Final Report: *PHSA/Working Group on Food* Recommendations for Obesity Reduction in BC

FINAL

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Provincial Health Services Authority
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Responding to the Obesity Epidemic with Food Related Strategies

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1. Purpose

The purpose of the Working Group on Food was to propose a suite of policies, programs and initiatives (collectively termed "actions") aimed at transforming a broad range of factors that contribute to an obesogenic food environment and influence people's food choices. The goal of the actions is to make healthy eating the easy and preferred choice for British Columbians. The actions proposed are for consideration in the Obesity Reduction Strategy (ORS) being developed for British Columbia (BC).

2. Process

The Provincial Health Services Authority (PHSA), the coordinator of the ORS being developed for BC, established four working groups with content expertise from relevant sectors and organizations. The working groups were to synthesize the best available evidence, scan the current BC policy and practice landscape and propose actions related to food, physical activity, treatment and surveillance for consideration in the Obesity Reduction Strategy for BC.

The Working Group on Food (Working Group) consisted of 25 members representing provincial government ministries and federal government departments, provincial non-government/umbrella organizations and food industry associations (See Appendices A and B for Terms of Reference and Membership).

The Working Group met three times (participating in-person and via teleconference) and communicated via e-mail. At the first meeting, held on January 26, 2010, an overview of the issue being addressed, the purpose and role of the Working Group, the expected results/ deliverables and the timeline were presented. Members were requested to bring forward literature on promising practices as well as their knowledge of, and experience with, current BC food related actions. The best available evidence was synthesized on the causes of the obesity epidemic, key considerations for addressing the epidemic and actions that policy makers around the world are using in developing obesity reduction strategies. A scan of current nutrition/food related actions underway in BC was undertaken, which was juxtaposed with strategies being implemented in other jurisdictions, to identify strengths and gaps in current nutrition/food policies and practices in BC.

This synthesis was used to guide the discussion at a second meeting held on March 5, 2010 where themes were identified which ultimately framed the strategic approaches that were recommended by the Working Group. A third meeting held on April 1, 2010 reviewed the

proposed recommendations. A *first* draft of the final report was circulated to working group members via e-mail and feedback was invited via the same mechanism. In preparation for sign-off of the report, a final draft of the report incorporating the feedback was circulated to the working group on May 4, 2010.

Concerns were expressed by food industry association representatives about the process used to develop the report and the content of the report. To address these concerns, PHSA's Obesity Reduction Strategy secretariat met with the food industry association representatives on June 22, 2010. The food industry association representatives were provided an opportunity to discuss their concerns about the draft report, as well as provide their suggestions for ways the food industry is already contributing and could further contribute to the overall goal of reducing obesity in BC. The report was reviewed section by section and points of agreement and disagreement noted.

Following the June 22, 2010 meeting, the Working Group's draft report of May 4, 2010 was significantly revised in an attempt to capture the discussion and, in some cases, divergent viewpoints expressed at the June 22, 2010 meeting. The specific areas where consensus was not reached were identified. Feedback was obtained on this version of the draft report from participants at the June 22, 2010 meeting and incorporated into the final report. This final report is intended to reflect the Working Group on Food discussions as well as the subsequent discussions with representatives of some of the food industry associations. Where there were differing viewpoints, these are noted in the report.

3. Glossary of Terms

Definitions for the purposes of this report:

Healthy living: Making positive choices that enhance personal physical, mental and spiritual health. A person makes these choices when he/she:

- Eats nutritiously, choosing a variety of foods from all of the food groups as suggested by Canada's Food Guide;
- Builds a circle of social contacts to create a supportive environment of people who care for and respect him/her;
- Stays physically active to keep the body strong, reduce stress, and improve energy levels;
- Chooses not to smoke; and
- Puts an end to other negative lifestyle practices.

(Health Canada http://www.hc-sc.gc.ca/hl-vs/index-eng.php)

Healthy eating: Eating which is consistent with the principles outlined in *Eating Well with Canada's Food Guide* (2007). The guide describes the *amount* of food people need and what *type* of food is part of a healthy eating pattern. The eating pattern in Canada's Food Guide

includes foods from each of the four food groups – vegetables and fruit, grain products, milk and alternatives and meat and alternatives – plus a certain amount of added oils and fats. (*Eating Well with Canada's Food Guide: A Resource for Educators and Communicators*; www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/pubs/res-educat-eng.pdf).

Healthy food choices: Foods and beverages that are core to shaping a healthy eating pattern and include:

- Fruits and vegetables, in particular those prepared with little or no added fat, sugar or salt.
- Grain products, in particular whole grains and those lower in fat, sugar or salt.
- Lower fat milk and milk alternatives.
- Lean meat, meat alternatives and fish, all prepared with little or no added fat or salt.

(Eating Well with Canada's Food Guide; www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/pubs/res-educat-eng.pdf)

Less healthy food choices: Foods and beverages for which *Eating Well with Canada's Food Guide* recommends that consumption be limited and includes:

- Cakes and pastries
- Chocolate and candies
- Cookies and granola bars
- Ice cream and frozen desserts
- Doughnuts and muffins
- French fries
- Potato chips, nachos and other salty snacks
- Alcohol
- Fruit flavoured drinks
- Soft drinks
- Sports and energy drinks
- Sweetened hot or cold drinks

(Eating Well with Canada's Food Guide; www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/pubs/res-educat-eng.pdf)

Food security: a situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice (Hamm & Bellows, 2003).

BC Public Buildings: BC public buildings owned or leased by Her Majesty (through the Accommodation and Real Estate Services Division ("ARES"), Ministry of Labour and Citizens' Services,) or provincial public bodies, including health authorities, public post-secondary Institutions (i.e. university colleges, colleges and public institutions) and Crown corporations. *(Healthier Choices in Vending Machines in BC Public Buildings Policy Paper*; www.lcs.gov.bc.ca/HealthierChoices/pdf/CompletePolicy.pdf)

Food and beverage industry: farmers, growers, businesses and their associations that produce, process, distribute, market and sell food and beverages in BC and/or to BC residents.

Social marketing: the systematic application of marketing, along with other concepts and techniques, to achieve specific behavioral goals for a social good. Social marketing can be applied to promote merit goods, or to make a society avoid demerit goods and thus to promote

society's well being as a whole. For example, this may include asking people not to smoke in public areas, asking them to use seat belts, or prompting to make them follow speed limits. (Wikipedia, http://en.wikipedia.org/wiki/Social_marketing)

4. The Issue

4a. Causes of Obesity

There are several theories to explain the rapid rise of obesity across the globe in the past three decades (Lang & Rayner, 2007; Rayner; 2007; Foresight Report, 2007). These theories propose that the obesity epidemic results from both "***individual***" and "***societal***" factors.

- ***Individual factors*** are genetics, psychosocial attributes, lifestyle and behaviour (Farooqu & O'Rahily, 2007; Rolls, 2007).

- ***Societal factors*** are the complex societal changes that have occurred and have contributed to the creation of an ***obesogenic environment*** (Pouliou & Elliott, 2010; UK Department for Environment, Food and Rural Affairs, 2010; UK Cabinet Office, 2008; Jones et al., 2007; Lang & Rayner, 2007). Factors include***:***
  - Food systems which encourage over-production and over-consumption of cheap energy dense food.
  - Built environments which encourage sedentary behavior.
  - Socio-cultural shifts which have resulted in (a) the loss of people's understanding of how food is produced, processed, distributed and retailed; (b) reduced skills in the area of healthy food preparation; and (c) diminished cultural and family ties to food (e.g., fewer family meals). Further, inadequate work-life balances have pushed people to prioritize "convenience eating" over healthier eating.

Individual factors alone cannot explain the rapid increase in the ***prevalence*** of obesity. The *e*vidence suggests that many factors interact with each other to form a complex web of causal factors (Foresight Report, 2007). This understanding has focused the attention of policy makers on the **obesogenic environment** and the need for action "upstream" on the ***societal determinants of obesity*** (Pouliou & Elliott, 2010).

