



Presidents' Council Agri-food for **Health** Strategy

How Ontario's agriculture and food system can increase its positive impact on health and wellness

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Methodology

Two subject matter experts, Lois Ferguson, a registered dietitian and highly respected author and commentator on health and nutrition, and Katia De Pinho Campos, a Ph.D candidate at the Dalla Lana School of Public Health at the University of Toronto, undertook a comprehensive environmental scan of relevant work being done in the food and health space over the summer of 2014. Major research and strategic initiatives were reviewed, assessed and used to inform the recommendations provided to the Presidents' Council in this Strategy. Representative leaders in health and nutrition were interviewed by the authors to gain the benefit of their insights. The authors appreciated the openness and readiness of those interviewed to share their perspectives and to make connections to thought leaders, studies, and research papers relevant to the subject matter. The food and health space is a very active sphere of research and engagement by industry, government, and non-governmental organizations (NGOs) from both the health and agriculture and food communities. While this strategy has been shaped by current, relevant information, it does not address all the extensive work and research underway in this space. The opinions expressed in this Strategy are those of the authors alone and not necessarily held by the Presidents' Council, the levels of government providing funding (Agriculture and Agri-Food Canada and the Ontario Ministry of Agriculture, Food and Rural Affairs), nor by authors of reports cited in the Strategy.

The views expressed in the report or materials are the views of the authors and do not necessarily reflect those of the governments of Canada and Ontario.



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The Presidents' Council was formed in 2004 and is a venue for the Chairs and Presidents of Ontario's agriculture and food organizations to discuss the broad issues and challenges facing the industry. A full list of members is provided on p. 45.

Food and beverage processing: adding value to Ontario's agriculture

With over five million acres in production, over 200 commodities produced, and farmgate receipts exceeding \$11 billion, agriculture is a vital part of Ontario's economy.

The food and beverage processing sector is a key link in Ontario's agriculture and food value chain and also a substantial contributor to the provincial economy. In 2011, the industry's 3,000 plus businesses generated \$39.4 billion in annual revenues and contributed \$11 billion to the provincial Gross Domestic Product. Over 125,000 jobs are directly provided through the sector with thousands more generated in other interconnected parts of the agriculture and food value chain.

Ontario's food and beverage processing sector is the primary customer for Ontario's 75,000 farm operators. Ontario-based food and beverage processors buy about 65% of food-related farm production in the province. The relationship between the farmer and the processor is essential to making healthy and high quality food and beverage available to Ontario consumers 12 months of the year.

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Executive Summary

The overall goal for the Presidents' Council Ontario agriculture and food strategy is clear:

To build a successful and sustainable future for Ontario farmers, food processors and bio-economy firms, who collectively contribute to a stronger economy, create jobs and a healthier society in Ontario.

The strategy is based on three pillars: economic growth, health and sustainability. This report provides an environmental scan of the issues, activities and recommendations for the Health Pillar of the Ontario strategy. This report shows how Ontario's agriculture and food sector can increase its positive impact on health and wellness.

An environmental scan of the issues revealed that demographic changes such as our aging population and increasing multiculturalism are important factors related to food and health. Other factors include lack of understanding of nutrition, lack of food skills to prepare healthy meals, limited access to healthy food and the cost of healthy food.

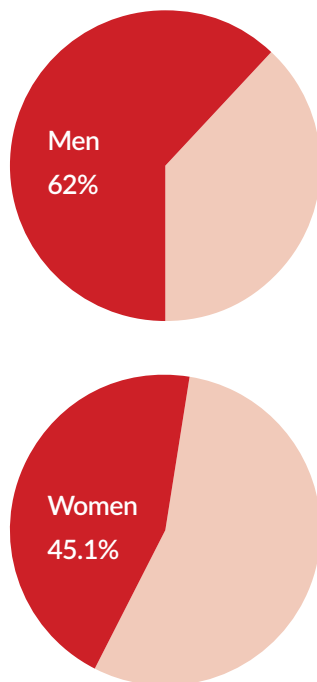
Health care system costs in Ontario continue to rise. Proportionately, health care has risen to the point where it now accounts for 42% of all public spending. In absolute terms, the estimated health care system costs for Ontario in 2013/2014 were \$51 billion with an additional \$29 billion spent directly by consumers and their private sector insurers and by other levels of government.

