partnership with local community agencies and services.</p> <p>School meal programs may provide a safety net for children and adolescents at nutritional risk. They may not eat breakfast because they may not be hungry in the morning, parents may not be home, eating breakfast may not be the norm or breakfast may be a low priority. There also may be dieting or financial concerns. (Ontario Society of Nutrition Professionals in Public Health, 2004).</p> <p>Training in nutrition can help gain teacher support for nutrition</p>	<p>Using specially trained (external) staff to deliver programs enhances program effectiveness (Lytle, et al., 2004).</p> <p>Effectiveness of nutrition interventions are improved when a multi-strategy, or comprehensive approach is taken (McKenna 2003).</p> <p>Using specifically trained (external) staff to deliver classes or having peer-led activities may address lack of time and/or interest (Lytle et al., 2004, Lowe et al., 2004).</p> <p>Participation in school meal programs increased achievement as measured by standardized test scores and grades. Participation in school food programs has also been shown to have a positive effect on psychological outcomes leading to lower levels of anxiety, hyperactivity and depression (Taras & Potts-Datema, 2005).</p>	<p>Identify and strategize the issues concerning inadequate support from stakeholders.</p> <p>Target the engagement of the community to influence the environment outside the school (St Leger, Nutbeam 2000).</p>	<p>Some examples of community engagement include:</p> <ul style="list-style-type: none"> Good Food Box program delivered out of the school Alberta Schools collaborate with Breakfast for Learning and other organizations that support school meal programs Local businesses, community organizations provide financial and human volunteer support to school-based meal programs Volunteers plan, shop, prepare and serve school-based meal programs Local grocery stores in Manitoba have prepared and delivered a homemade-

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	education and increase the extent to which teachers will implement the curriculum (CDC, 1996)			<p>bagged lunch to schools. Parents can pre-purchase the lunches when they do their weekly grocery shopping</p> <ul style="list-style-type: none"> • Local grocery stores provide taste-testing samples on special event days. Many provide food for school-based meal programs at lower prices or through donation. • Local businesses incorporate nutrition education in schools as part of their marketing plan (i.e. For Pita's Sake program in Calgary). • Direct and frequent links with local community dietitian to identify credible resources and assist with program delivery. • Local vending machine companies provide healthier vending machine options approved by local community dietitian and reflect healthy eating guidelines to provide healthier options, change advertisements on machines and change pricing schemes. • Alberta's Agri-preneur newsletter (winter 2006 vol 19) advocates Alberta producers to consider nutritious options in marketing to children and schools.

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E - Encourage parent and family involvement in healthy eating at home and at school	<p>The attitudes and behaviours of parents and caregivers directly influence children and adolescent's choices of foods (CDC, 1996).</p> <p>Interest and support shown by parents was identified by youth as highly influential (OPHEA, 2002).</p>	<p>The CATCH interventions showed that as parent participation increased, students increased usual food choice, dietary self-efficacy and dietary knowledge (Nader et al, 1996).</p>	<p>Use creative ways to encourage healthy food choices – make it fun and age appropriate.</p> <p>Encourage parental and community involvement in supporting children to adopt healthy behaviours.</p> <p>Educate parents about healthy and nutritious foods through newsletters, homework assignments, and information sessions.</p> <p>Demonstrate the ease, cost, and availability of healthier options over unhealthy pre-packaged and fast foods.</p> <p>Encourage positive modeling behaviours in the home and school, and demonstrate positive modeling in the school by staff and student leaders.</p>	<p>Many Alberta schools have:</p> <ul style="list-style-type: none"> • Parent and student involvement on school health/nutrition committees • Parents/peers delivering school milk program or meal programs • Community services and community businesses working with parent councils to improve the foods offered in schools • Ongoing communications with parents in the form of newsletters, website, e-mail, parent education night, student teacher interviews • After school cooking clubs in which parents volunteer
S – Student and youth are engaged as leaders and decision makers regarding healthy eating at school	<p>Students are more likely to adopt healthy eating behaviours if they receive healthy eating messages through multiple channels (i.e. home, school, community and media) and from multiple sources (parents, teachers, Registered Dietitians and media) (CDC, 1996).</p> <p>Youth involvement and peer leadership in nutrition programming increases the likelihood of having impact on</p>	<p>Peer-led activities and interventions can have significant positive impact on fruit, vegetable and fat intake in students (Hamdan, Story, French, Fulkerson and Nelson, 2005; Lowe, Horne, Tapper, Bowdery and Egerton, 2004).</p> <p>Peer-led nutrition education approaches in schools are feasible and have high acceptability among peer leaders, classroom students and teachers (Story, Lytle, Birnbaum & Perry, 2002).</p>	<p>Use creative ways to encourage school-age children and youth to make healthy food choices such as (CDC 1996):</p> <ul style="list-style-type: none"> -provide opportunities to taste many different healthy foods - let students prepare healthy snacks or simple meals -provide opportunities for students to sample culturally diverse foods that are lower in fat, salt and sugar. -have students select healthier choices from fast food menus - teach children to be wise consumers by reading the Nutrition Fact label 	<p>Several Alberta schools are using peer education to teach about healthy and unhealthy food choices using fun and creative delivery methods.</p> <p>Manning Elementary School has students discuss healthy eating with their families and have learned how to read food labels on packaged foods.</p> <p>Bracco Jr High through CHOW and CHAT students learn to prepare healthier</p>