Several factors in the **food system** have contributed to the creation of an obesogenic environment (Wallinga, 2009). These factors include:

- Policies (subsidies and other) that have resulted in an increased production and reduced cost of less healthy food choices (Muller et al., 2009).
- Agricultural policies in many industrialized societies that have resulted in increased production of less healthy food choices and foods high in fat, salt and sugar to the detriment of, for example, fruit growing capacity (Lloyd-Williams et al., 2008).
- Advertising of less healthy food and beverage choice to vulnerable groups like children (Health Affairs, 2010a, 2010b; Jain, 2010).

4b. Key Considerations for the Obesogenic Environment

The following considerations are important for addressing factors in the food system that contribute to an ***obesogenic environment*** and therefore, the ***obesity epidemic.***

- Preventing obesity requires changes to the obesogenic environment (at societal, community and organizational levels) as well as changes in group, family and individual behavior (Pouliou & Elliott, 2010).

- Structural and systemic approaches are critical to altering the food environment, in order to support behavior change (Pouliou & Elliott, 2010; Harvie, 2006). In other words, evidence consistently indicates that educating consumers is not sufficient in the absence of basic structural change to effect obesity reduction. Though systemic and structural changes such as urban design may be more difficult and costly to achieve (in the short term), and targeting individuals might seem more feasible, changes in these basic infrastructures are more likely to result in more successful and sustained health outcomes (Pouliou & Elliott, 2010).

- The complexity and interrelationships of the factors causing obesity makes a strong case for the futility of isolated initiatives (Ries & von Tigerstrom, 2010). Intervention on one aspect of obesity is not only unhelpful, it could undermine positive action elsewhere (Mercer et al., 2003; Ries & von Tigerstrom, 2010). This underscores the need for intervention along the entire policy terrain (Ries & von Tigerstrom, 2010) as well as at multiple levels (individual, community, provincial, and national) and across multiple jurisdictions.

- A substantial degree of intervention (commitment) will be required to impact rising obesity rates. The challenge is to get buy-in from a range of sectors and stakeholders to effectively collaborate across different areas of policy to deliver a corrective population-wide shift.

- Obesity is prevalent in children (developing even prior to birth) and adults, therefore, interventions are needed throughout the life course (Foresight Report, 2007). It is also more prevalent in some segments of the population, for example aboriginal and socio-economically disadvantaged people. Therefore targeted interventions are also required. (Foresight Report, 2007).

- Policies must be based on the best available evidence and also have to be feasible and cost-effective. It is important to learn from strategies and policies that have successfully addressed other complex issues (e.g., tobacco reduction) (Foresight Report, 2007).

- In order to contribute to the emerging body of evidence, it is important to rigorously evaluate actions to create “practice based evidence” to better inform future action (Foresight Report, 2007).

- Finally, aligning with other major policy issues (i.e., climate change action) can help by consolidating policy action and maximizing engagement of a broader range of stakeholders to move the obesity policy agenda forward (Foresight Report, 2007).

The challenge at hand is significant; however, it is important to note that similarly complex and seemingly daunting issues have been successfully addressed in BC (e.g. smoking reduction). The next section highlights key learnings from successful approaches to complex issues and examines strengths and gaps in current BC policies, initiatives and programs.

5. Food-related Obesity Reduction Approaches and Actions

5a. Summary of Approaches and Actions

Several reports were reviewed to identify potential approaches and actions to reduce obesity in BC:

1. Strategies used to address other health-related issues (see Appendix C for details)
   - Prevalence of coronary disease in North Karelia
   - Tobacco and alcohol use in BC

2. High-profile obesity reduction strategy reports (see Appendix D for details)
   - BC Provincial Health Officer's Report. 2005. *Food, Health and Well-being in BC.*
   - Legislative Assembly of BC. 2006. *A Strategy for Combatting Childhood Obesity and Physical Inactivity in BC.*
   - World Health Organization. 2009. *Interventions on Diet and Physical Activity: What Works.*
   - Centres for Disease Control and Prevention. *Division of Nutrition, Physical Activity and Obesity*, website accessed July 5, 2010.
   - Centres for Disease Control and Prevention. 2009. *Recommended Community Strategies to Prevent Obesity in the US.*
   - Institute of Medicine. 2009. *Local Government Actions to Prevent Childhood Obesity.*

3. National obesity reduction strategy reports (see Appendix E for details)
   - *Obesity in Australia: A Need for Urgent Action*. 2009
   - *Healthy Weight, Healthy Lives: A Cross-Government Strategy for England*. 2008

While each of the reports offered different frameworks for their recommendations, several themes emerged:

- Addressing the obesity epidemic requires multiple interventions at multiple levels. No single intervention will be successful at reducing obesity in the population.
- High-intensity school-based interventions to support healthier eating and physical activity were foundational to all reports. Interventions included providing healthier snacks and

meals, banning less healthy food and beverage choices and actively involving parents in the plans to reduce obesity in schools and, in some reports, at home.

- Several reports recommended extending school-based interventions to child care, pre-school and after-school programs as well as to public buildings/venues.
- Working with industry to reduce the fat, salt and sugar content of foods was common in all reports.
- Regulatory and/or economic levers were recommended in some reports to support specific strategies such as reducing advertising to children and food labelling. Subsidies on healthy food and beverage choices and taxes on less healthy food and beverage choices were also recommended in some reports.
- Education of consumers was recommended in all reports, mostly through mass media and social marketing-type campaigns. Simplified methods to label healthy and less healthy food and beverage choices were identified as important educational tools in several reports (both pre-packaged foods and foods sold in restaurants).
- The importance of the built environment was identified, including neighbourhood proximity and easy and affordable transportation to grocery stores that provide a balanced selection of food and beverage choices.
- Healthy eating in socially and economically disadvantaged communities was discussed in most of the reports. Recommended interventions included subsidies for the production, transport and/or retailing of healthy food choices in the local communities, creating incentives to ensure an appropriate number of grocery stores in the area and reducing transportation barriers.
- Workplace policies and programs which support healthy eating were recommended in some reports. The role of physicians and health care professionals (primary health care team) in promoting healthier eating and healthy weights and early recognition of obesity was also mentioned. Development of baby and breastfeeding-friendly communities and workplaces were mentioned.
- The continuing need to build the evidence based and monitor rates of obesity was consistently recommended.

5b. Gap Analysis

BC was noted to be a leader in food and nutrition policies (See Appendix F for descriptions) and has initiated numerous local programs that focus on increasing food security and on healthier eating (ActNowBC, 2010). Actions are most developed in BC's public school system.

An analysis of current BC actions highlighted some gaps which include:

- Interventions at the food production, transformation (processing) and distribution phases that encourage access to healthy food choices and discourage access to less healthy food choices. This gap is most evident at the production phase.

- Interventions at the consumption (usage) phase that encourage healthier eating and discourage less healthy eating.

- The focus of current action in BC is on encouraging access to and consumption of healthy food choices with few actions that reduce access and discourage consumption of less healthy choices. The exception is in BC schools and, to a lesser extent, BC Public Buildings, where guidelines and policies have been implemented toward this end (*Guidelines for Food and Beverage Sales in BC Schools* and the *Nutritional Guidelines for Vending Machines in BC Public Buildings*).

6. Goals of the Strategy

The goal of the ORS is to support the BC Government's ActNow BC goals which are to:
- Reduce the percentage of BC adults who are overweight or obese by 20%.
- Increase the percentage of the BC population that is physically active by 20%.
- Increase the percentage of the BC population (aged 12+) who eat fruits and vegetables at least five times per day by 20%.

More specific goals and measures may be established when the ORS for BC is developed.

7. Food Related Obesity Reduction Recommendations for BC

The recommendations that follow emerged from the literature review, gap analysis and working group discussions.