The analysis revealed obesity, Type II diabetes and cardiovascular disease to be major health issues for Ontario that can be significantly affected by diet. Like many other countries in the developed world, the prevalence of obese and overweight Canadians is a major health issue that can increase likelihood of other health issues. Statistics Canada reported in 2013 that 62.0% of men (8.8 million) and 45.1% of women (5.8 million) in Canada were classified as either overweight or obese.

Researchers who have studied the issue recognize that there is no one single factor responsible. Changes in life-style, leading to more sedentary behaviour and therefore less energy expenditure, are contributing factors as are a wide range of socio-economic factors that are associated with lack of access to and availability of healthy affordable food.

But there is some positive news for health and diets. According to a Tracking Nutrition Trends study, nearly all Canadians (92%) report

Proportion of obesity in Canada, 2013¹



Source: BUILDING BETTER HEALTH CARE, Policy opportunities for Ontario, Institute for Competitiveness and Prosperity, Working Paper # 20, (April, 2014), http://www.competeprosp.ca/uploads/WP20_BetterHealthCare_FINAL.pdf

having done something to improve or change their eating and drinking habits over the past year. The top three improvements made by Canadians are: eating more fruits and vegetables (68%), reducing salt/sodium (50%) and reducing sugar (50%) in their diet.

Ontario's agriculture and food system has demonstrated that it is well positioned to respond to consumer drivers of change. When consumers demand healthier food products, Ontario farms, food and beverage processors, food distributors and retailers provide them. Many products, for example, have been reformulated in the past five years with lower levels of sodium and trans fat in response to voluntary Health Canada guidelines.

The Health Pillar for this Ontario strategy can have shared goals with other existing strategies that seek to achieve the same outcome. The Canadian Federation of Agriculture National Food Strategy, for example, includes the following two health related goals:

- Consumers choose foods and healthy eating patterns that promote optimal health.
- Consumers always have access to safe and nutritious food.

Similarly, the Ontario Food and Nutrition Strategy developed in part by Sustain Ontario includes the following three goals:

- To promote wholistic health and well-being of all people in Ontario.
- To reduce the burden of obesity and chronic disease on Ontarians and the Ontario health care system.
- To strengthen the Ontario economy and resiliency of food systems.

The research has revealed six (6) key opportunities for interventions or improvements to food and nutrition in Ontario:

Effective Intervention Opportunities

- **A More Collaborative Multi-Sector Approach**
- **Food Availability and Access**
- **Food Literacy**
- **Food Skills**
- **Information Sharing and Disclosure**
- **Industry-Government Voluntary Collaboration**

How can the agriculture and food sector help seize these opportunities and support the goals for the Presidents' Council's strategy? We offer the following recommendations:

Recommended Strategies on How To Increase Positive Impact

Support A More Collaborative Multi-Sector Approach

Support a more collaborative multi-sector approach across business and governments representing agriculture, food processing, nutrition and health to ensure consistent messaging and optimal use of resources. A possible focus is increasing collaboration with the health community to build trust and understanding of the health issues facing society and in determining the evolving role of the agriculture and food sector in contributing to healthier life-styles.

Support Co-ordinated Programs that build Food Literacy and Food Skills

Increasing food literacy and food skills, especially in school age children, is a key priority identified during the research for this strategy. There are already several existing programs or initiatives that are underway in this area. However, a more co-ordinated and expanded approach will increase the

combined impact. A possible activity is to support and expand existing initiatives that enhance food literacy and food skills in schools by giving these areas prominence in core curriculum as critical life skills.