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SUCCESS Element	Rationale	Evidence Supporting the Key Elements	Overcoming Barriers- or Strategies for successful implementation of SUCCESS	Current Nutrition Initiatives in Alberta and Abroad that illustrate the Success Framework
	personal eating habits (Hamdan, Story, French, Fulkerson & Nelson, 2005).		<p>- provide opportunities for students to record and assess their own food intakes</p> <p>Use ways to decrease the demand for so called “junk food” and support the choice of healthy foods through:</p> <ul style="list-style-type: none"> - pricing strategies, - promotional campaigns and contests -limiting the selection of unhealthy choices, etc. 	meals and some have even gone home to teach their parents.
S - School Staff support and participate in healthy eating initiatives in school	<p>Children and youth who see teachers eating healthy foods are more likely to eat well (Ontario Society of Nutrition Professionals in Public Health, 2004).</p> <p>Teachers are found to be trusted sources for nutrition and dietary choices (Hanning and Jessup, 2002).</p> <p>Elementary school teachers have a potentially greater influence on a child’s health than any other group outside of the home (Berenson et al., 1991).</p> <p>Teacher’s and coaches are seen to have a substantial impact, both positive and negative (OPHEA, 2002).</p>	<p>Staff wellness programs are successful in changing behaviors of teachers.</p> <p>Staff role-modeling supports healthy eating behaviors in schools.</p> <p>School champions can initiate, support and sustain healthy eating environments in schools. Administration support is key.(Food Trust, 2004).</p> <p>School staff, students and parents are part of the policy-making process and support a healthy school nutrition environment is one of the definitions of success to improving the school nutrition environment. (Team Nutrition USDA, 2000).</p> <p>Administrators support the development of healthy lifestyles for students, and establish and enforce policies that improve the school nutrition environments. They address issues such as the kinds of foods available, mealtime schedules, nutrition education, and dining space and atmosphere. (Team Nutrition USDA, 2000).</p>	<p>Communicate to teachers about the influence they have as role models for school-aged children and youth.</p> <p>Ensure that food and beverages sold in staff rooms are the same as foods offered to students and work towards healthy food options.</p> <p>Clarify the misconceptions among teachers and school staff with respect to the term ‘healthy eating’.</p> <p>Implement worksite wellness programs that facilitate healthy staff and school environments.</p> <p>Ensure that food company sponsorship of beverages and food items is not inadvertently influencing teaching strategies and school messaging.</p> <p>Ensure teachers support students in eating breakfast and lunch and that they practice healthy eating habits at school.</p>	<p>Some schools in British Columbia have included a statement prohibiting the use of food rewards in the classroom and have included this in their school food and nutrition guideline.</p> <p>Steele Highs Jr high – Principal champions, promotes and supports a healthy eating environment with staff and students.</p> <p>Chief Justice Milvain Elementary school-teacher promotes Rainbow Snack Time (a reading program at which the teacher allows consumption of a fresh fruit or vegetable snack) daily.</p>