Recommendations are divided into 7 themes:
1. Develop a Canadian food and beverage strategy.
2. Create an opportunity for dialogue, planning and implementation of BC-specific food-related obesity reduction initiatives.
3. Increase access to healthy food choices and reduce access to less healthy food choices.
4. Support consumers to make healthy food choices.
5. Promote healthy weights during pregnancy and the early years.
6. Develop an Aboriginal-specific obesity reduction strategy.
7. Monitor progress over time.

An eighth theme, increasing local food production and consumption, was discussed as a complementary strategy but was not incorporated into the recommendations. While encouraging local food production and consumption was identified by the group to be important in creating healthy communities and for shifting people's values about food, the correlation between local food production and consumption and reducing obesity was not as strong as for other areas.

The majority of the recommendations presented in this report were arrived at through consensus. **Where consensus could not be reached, the divergent viewpoints are captured in the text.**

1. Develop a Canadian food and beverage strategy.

Responsibility for decisions involving the food supply chain rests at the federal, provincial, and municipal levels; therefore, coordination and collaboration, especially between the federal and provincial levels of government, is important to a well functioning food system. This is most critical in the areas of standards and regulations where provincial efforts, not coordinated with national efforts, could lead to a patchwork of standards and regulations across the country. Such action would create an un-level playing field between sectors of the food industry if independent action was taken by provinces in the areas where provinces have jurisdiction. It would also make it difficult for businesses to operate effectively and profitably. Given there is currently no comprehensive national food strategy, BC has an important role to play in advocating with the federal government to develop a Canadian Food Strategy which will complement BC's efforts to reduce obesity.

Even in the absence of a Canadian strategy, it was acknowledged that several individual initiatives are already underway at a national level, including:

Initiatives being led by Health Canada:

- Development of national trans-fat guidelines.
- Development of voluntary national sodium reduction targets for the food industry (to be in place in 2011).[1]
- Other discussions are expected in the near future to address issues such as serving sizes (excluding restaurant meals) and the Nutrition Facts table.

Initiatives being led by the Public Health Agency of Canada (PHAC):

- Discussions to strengthen the code and related programs that address marketing and advertising to children.

Recommendation:

1.1. Advocate for and work with the federal government and other provinces/territories to develop and implement a comprehensive and coordinated Canadian food and beverage strategy which includes:
   - Coordination of food and beverage-related regulatory policies at a national level.
   - Targets and plans to reduce Canadian's consumption of fat, sugar and sodium, including a timeline for this to be achieved (note: not all participants agreed to targeting "sugar" per se; those that thought sugar should be included indicated

[1] Although sodium by itself does not cause obesity, it is a common component in less healthy food and beverage choices, so contributes to the obesity problem.

that food and beverages with significant amounts of sugar contribute to obesity; those that did not said that the human body treats all forms of sugars exactly the same regardless of whether they come from ingredients such as juice or are added as nutritive sweeteners).

- Targets and plans to provide Canadians with more healthy choices such as reduced portion options, including a timeline for this to be achieved.
- A social marketing and education strategy to promote the consumption of healthy food and beverage choices.
- Educational initiatives and other ways to support the use and understanding of the Nutrition Facts table to make it easier for consumers to make healthy food and beverage choices in stores.
- National guidelines requiring nutrition information to be available in food service establishments.
- A mechanism to limit child-directed advertising, sponsorship and marketing of food and beverages to healthy choices only.
- Coordination of policy evaluation research to enhance the effectiveness of the Canadian food and beverage strategy.

2. Create an opportunity for dialogue, planning and implementation of BC-specific food-related obesity reduction initiatives.

While the development of a Canadian food and beverage strategy was noted to be important, initiatives were identified by working group participants that could be implemented in BC prior to the development of a national strategy. Food industry association representatives identified several initiatives that were already underway (e.g., product reformulation to reduce the number of calories; nutrition tours in grocery stores; grocery store involvement in active community initiatives) or would be worthwhile to consider (e.g., engagement of celebrity chefs and healthy cooking programs; education/media campaign around making healthy food choices; incorporation of obesity reduction strategies/education into existing pharmacy health and wellness programs; realistic strategies to reduce portion sizes).

Recommendation:

2.1. Establish a dialogue table between all levels of government, health authorities, non-government organizations and the food and beverage industry to plan and implement food-related initiatives that will contribute to the goal of reducing obesity in BC.

3. Increase access to healthy food choices and reduce access to less healthy food choices.

Several ways to increase access to healthy food choices and/or reduce access to less healthy food choices were reviewed and discussed by the working group. Access was considered broadly, from production to processing, distribution and retailing.

There was agreement in some areas but not in most areas.

Consensus was reached about the need to develop and implement nutrition guidelines in child care, pre-school and after-school programs as well as some of the broader issues of land use, transportation and removing barriers as they relate to healthy eating and healthy living.

Consensus was not reached in three areas, although, after consideration of both viewpoints, recommendations pertaining to these areas have been included in this report:

1. Adapting and implementing nutrition guidelines in BC schools and BC public buildings to apply to all food service venues within these buildings and to municipal buildings.
2. Implementing guidelines to restrict the sales of less healthy food and beverages in areas surrounding schools.
3. Developing point-of-purchase strategies to promote the purchase of healthy food and beverage choices in grocery stores and food service establishments.

Viewpoint #1:

- Expansion of the current guidelines for vending machines to other sales channels would be unjust and unfair to consumers who wish to purchase a product that is negatively targeted under the guidelines. Such action would also excessively restrict commercial enterprise, possibly violate the Canadian Charter of Rights and Freedoms, and create an unlevel and anticompetitive playing field for those businesses operating a food service venue within a BC Public Building versus those businesses that may be literally in the very next building (or even in the same building but in an area leased to a third party providing non-government services).
- Implementation of guidelines for food and beverage sales in geographic areas surrounding schools was seen as having the potential to lead to regulatory intervention and impacting which products can be sold in specific commercial areas.
- Point-of-purchase strategies about product placement were not supported as they would infringe on the jurisdiction of private businesses.
- Guidelines that require nutrition information to be provided in food service establishments need to be developed nationally.

Viewpoint #2:

- The BC Nutrition Survey showed that “other foods”, primarily high in fat and/or sugars, comprised about 25% of the energy intake of adults on a given day (BC Nutrition Survey, 2004).
- Access to healthier food and beverages positively impacts people’s choices. The absence of access to such options is a factor in choosing less healthy foods.
- Considerable work has been done in BC schools and, to a lesser extent, BC Public Buildings to increase access to healthier food choices and to reduce access to less healthy food choices. Guidelines have been developed for food and beverage sales in BC schools and for vending machine sales in BC schools and BC public buildings. These

guidelines are based on the recommendations in *Eating Well with Canada's Food Guide* and provide direction for operators of BC schools and public buildings about specific food and beverages which may or may not be sold. Extending these guidelines beyond vending machines to food service establishments that operate in BC Public Buildings is the next logical step.

- An incremental approach to applying existing policies and programs to new settings, beginning with public buildings, would be an effective way to lead the public to healthier choices. This strategy was shown to be effective in reducing tobacco use.
- Implementation of guidelines for food and beverage sales in geographic areas surrounding schools would support the existing nutrition guidelines in schools which currently limit access to less healthy food choices.
- Point-of-purchase policies about product placement and including nutritional information on menus would support consumers in making the healthy choice the easy choice.

An area of discussion but one in which no recommendation was proposed was in the use of taxation as a tool to reduce the consumption of less healthy food and beverages.