Support Increased Healthy Food Availability and Access through Innovation

Support increased availability and access to healthy food through innovation, not only in the domestic market but also in international markets that have similar needs. While the issue of food access and availability is complex and will require a range of interventions, the agriculture and food sector can make a significant impact by giving more focus to the nutritional attributes of crops, livestock, food products and processes. A possible activity is making an industry-led 10-year commitment to expand research capacity in food nutrition that strengthens relationships and enhances outcomes across research institutions.

Walk The Talk

The Presidents' Council can engage in proactive steps to change the culture in which the importance of nutrition is given prominence and focus by all organizations within the Council. A possible activity is the creation of a standing working group of Presidents' Council organizations focused on health and nutrition to enable Council members to coordinate efforts and financially support combined outreach programs.

Fundamental Principles

This Agri-Food for Health Strategy report was prepared with the following fundamental principles in mind.

Principle # 1 – The Agriculture and Food Sector’s Fundamental Commitment To Valuing Consumers

Enterprises throughout the agriculture and food value chain, from production agriculture to food service and food retail establishments, are committed to delivering value to consumers by providing healthy food and beverage choices, and therefore will respond to consumer drivers for products that meet consumer needs.

Consumer needs extend beyond the healthfulness of the products which they purchase and include other important purchase decision criteria such as convenience (in terms of access, storage, preparation and disposal), taste and texture (deriving pleasure from the sensory eating experience), affordability (price and value), and food origin (local versus imported). Healthy food products need to be offered in the context of meeting other important consumer needs.

The agriculture and food sector has a major investment in production and processing assets, brand assets, and distribution infrastructure. Change in providing healthier food products will be evolutionary as future investments respond to changing consumer preferences.

Principle # 2 – The Fundamental Role of Information In The Market Economy

Informed consumers are the most efficient and effective means of contributing to food choices that are healthy.

In a free enterprise market economy system, the underlying premise is that the market is the most efficient mechanism for the optimal allocation of resources. In order to ensure that efficiency, there is a role for regulatory oversight to monitor equitable competition among providers of food products and to validate that the best possible information is available to consumers concerning nutritional and health-related impacts of the food choices. With the explosion of digital media in the 21st century, there has never been more opportunity for information-empowered consumers to drive change towards healthier food products.

**Principle # 3 – The Fundamental Need For Consumer Market Signals
To Flow Up The Value Chain**

The closer a food establishment is to the point of selling food to the consumer, the greater responsibility and capacity it has to ensure that consumers' collective demand profile, including the need for healthier food options, is relayed to earlier stages in the value chain.

Consumer demand will therefore be enabled to drive changes in the formulation and portion size of products and the manner in which they are presented and distributed. The pace of product innovation, both in terms of the physical attributes of the product and its information, will be determined by the level of investment and the commitment of resources. Research and development activities that lead to discoveries of healthier attributes need to be commercialized in short cycle times to capture the competitive advantage of innovation.

**Principle # 4 – The Fundamental Scope Is Global For Ontario's
Agriculture, Food and Beverage Sector's Market.**

The development of healthier food products can satisfy consumer demand far beyond the domestic market.

Governments around the world, as expressed in policy initiatives of the World Health Organization, share a common need to provide healthy food products to their populace and ensure that their people are informed about the food choices they make. Other governments face similar challenges to Ontario's in managing the cost of the health care system.

Ontario can make a decision to be differentiated and recognized as a global leader in the production and marketing of healthy food products. As consumer incomes rise in Asia and the demand for value-added food products increases, Ontario has opportunity to grow its food and beverage processing sector at rates beyond the growth in local demand alone.