Viewpoint #1:

- Obesity results from an imbalance in the "calories in" and "calories out" at the level of the individual.
- The focus of an obesity reduction strategy should be on making healthy food choices available and on educating consumers to make healthy food choices and eat a balanced diet. It is the over-consumption of food and beverages that are the root cause of obesity. This has been well documented in recent studies (Summerbell, July 2009; Gibson, 2008; Janssen, 2005; Forshee, 2008, Sun, 2007, Sacks, 2009).
- The food sector has been working for the past few years on several fronts to provide consumers with healthy food choices and to educate them on how to make healthy food choices. Examples include the reformulations of thousands of products and support for grassroots consumer focused education programs to help make it easier for Canadians to make healthier food and beverage choices.
- Studies have shown that increasing taxes on less healthy food and beverage choices has not reduced obesity rates (Williams, 2009; Williams, 2009 [different articles]). To make the point, it was noted that US states that have a specific tax on soft drinks have some of the highest obesity prevalence rates in the US; also, that the sales of regular, caloric (non-diet) soft drinks dropped 21% between 1999 and 2008 in Canada, while adult and childhood obesity rates have reportedly risen during the same period (communication; RC, 2010).
- The National Preventative Health Taskforce (2009, p. 104) in Australia has called on the Australian government to conduct research into policies and tax incentives that would promote the production, access to and consumption of healthy food choices. The Taskforce noted that this was a complex issue and not a simple case of imposing a per unit tax. The relationship between costs and the consumption of particular products is complex and obesity is affected by lifestyle as well as inherited and social influences.

- Applying punitive taxes (over and above sales taxes) is not sound tax policy (as recently concluded by the Australian government), violates Canada's trade obligations under the North American Free Trade Association and the World Trade Organization, penalizes consumers who are of a healthy weight and, as demonstrated in US States that have implemented such punitive taxes (Maine, Arkansas and West Virginia), does not work.
- It is also noted that such a move unduly penalizes certain sectors (e.g., food service establishments) and smaller operators in the food industry. The latter creates an unfair playing field and is not supported by the food and beverage industry.

Viewpoint #2:

- The focus of an obesity reduction strategy should include increasing access to healthy food choices as well as reducing access to less healthy food choices and education of consumers.
- Studies have shown that if the price of a particular food or beverage increases or decreases, consumption will decrease or increase (Drenowski, 2004; Drenowski, 2005; French, 2003). Consumer education, in combination with taxation, will shift consumer behaviour. Such actions were successful in reducing access to, and therefore consumption of, other less healthy products such as tobacco and alcohol (Duffey, 2010); Fletcher, 2010); Brownell, 2009; French, 2002, Nnoaham, 2009, Horgen, 2002).
- The obesity epidemic cannot be solved by voluntary efforts alone; it can only be solved by a combination of voluntary and mandated efforts.

Recommendation:

3.1. Make healthy food and beverage choices more accessible and less healthy food choices less accessible by:
   - Extending the *Nutritional Guidelines for Vending Machines in Provincial Public Buildings* to all food service venues in BC Public Buildings (currently, the guidelines apply only to vending machines but not to other food and beverage sales).
   - Working with local governments to adapt and implement the *Nutritional Guidelines for Vending Machines in BC Public Buildings* to all food and beverage sales in municipal buildings (vending machines and all food service venues).
   - Developing and implementing guidelines for food and beverage sales in geographic areas surrounding BC schools.
   - Developing and implementing nutrition guidelines in child care, pre-school and after-school programs.
   - Developing point-of-purchase strategies to promote the purchase of healthier food choices in grocery stores and food service establishments.
   - Applying a healthy eating lens to policies, practices and plans related to land use and transportation (e.g., walking or cycling access to grocery stores with a selection of healthy food choices, space for community gardens and locations for farmers markets).
   - Supporting initiatives which address barriers to healthy living experienced by socially and economically disadvantaged populations (e.g., reducing barriers for getting to grocery stores).

4. Support consumers to make healthy food and beverage choices.

Several ways to support consumers to make healthy food and beverage choices were reviewed and discussed by the working group. Many initiatives were noted to be already underway, some led by government and some by the food industry. Much more still needs to be done.

Consensus was reached in several areas for supporting consumers to make healthy food and beverage choices.

Two areas in which consensus was not reached:
1. Making nutritional information available on-menus in food service establishments.
2. Restrictions on advertisement, sponsorship and marketing to children.

After consideration of both viewpoints, recommendations pertaining to these two areas have been included in this report.

Making nutritional information available on-menus in food service establishments, viewpoint #1

- The food service sector has voluntarily taken a number of steps to provide customers with information about healthy food choices including:
  - Participation by chains in the Canadian Restaurant and Food Services Association's (CRFAs) Nutrition Information Program.
  - Reduction in trans-fat and sodium in several menu items.
  - Participation by many restaurants in the Heart and Stroke Foundation's Heath Check program (it was noted that BC has the highest number of restaurants participating in this program in Canada).
  - Participation by the CRFA and CCGD in Health Canada's Trans-Fat Task Force and the Sodium Reduction Working Groups.
- The food service sector supports the provision of nutrition information on-site for standardized menu items and is prepared to engage with all levels of government to develop a nationally consistent format.
- The food service sector supports the recently released recommendation of the national Sodium Working Group: the Food and Drug Regulations and applicable provincial regulations be amended to require the on-site disclosure of nutrition information in a consistent and readily accessible manner for standardized menu items prepared and assembled on-site at restaurants and food services establishments, where feasible (i.e., in establishments with a high degree of standardization).

Making nutritional information available on-menus in food service establishments, viewpoint #2

- Providing nutrition information on-menus at food service establishments is important to consumer decision-making. Through the Food and Drugs Act, Health Canada regulates

the labelling of most pre-packaged food and beverage products in Canada. Food service establishments, on the other hand, are not required to include nutrition information on menu items.

- Food service establishments fall under provincial jurisdiction. BC has an opportunity to lead the way in Canada by requiring food service establishment to make nutrition information available to consumers at the point of purchase. Ideally, these changes would be made in consultation with other provinces.
- Studies show that most consumers underestimate the number of calories in away-from-home foods and tend to make greater errors when menu items are high in calories or ordering from establishments that promote their menu items as healthy. Most consumers would like to see nutrition information at places where they go to eat. Menu labelling reduces consumers' intentions to purchase items high in calories. Requiring restaurants to provide point-of-purchase nutrition information could promote the introduction of healthier menu options (Robert Wood Johnson Foundation, 2009).
- In July 2008, New York City required restaurants with standard menu items to make calorie information publicly available at the point of purchase by posting it on menus and menu boards, where consumers can see it when they order. A recent survey by a food research group Technomic, Inc (2009) found that 89% of the public consider it a positive move, 90% reported that the calorie counts were higher than expected and 82% reported that the nutrition information on menus made an impact on their ordering (71% sought out lower calorie options and 51% no longer ordered certain items).

Child-directed advertising, viewpoint #1

- The food industry is involved in several initiatives that support children to make healthy dietary choices.
    - The Canadian Association of Broadcasters (CAB), a Canadian non-profit organization, administers a Broadcast Code for Advertising to Children in co-operation with the Advertising Standards Canada. It is available to the public on line and provides guidelines for responsible advertising and marketing to children and their families.
    - The Concerned Children's Advertisers (CCA) is leading several Canadian initiatives, including one called Long Live Kids. This initiative brings together industry, issue experts and government and focuses on the concept of balancing food and activity choices to achieve optimal weight and long-term good health with the child-friendly message of "eat smart, move more, be media wise". Focus on encouraging children to think critically about the messages they receive from media and making informed, healthy choices.
    - The Canadian Children's Food and Beverage Advertising Initiative (CCFBA or Children's Advertising Initiative) is a voluntary initiative in which 19 of Canada's leading food and beverage companies have agreed to shift their advertising and marketing emphasis to foods and beverages that are consistent with the principles of sound nutrition guidance, including those that are lower in total calories, fats, salts and added sugars and higher in nutrients that are significant to public health.

To ensure the program is transparent and accountable, participants have asked Advertising Standards Canada to administer the Children's Advertising Initiative.

- Rather than banning advertising to children, it would be better to engage CCA to discuss national and/or BC specific issues related to advertising to children.
- It would be wrong to ban all advertising of food and beverages to children. Advertising can also be used to promote healthy living messages.
- Evidence indicates that ad bans do not help children achieve healthy weights. Since a prohibition on advertising went into effect in Quebec, the combined childhood overweight and obesity rate has more than doubled from 11.5% in 1981 to 23% in 2004. In fact, Quebec has the same rate of childhood obesity (7%) as British Columbia, where there is no ban in place. Alberta in fact has the lowest combined rates of overweight and obesity levels in Canada at 22% and there is no advertising ban in place in that province (Statistics Canada, 2004).

Child-directed advertising, viewpoint #2

- Children spend many hours using a combination of various media, including television, DVDs, video games, the Internet, and cell phones. Exposure to advertising via these media affects children's choices about foods, beverages and sedentary pursuits. Advertising increases food purchase requests by children to parents, has an impact on children's product and brand preferences, and affects their consumption behaviour. More than half of television advertisements directed at children promote foods and beverages such as candy, fast food, snack foods, soft drinks, and sweetened breakfast cereals that are high in calories and fat, and low in fiber and other essential nutrients. Young children are uniquely vulnerable to commercial promotion because they lack the skills to understand the difference between information and advertising (institute of Medicine, 2004).
- There is evidence that voluntary restrictions (self-regulation) on advertising, sponsorship and marketing to children alone are not effective (Centre for Science in the Public Interest, March 2010). There is evidence, however, that a combination of mandatory and voluntary restrictions can be effective. Ideally such regulation would be implemented federally; however, in the absence of federal action, there is the potential to implement BC-specific regulation.

Recommendations:

4.1. Undertake an extensive social marketing campaign, supported by all stakeholders, to educate consumers about eating well and making healthy food and beverage choices as per the principles outlined in *Eating Well with Canada's Food Guide.*

4.2. Increase the reach of school-based initiatives that focus on educating children about eating well and creating healthy built environments.

4.3. Integrate education about nutrition and healthy food choices into the BC school curriculum.

4.4. Develop workplace policies and programs that support healthy living and work-life balance.

4.5. Explore policy and regulatory options to support consumers making healthy food and beverage choices through mechanisms that:
- Require food service establishments to make nutrition information available on-menus to consumers for standard menu items.
- Restrict advertising, sponsorship and marketing of less healthy food and beverages to children.

5. Promote healthy weights through breastfeeding.

An important factor in childhood obesity is whether the baby was breast or formula fed. Children who are breastfed are at reduced risk of obesity (Owen, 2005). Studies have found that the likelihood of obesity is 22% lower among children who were breastfed (Arenz, 2004). The same was observed in adolescents, suggesting that the obesity-reducing benefits of breastfeeding extend many years.

The benefits of breastfeeding increase with duration. One study reported a reduction of 4% in the risk of becoming overweight for every month of breastfeeding (Harder, 2005). Formula-fed babies gain weight more quickly than breastfed babies in the first year of life, and this may be because of the greater quantity of protein in infant formula (Sidnell, 2009).

Significant cultural, societal and structural shifts are necessary to help women achieve healthy maternal weights before and during pregnancy and to initiate and sustain breastfeeding. Support is needed for women in hospitals, communities, workplaces and at home.

All recommendations to promote breastfeeding were developed through consensus. The promotion of breastmilk substitutes (formula) to health care providers counteracts the movement to increase breastfeeding rates and breastfeeding has many health benefits including reducing the likelihood of obesity.

Recommendation:

5.1. Encourage healthy birth weights through initiatives such as:
- Encouraging BCs hospitals and public health units to achieve the relevant WHO/UNICEF Baby Friendly™ Initiative designation.
- Making BC workplaces and communities more baby-friendly (e.g., breastfeeding-friendly facilities).
- Developing and promoting guidelines which restrict the commercial promotion of breastmilk substitutes to healthcare providers as recommended in the International Code of Marketing of Breastmilk Substitutes.

- Monitoring the provincial rates of exclusively breastfed babies.

6. Develop a remote/Aboriginal-specific obesity reduction strategy.

People who live in rural and remote areas of the province have higher rates of overweight and obesity than those living in urban areas. The cost of food, especially healthy food choices, tends to be much higher in rural and remote communities and the supply scarcer.

Given that many of these remote communities are often aboriginal communities and, given the higher rates of obesity in aboriginal communities, a focused and specific food strategy for aboriginal communities was considered a priority.

Recommendation:

6.1. Support remote/Aboriginal communities and organizations in the development and implementation of a plan to increase demand for and access to healthy, culturally appropriate food and beverage choices (e.g., build on the BC Produce Availability Initiative, increase local food production and develop culturally appropriate, innovative ways to change behaviour and support healthy food and beverage choices).

7. Monitor progress over time.

Recommendation:

7.1. Develop a surveillance program to monitor the diet and nutrition and obesity rates in the BC population (e.g., Canadian Community Health Survey).

7.2. Publish an annual report measuring progress in reducing overweight and obesity.

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Appendix A: Working Group on Food – Terms of Reference

1.0 PURPOSE

The Working Group on Food is a multi-sector, multi-stakeholder collaboration that will identify strategies and interventions to transform the food environment that can make healthy eating the easy choice. The working group will propose strategies and interventions to the Provincial and Community Collaboratives for their consideration and inclusion in the BC Obesity Reduction Strategy. The scope of these recommendations will range from environmental, policy and behavioral approaches to obesity reduction.

2.0 GUIDING PRINCIPLES

The recommended strategies and interventions will:

- Be based on best available evidence
- Build on existing successes in BC
- Meet gaps with evidence based and evaluated strategies
- Consider recommendations from the perspectives of:
  - settings (workplace/school/home etc.)
  - mental Health (both as a determinant of obesity, and the impact strategies may have on mental health)
  - life course (children, youth, adults, seniors)
  - people living with cognitive, mental and physical disabilities
  - socioeconomic, ethocultural and gender diversity
- Be cost-efficient, effective, feasible, equitable, acceptable and sustainable
- Do no harm (e.g. consider unintentional impacts of recommended strategies)

3.0 RESPONSIBILITIES

3.1 Provide expertise, advice and guidance

3.2 As a group, identify, review and synthesize the emerging research, promising practices and other relevant resources

3.3 Identify national/international evaluated promising practices

3.4 Identify current initiatives in BC Identify gaps

3.5 Propose strategies and interventions that can be implemented at environmental, policy and behavioural levels

3.6 Submit recommendations to Task Force, Provincial and Community collaboratives for review

3.7 Review potential strategies for acceptability, feasibility, equity, cost-effectiveness and sustainability

3.8 Share or contribute resources where relevant.

4.0 MEMBERSHIP

Membership on the working group is made up of content experts, drawn from organizations that have jurisdiction and authority to implement recommended strategies/interventions; represent provincial or community based networks or are involved in research related to healthy eating and/or the food environment. This membership will include representatives from government, industry/business; not-for-profit organizations; academia and, where feasible, citizen groups.

5.0 REQUIRED COMMITMENT

- Two to four meetings, two hours in length, between January and May (in-person or by teleconference)
- Contribute relevant strategies and recommendations
- Review and critique materials distributed via e-mail

6.0 ACCOUNTABILITY

To the Obesity Reduction Task Force.

7.0 OPERATING PROTOCOL

Leads

The Working Group will be Co-Lead by a Task Force member and another member selected by the group. Co-Leads are responsible for:

- Prioritizing items and organizing the agenda for meetings.
- Chairing the meetings.
- Serving as a communication link between the Working Group and the Task Force.

Managerial Support

PHSA Centers for Population and Public Health will provide support with:

- Meeting logistics (scheduling meetings, developing and circulating agenda, recording and circulating minutes)
- Providing project management support
- providing content and consultant support where feasible.