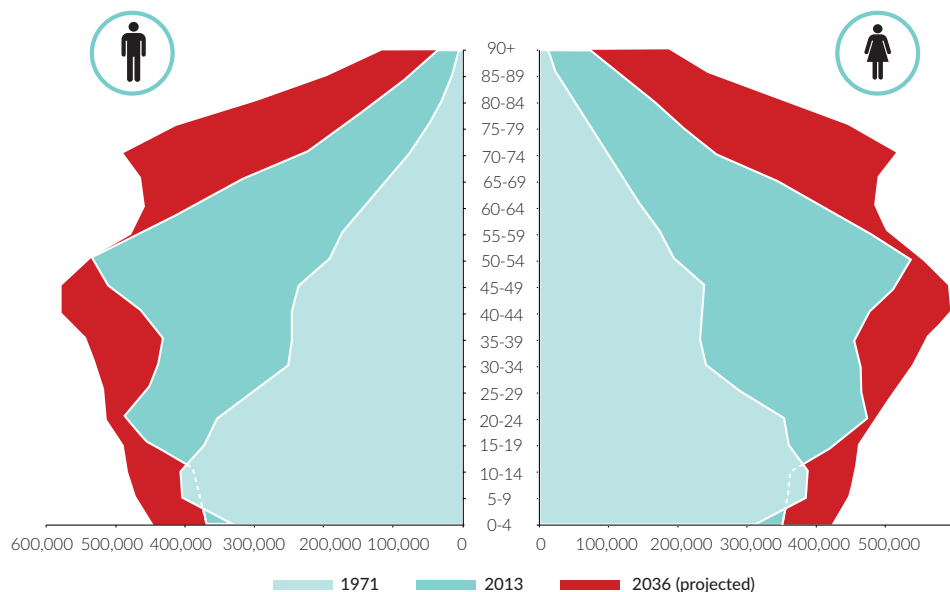
Population Changes in Ontario

A review of demographic changes affecting Ontario's population is important in order to understand its impact on health and future health care system delivery costs. The analysis revealed that an aging population and growing multiculturalism in Ontario are key factors related to agriculture, food and health.

Aging Population

The primary change occurring is the relatively higher proportion of the population that is over 65. The relative proportion of Ontario's population 65 years and older is increasing as well as the absolute number of individuals in this age segment. Individuals 65 years and older are projected to double by 2036 (~ 4,166,812 people), representing 24% of the entire population.

Figure 1 Population of Ontario by age group and sex, 1971, 2013, 2036

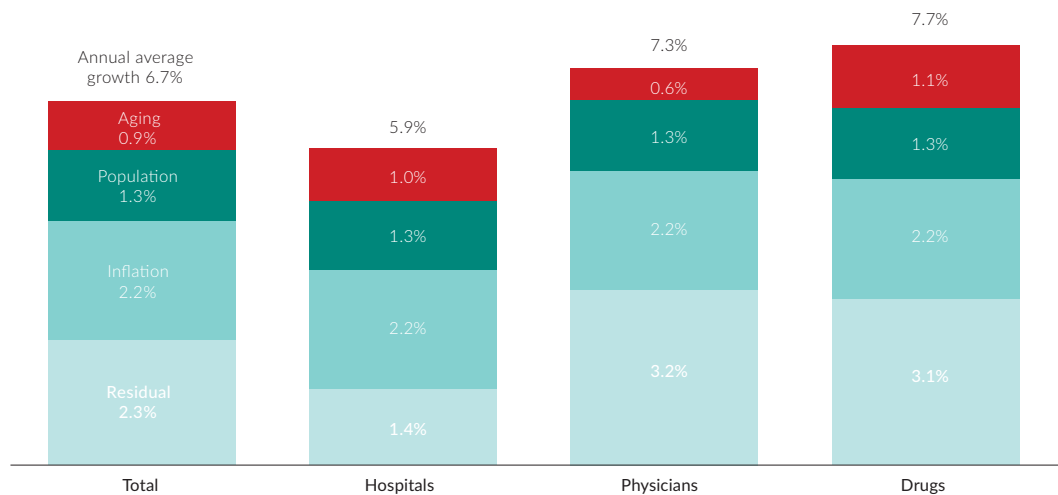


Source: Public Health Ontario. Ontario's Population: Determinants of Health. Toronto: Public Health Ontario, 2014.