8.0 MEETING SCHEDULE

To be decided based on work plan – to be developed at the first meeting.

Appendix B: Working Group on Food – Membership

Name	Title	Agency
Meghan Day (Co-Lead)	Manager, Healthy Eating and Food Security, Population and Public Health	Ministry of Healthy Living & Sport - Population & Public Health
Andreas (Andy) Dolberg	Executive Director	BC Agriculture Council
Brenda Lennox	Program Development & Investment, Marketing and Investment Facilitation	Ministry of Agriculture & Lands
Pam Christenson	Senior Policy Advisor Employment and Income Assistance	Ministry of Housing & Social Development
Grant Sheppard	CommunityLINK Coordinator Diversity and Equity	Ministry of Education
Shannon Bradley	Knowledge Development and Exchange Analyst	Public Health Agency of Canada
Jarrod Gunn-McQuillan	Regional Coordinator, Food Security	Vancouver Island Health Authority
Lynn Wilcott	Food Safety Specialist	PHSA-BC Centre for Disease Control
Suzanne Johnson	Nutritionist	First Nations Health Council
Marylyn Chiang	Policy Analyst	Union of BC Municipalities
Mike Gagel	Director, Information & Education Technology	BC School Trustees Association
Noelle Virtue	Manager Communications/Advocacy	BC Healthy Living Alliance
Jennifer Bradbury	Executive Director	BC Childhood Obesity Foundation
Jen Cody	Chair	BC Food Systems Network
Sue Ross	President and Consultant	Susan E. Ross & Associates
Lindsay Babineau	Executive Director	BC Agriculture in the Classroom Foundation
Gwen Chapman	Associate Professor;Food, Nutrition & Health	University of BC Faculty of Land and Food Systems
Sydney Massey	Director of Nutrition Education	BC Dairy Foundation
Allen Langdon	Vice-President, West	Canadian Council of Grocery Distributors
Julie Dickson Olmstead	Director of Communications	Overwaitea Food Group
Justin Sherwood	President	Refreshments Canada
Jim Goetz	Vice President-Provincial Affairs	Food & Consumer Products of Canada
Amanda MacNaughton	Advisor, Scientific & Regulatory Affairs	Food & Consumer Products of Canada
Mark von Schellwitz	Vice President, Western Canada	Canadian Restaurant & Foodservices Association
Gary Sands	Vice President	Canadian Federation of Independent Grocers
Aleck Ostry	Consultant, Working Group on Food Obesity Reduction Strategy	University of Victoria
Deepthi Jayatilaka	Project Manager, Working Group on Food Obesity Reduction Strategy for BC	Provincial Health Services Authority

Appendix C: Three Successful Intervention Models

1. North Karelia

This program, initiated in 1972 and in operation for 20 years, aimed to reduce the ***prevalence*** of heart disease in Finland's North Karelia region (Puska et al., 1995). It was a community-based prevention program that involved multiple sectors in tackling critical risk factors. Emphasis was placed on influencing dietary and smoking habits of the population. This strategy included the following actions:

- Systemic change such as encouraging farmers to produce foods that are more congruent with dietary guidelines promoted by the project (reducing animal fat production and increasing vegetable production);
- Environmental changes such as smoking restrictions and collaboration with food manufacturers and retailers;
- Health education targeting the population (through media, campaigns and meetings);
- Training of health personnel;
- Implementing programs through community based organizations;
- Scientifically sound evaluation of outcomes,
- Inclusion of expert advice and
- Co-ordination of activity and media information.

The North Karelia Project achieved impressive results. Over the 20-year period, death rates from coronary heart disease decreased dramatically especially for men, whose mortality rates from coronary disease was reduced by 59%. Significant was the difference in mortality rates in North Karelia compared to elsewhere in Finland. The North Karelia Project demonstrated that comprehensive, determined and community-based approaches, over time, can have a substantial positive effect on a major health problem (Puska et al., 1995).

2. Tobacco Reduction

Beginning with the report entitled *Smoking and Health* (Royal College of Physicians of London, 1962) and continuing over the next 40 years, a broad range policies have been enacted across jurisdictions, aimed at both "individual" and "societal" causes of smoking. Some of the key policies include:

- Increasing awareness on the hazards of smoking in the general public, with emphasis on reaching school children;
- Restrictions on the sale of tobacco to children;

- Restriction of tobacco advertising, initially voluntary, later supported by legislation;
- Smoking bans in public places;
- Restricting usage through increased pricing resulting from taxation;
- Restricting usage through increased and effective warning/labeling information;
- Creating evidence through enhanced funding of studies on links between chronic illness and tobacco use.

This is another example of a comprehensive and effective approach to tackling a complex policy issue that spills over many policy jurisdictions. This approach targeted educational programs and treatment options (e.g. nicotine patch) on individual factors and targeted a variety of actions on societal factors in order to restrict access (legislation) and usage (changes in the social and built environment) to achieve significant reductions in tobacco use in many nations (Mercer et al, 2003).

3. Alcohol Reduction

Studies focused on alcohol use reduction find that educational and public information strategies alone often fail because they are generally short-term and less intensive in comparison to the advertising by the alcohol industry, which promotes positive beliefs about drinking to encourage drinking. Hard-hitting counter-advertising is only moderately effective at reversing these trends (Babor & Caetano, 2005). Highly effective policy measures for reducing alcohol consumption that have been demonstrated through research are:

- Restricting access to alcohol through taxes and other influences on price;
- Restricting access through minimum purchase age laws;
- Restricting availability by not selling alcohol in grocery stores and supermarkets;
- Limiting availability through hours of sale restrictions;
- Regulation of drinking environments;
- Drinking and driving countermeasures.

Similar to the tobacco reduction strategy, this strategy targets education and awareness to individuals; while creating environments that support behaviour change by restricting access (legislation), and usage (changes to the social and built environment).

Appendix D: Recommendations in High-Profile Obesity Reduction Reports

Report	Summary of recommendations
BC Provincial Health Officer's Report, 2005 Food, Health and Well-being in BC Identifies actions for individuals, communities, businesses and governments to reduce obesity (and increase food security)	Individuals: eat a healthy diet, increase physical activity & maintain healthy weights
	Parents: Breastfeed babies, be a role model for children by adopting healthy eating habits, limit children's screen time
	Schools: provide healthy snacks and meals in schools; ban unhealthy foods & drinks and replace with healthy ones
	Communities: promote healthy eating and healthy weights, food policies to ensure access to healthy foods for all people, encourage urban design that encourages active transportation
	Industry: ensure sales, marketing and employment policies promote healthy eating; support health promotion at the workplace, baby-friendly practices, stop advertising unhealthy foods to children, eliminate trans fats
	Health care professionals: Promote healthy eating and healthy weights; educate patients to prevent and reduce obesity; promote breastfeeding
	Governments: commit to healthy eating strategy, support ActNow, income supports, investigate ways to reduce the cost of food in lower-income communities, monitor & regulate marketing approaches adopted by the food industry, support health promotion in the workplace
	Identify and develop strategies to address gaps in the evidence and research
Legislative Assembly of BC Report, 2006 A Strategy for Combatting Childhood Obesity and Physical Inactivity in BC Identifies actions for the provincial government to reduce obesity.	Create a provincial, multi-sectoral Nutrition and Exercise Council to coordinate obesity reduction related actions
	Enhanced role for ActNow BC (increase px activity and healthy diets; combat obesity)
	Additional funding for public health and prevention programs
	Strict limitations on access to nutritionally-poor "not recommended" foods in public facilities
	Removal of the social services tax exemption on "candy and confections, soft drinks and other unhealthy foods exempt from the PST
	work with federal government & industry to enhance labelling requirements
	Encourage industry to reduce sugar, salt and fats in foods
	Encourage industry to adopt stronger self-regulation criteria of food and beverage advertising to children
	Publish an annual report measuring progress in improving diet and activity levels and reducing obesity
	Investigate feasibility of new junk food tax on non-nutritive foods and beverages
	Develop public marketing campaigns to assist in lifestyle changes
Institute of Medicine (IOM), 2009	
	Goal 1: Improve access to and consumption of healthy, safe and affordable foods (**create incentive programs to attract grocery stores to underserved neighbourhoods, require menu labelling in chain**

Report	Summary of recommendations
Local Government Actions to Prevent Childhood Obesity Identifies actions related to food and physical activity. Bolded actions identified as "most promising" in the report.	**restaurants**, promote efforts to provide fruits and vegetables in a variety of settings such as farmers' markets and community gardens, **mandate nutrition standards for foods and beverages available in government-run or regulated after-school programs,** recreation centres, parks and child care facilities, encourage breastfeeding-friendly communities, **adopt building codes to require access to and maintenance of fresh drinking water fountains.**
	Goal 2: Reduce access to and consumption of calorie-dense, nutrient-poor foods (**implement a tax strategy to discourage consumption of foods & beverages that have minimal nutritional value such as sugar-sweetened beverages**, land use & zoning policies that restrict fast food establishments near schools, eliminate advertising and marketing of calorie-dense, nutrient poor foods and beverages near school grounds, create incentive and recognition programs to promote "candy-free" check out aisles).
	Goal 3: Raise awareness about healthy eating (**develop media campaign to promote healthy eating**, develop counter-advertising media approaches against unhealthy products)
	Also identified 3 goals & related strategies for increasing physical activity.
World Health Organization, 2009 Interventions on Diet and Physical Activity: What Works Identifies diet and physical activity interventions in 8 categories. 396 peer-reviewed diet and physical activity studies met the inclusion criteria.	Policy & environment: Effective interventions: government regulatory policies to support a healthier composition of staple foods, environmental interventions targeting the built environment, policies that reduce barriers to physical activity, transport policies and policies to increase space for recreation, point of decision prompts to encourage using the stairs; Moderately effective interventions: pricing strategies (fiscal policies) and point of purchase prompts in grocery stores, vending machines, cafeterias and restaurants to support healthier choices, multi-targeted approaches to encourage walking and cycling to school, healthier commuting and leisure activities.
	Mass media: Effective interventions: mass media campaigns promoting physical activity; Moderately effective interventions: intensive mass media campaigns using one simple messages (e.g., increase fruits and vegetables), national "health brand" or logos to assist consumers to make healthy food choices, LT intensive mass media campaigns to promote healthy diets
	Schools: Effective Interventions: high-intensity school-based interventions that focus on diet and/or physical activity and are comprehensive, multi-component (e.g., curriculum on diet and/or physical activity, supportive school environment, physical activity program, healthy food options; parental/family component); Moderately effective interventions: focused approach, with supportive activities within the curriculum, formative assessment that addresses the needs of the school and cultural contexts
	Workplaces: Effective Interventions: multi-component programs promoting healthy dietary habits and/or physical activity that provide healthy food and beverages at the workplace, provide space for physical

Report	Summary of recommendations
	activity, involve workers in program planning, involve families, provide individual behaviour changes strategies and self-monitoring.
	Community: Effective interventions: diet education programs that target high-risk groups and/or are multi-component; community development combines that focus on a common goal, group based physical activity programs; Moderately effective interventions: phone-in services for dietary advice, community-wide interventions (e.g., Healthy Village), programs that target low-income/low literacy populations and include diet education, computer/web-based interventions with interactive personalized feedback and target high-risk groups, supermarket tours, walking school buses
	Primary health care: Effective interventions: interventions targeting chronic groups (unhealthy life styles, brief interventions, link/coordinate with other stakeholders); Moderately effective: cholesterol screening programs, weight loss programs using health professionals with personal or telephone/internet consultations over a period of at least 4 weeks and a self-help program that includes self-monitoring
	Older adults: Moderately effective interventions: physical activity in a group setting, home-based interventions in which older adults have increased access to fruit and vegetables using existing infrastructure.
	Religious settings: Effective interventions: culturally appropriate and multi-component diet interventions that are planned and implemented in collaboration with religious leaders; Moderately effective interventions: culturally appropriate interventions targeting weight loss, healthy dietary habits and increased physical activity.
Centres for Disease Control and Prevention (CDC), 2009 Recommended Community Strategies to Prevent Obesity in the US Identifies actions for local governments to reduce obesity; focus is on children	Increase availability and affordability of healthier food and beverage choices in public sector venues (polices on the types of food sold within government facilities, pricing strategies which promote the purchase of healthier food
	Improve geographic availability of supermarkets in underserved areas
	Provide incentives to food retailers to locate in &/or offer healthier food and beverages choices in underserved areas (e.g., tax benefits, loans, etc to cover start-up and investment costs for retailers, supportive zoning, etc).
	Improve availability of mechanisms for purchasing foods from farms (e.g., farmers' markets, farm stands, "pick your own" and farm to school initiatives).
	Incentives for the production, distribution and procurement of foods from local farms (e.g., grower cooperatives, revolving loan funds, building markets for local farm products).
	Restrict availability of less healthy foods and beverages in public service venues (schools, after-school programs, regulated child care centres, community recreational facilities, city and county buildings)
	Institute smaller portion size options in public service venues (packaged and restaurant foods)
	Limit advertisement of less healthy foods and beverages (especially to children)

Report	Summary of recommendations
	Discourage consumption of sugar-sweetened beverages reduce availability in schools and child care centres)
	Increase support for breastfeeding (policies and facilities to provide accommodation for breastfeeding in public settings and government workplaces)
	Increase physical activity (require PE in schools, increase opportunities for extracurricular physical activity, better access to outdoor recreational facilities, infrastructure to support bicycling & walking, improve access to public transportation)
	Reduce screen time in public service venues (e.g., schools, day care centres, after-school programs)
	Zone for mixed-use development (land use policies that promote healthy living)
	Improve safety (traffic safety and places where people can be physically active)
	Establish community coalitions or partnerships to address obesity
Centres for Disease Control and Prevention (CDC), accessed July 5, 2010 Division of Nutrition, PA and Obesity Overweight and Obesity (special section on website)	Individual healthy choices and healthy home environments (make healthier food choices, reduce TV time and be more physically active)
	Create healthy child care settings (implement approaches to to increase physical activity, limit screen time, good nutrition and healthy sleep practices).
	Create healthy schools: opportunities for children to learn about healthy behaviours, provide healthy food options, require daily physical education.
	Create healthy work sites: implement wellness programs, encourage physical activity through group classes and stairwell programs, create incentives for employees to participate.
	Mobilize the medical community: teach patients about the importance of good health, connection between BMI and risk of disease and refer to appropriate programs.
	Improve our communities: communities should consider the geographic availability of their supermarkets, access to outdoor recreational facilities, limit advertisement of less healthy foods and beverages, infrastructures to support active transportation and improve the safety of neighbourhoods.