An older population has different food needs and generally requires a smaller portion size. This senior segment will be a growth segment in the domestic market and in international markets such as Japan and Europe where the population aging trends are comparable to Canada's.

The aging population might also be expected to be responsible for increases in health care costs. The Canadian Institute for Health Information (CIHI) suggests that aging population is not the primary driver of **increases** in cost pressures on the system. The following chart shows the primary drivers of cost **increases** in health care spending: hospitals, physicians and drugs. Of these three categories, the fastest growing spending category is drugs.¹

Figure 2 Ontario, 2000-2011 Decomposition of government health care expenditure growth



Source: Institute for Competitiveness & Prosperity analysis based on data from the Canadian Institute for Health Information

Multiculturalism

Increases in the population of youth occur as a result of immigration as well as births. Although it is not part of this analysis, the information in this table below is relevant to food and health to the extent that different ethnicities have different dietary preferences and different risk factors for disease. Although these factors are not deemed to be fundamental to the strategy, they are part of the changing demographic landscape in Ontario and therefore affect the market for food and beverage products.

Table 1 Canada, Permanent residents by country of origin accounting for 40,000 or more immigrants (Data for the ten year period 2003 – 2012)

China, People's Republic of	325,360	Iran	63,144
India	274,924	France	59,645
Philippines	234,922	Korea, Republic of	58,819
Pakistan	95,848	Colombia	47,414
United States	92,601	United Arab Emirates	44,807
United Kingdom	73,016	Sri Lanka	40,911

Source: Government of Canada <http://www.cic.gc.ca/ENGLISH/resources/statistics/facts2012/permanent/10.asp>

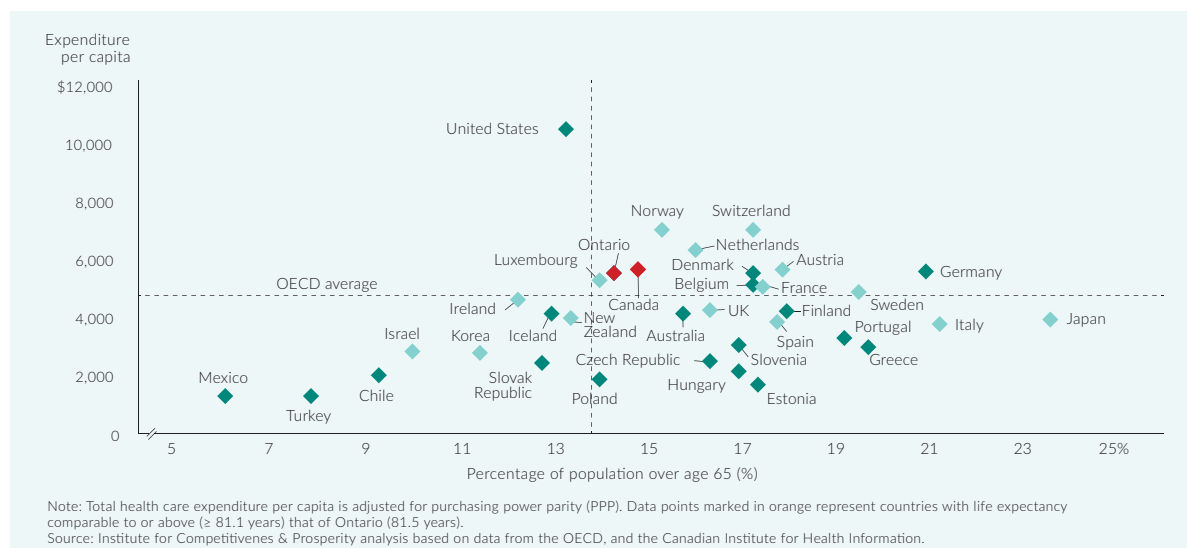
1. Born, Karen, & Laupacis, Andreas. (2011). What is driving health care costs? Retrieved September 4, 2014