Appendix E: Recommendations in National Obesity Reduction Strategies

Report	Summary of recommendations
Obesity in Australia: A Need for Urgent Action, 2009 National Preventative Health Taskforce by the Obesity Working Group Identifies actions that will be required to address the obesity epidemic	Develop a national food strategy.
	Reshape the food supply towards lower risk products and encourage physical activity (review taxation system to enable access to healthier foods and active recreation and providing disincentives to consuming unhealthy foods, provide incentives to manufacturers to change their production processes to reduce the fat, salt or sugar content in order to maintain their market share, regulate the amount of fats, salt and sugar content in goods, subsidize transportation of fresh foods in rural and remote areas.
	Protect children and others from inappropriate marketing of unhealthy foods and beverages (curb inappropriate advertising).
	Improve public education and information (LT media advertising and public education campaigns to improve eating habits and enhance food labelling).
	Reshape urban environments towards healthy options (encourage school communities to support healthy living, implement comprehensive community-based interventions that encourage healthy lifestyles among all populations, encourage employers and workplaces to develop programs that support healthy eating and physical activity, introduce incentive schemes to encourage healthy behaviours and weight management).
	Strengthen and up skill primary health care workers and public health workforce to support people in making healthier choices.
	Have maternal and child health programs that target pregnant women and encourage breastfeeding.
	Close the gap for disadvantaged communities (tailored approaches for indigenous and low-income groups).
	Build the evidence base, monitor and evaluate effectiveness of actions.
Healthy Weight, Healthy Lives: A Cross-Government Strategy for England 2008	Children, healthy growth and healthy weight (identify at-risk families early; promote breastfeeding, promote healthy schools, cycling infrastructure).
	Promote healthier food choices (develop Healthy Food Code of Good Practice, promote appropriate planning regulations, review restrictions on advertising of unhealthy foods to children).
	Build physical activity into our lives (walking groups, work with entertainment technology industry etc).
	Create incentives for better health (work with employers to develop pilots for companies supporting healthy workplaces, offer personalized assessments and health/lifestyle advise, etc).
	Personalized advice and support (website, more funding for weight management services)

Appendix F: Food-related Policies and Programs Underway in BC

Many initiatives in BC are targeted at school children with the purpose of altering the obesogenic environment of the public school system. Some new initiatives have been more recently developed to improve the obesogenic environment in government and public buildings and workplaces. Finally, a number of initiatives are in place to impact changes in the obesogenic environment in communities. We list these initiatives and sectors within which they occur below. This listing is then followed by a more detailed summary of each initiative which highlights the partners involved.

DETAILED DESCRIPTION OF POLICIES AND PROGRAMS IN BC

A. School Based Policies and Programs

The **Guidelines for Food and Beverage Sales in BC Schools** is a Ministry of Education and Ministry of Healthy Living & Sport initiative. This policy has set nutritional guidelines for food and beverages sold in all of BC's public schools. This policy is targeted at changing the obesogenic environment in schools. While this policy approach seeks to restrict access to certain "less healthy" foods it also seeks to promote access to "more healthy" foods. The *Guidelines* work in partnership with several other provincial school-based healthy eating initiatives to change the food culture in schools.

The **School Fruit and Vegetable Nutritional Program** is partnership initiative of the Ministries of Education, Agriculture & Lands, and Healthy Living & Sport. This program delivers fresh fruit and vegetables to B.C. public schools. As of January 2010, the program is operating in 1092 schools. The **Farm to School Salad Bar Program** is a BC Healthy Living Alliance initiative, led by the Public Health Association of BC, which builds relationships between schools and local farms to increase vegetable and fruit consumption among school children.

Sip Smart! BC is a BC Healthy Living Alliance initiative, co-led by the BC Pediatric Society and the Heart & Stroke Foundation, which raises awareness among grades 4 to 6 students of the negative health effects associated with the consumption of sugary drinks, through an interactive learning module that supports the knowledge and skills necessary to enable children to make healthy beverage choices.

Action Schools! BC is a partnership initiative of the Ministries of Education and Healthy Living & Sport, led by DASH BC. This initiative is a best practices model designed to assist schools in creating individualized action plans to promote healthy living. The healthy eating component provides food grants, resources and materials for teachers to provide classroom-based healthy eating activities. As of May 31, 2010 there were 667 registered healthy eating Action Schools.

The **Healthy Eating and Physical Activity Learning Resources** (Grades Kindergarten to 12) were developed by the Ministry of Healthy Living and Sport, in partnership with the Ministry of Education, provide healthy eating and physical activity lessons that are congruent with and meet minimum prescribed learning outcomes in the Health and Career Education curriculum.

The **Healthy Eating at School website** is a partnership between the BC Dairy Foundation and the Knowledge Network. This one-stop shop encourages healthy eating at school. It uses a comprehensive school health model to address issues such as healthy fundraising, the school environment, nutrition education, food at school, community partners and school nutrition policy.

The Ministry of Education **CommunityLink Program** (**L**earning **I**ncludes **N**utrition and **K**nowledge) provides funding to school districts to support vulnerable students in academic achievement and social functioning. Allocation of funds is at the discretion of school districts; approximately 25% of total funding is spent on food for vulnerable students. The Ministry of Education, with nutrition expertise provided by Ministry of Healthy Living and Sport, has developed a School Meal Program Handbook to support school meal programs provide healthy food and beverages to students that access these programs.

LEAP BC, an initiative of 2010 Legacies Now, provides resources for Early Childhood Educators to support healthy environments (including healthy eating) in preschools and childcare settings.

B. Workplace–based Policies and Programs

These mainly provide educational resources to help managers and workers improve the obesogenic environment. The **Eat Smart Meet Smart** resource was developed by the Ministry of Healthy Living and Sport as part of the Western and Northern Canadian Collaborative for Healthy Living. This resource provides information, opportunities and support to employees with the goal of increasing physical activity and healthy eating, decreasing tobacco use and managing employee stress. The Eat Smart Guidelines are aligned with Canada's Food Guide rather than nutrient based criteria.

The Ministry of Labour and Citizens', in partnership with the Ministry of Healthy Living and Sport, has released the **Nutritional Guidelines for Vending in BC Public Buildings**, which is mandated for implementation in all BC public buildings (including health authorities, colleges, and public institutions). These guidelines apply only to vending machines, but do not impact other food service venues on site.

C. Community–based Policies and Programs

The **Community Food Action Initiative (CFAI)** aims to improve community food security. Community grants are available through the health authorities for community food action plans supporting local food access and food security. CFAI has promoted food security by taking action along a continuum that ranges from providing emergency food for those in need (for instance food banks), to building capacity and access within the community (community kitchens, gardens, farmers markets, etc.), to redesigning the local food system for sustainability (through for instance production cooperatives, food councils, and food policy).

The **Produce Availability Initiative** was developed to provide British Columbians living in remote communities with greater access (in terms of both quality and quantity) to vegetables and fruits.

This initiative will result in more fresh fruits and vegetables transported into remote communities and more produce grown locally in these communities.

Food Skills for Families is a BCHLA initiative, led by the Canadian Diabetes Association, which has the goal to build cooking skills and nutritional knowledge directly in Aboriginal, Punjabi, new immigrant and low income families. Over 1,200 participants have completed the Food Skills for Families program to date.

The **Healthy Food and Beverage Sales in Recreation Centers and Local Government Buildings Initiative (HFBS)** is a BCHLA initiative, led by BC Recreation and Parks Association and the Union of BC municipalities, which provides supports for local government buildings and recreational facilities to voluntarily adopt the sale of healthy food. This initiative is voluntary and uses the Nutritional Guidelines for Vending in BC Public Buildings to improve the number of healthy choices in food outlets located in the approximately 300 community centers in BC.

The **Guidelines for Food and Beverages Available at Sporting Events in BC** were developed by SportMed BC, in partnership with the Ministry of Healthy Living and Sport. This resource provides voluntary guidelines for the provision of healthy foods and beverages for spectators and athletes at sporting events.

The **Health Check™ Dining Program**, an initiative of the Ministry of Healthy Living and Sport and the Heart and Stroke Foundation, encourages consumers to choose healthy menu items using point-of-purchase decision-making information. Participants are BC Ferries, Boston Pizza, Red Robin, White Spot, Triple Os and Pizza Hut.

Dietitian Services at HealthLink BC (8-1-1) provides callers with information and counselling on nutrition and food-related concerns. Interpreter services are available in over 130 languages. The registered dietitians in the call centre answer over 20,000 calls per year.

D. Sector Specific Food-related Policy

BC Trans-fat Regulation The Ministry of Healthy Living and Sport and the Heart and Stroke Foundation of BC and Yukon are working together to support the food industry in restricting industrially produced trans-fat. The regulation applies to all food service establishments in BC that have a license to operate.