Costs of Health Care in Ontario

A major analysis of Ontario's health care system was undertaken by the Institute of Competitiveness and Prosperity and published in April 2014 as Working Paper #20. Highlights from that study include:

- Total health care spending in Ontario is expected to reach an all-time high of \$80 billion in 2013, of which \$51 billion was spent by the Ontario government. Ontario's health care sector, roughly comparable in size to its manufacturing sector, accounts for a significant and growing share of provincial gross domestic product (GDP): 11.5 percent in 2013, up from 7.5 percent in 1982. Health care is the biggest item in the Ontario's government's budget, and 42 cents of every dollar spent goes toward health care, up from 34 cents in 1982. Despite these exceptional resources, Ontario does not achieve high value for health care dollars compared with international peers.¹ The following table from the report shows differences in health care expenses compared to other OECD countries.

Figure 1 Ontario, Canada, and OECD countries, 2011
Total health care expenditure per capita and percentage of population over age 65

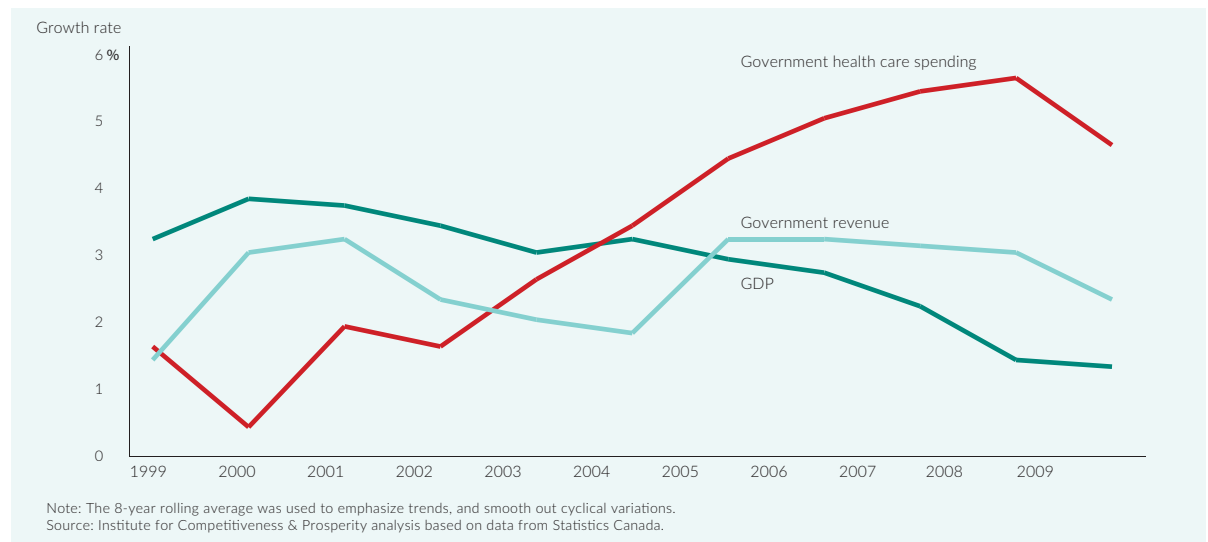


Source: BUILDING BETTER HEALTH CARE, Policy opportunities for Ontario, Institute for Competitiveness and Prosperity, Working Paper # 20, (April, 2014), http://www.competeprospers.ca/uploads/WP20_BetterHealthCare_FINAL.pdf

- Furthermore, the problem is compounded by decreasing government revenues relative to health care spending and gross domestic product (GDP) as shown in the following table.

Figure 2 Ontario, 1999-2009

GDP, government revenue and health care spending growth (8-year rolling average)



Source: BUILDING BETTER HEALTH CARE, Policy opportunities for Ontario, Institute for Competitiveness and Prosperity, Working Paper # 20, (April, 2014), http://www.competeprosper.ca/uploads/WP20_BetterHealthCare_FINAL.pdf

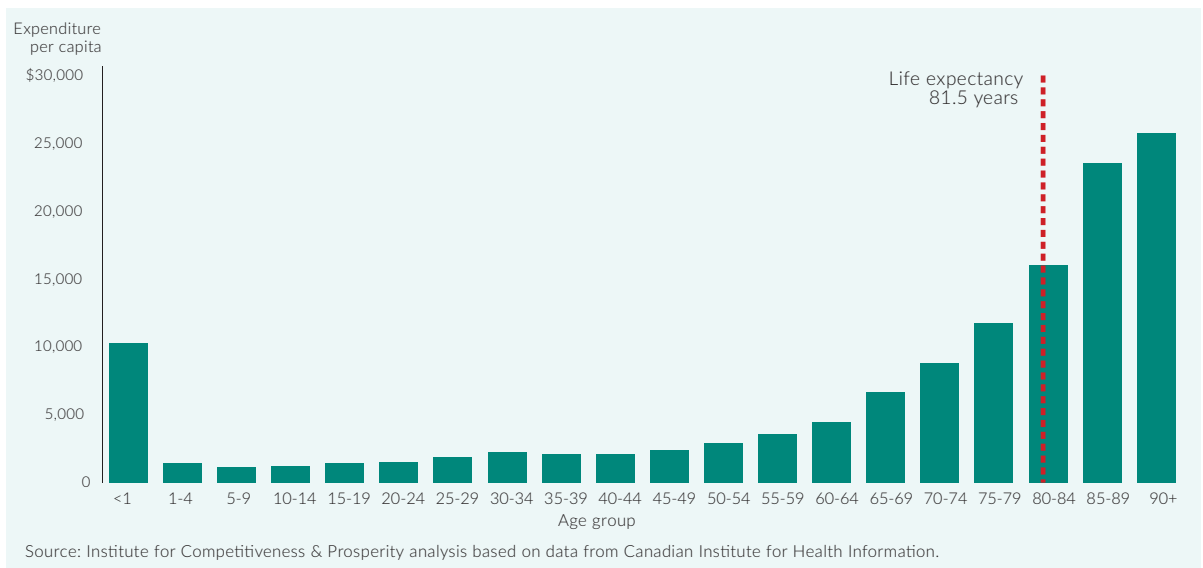
- In Ontario, one percent of the population accounts for one-third (34%) of the government's health care costs, while five percent of the population accounts for two-thirds (66%) of health care costs. Concentration of a large proportion of health care spending on a small group of patients is not unique to Ontario. Research from Manitoba, British Columbia, and the United States confirms that in every health care system, health care resources are skewed toward a small share of the population.¹

WHO ARE THE HIGH USERS OF HEALTH CARE?

"High users of health care are typically patients at the end of their lives, individuals with chronic diseases or multiple chronic diseases, and infants with high health care needs. The 60 and over age group accounts for the largest proportion of high-cost health care users. High-cost users are also more likely to come from disadvantaged groups in the population and thus more likely to be poor, unemployed, and socially isolated."¹

- The reality is that population health is affected by a broad range of factors, including income, education, housing, and social integration. These factors, labeled the upstream determinants of health, are much more powerful predictors of health outcomes than, for example, lifestyle choices (diet and physical activity) and health care delivery itself, and are widely recognized as lying at the root of poor health outcomes in Canada and globally.¹

Figure 3 Ontario, 2011 Government health care expenditure per capita, by age group



Source: BUILDING BETTER HEALTH CARE, Policy opportunities for Ontario, Institute for Competitiveness and Prosperity, Working Paper # 20, (April, 2014), http://www.competeprosper.ca/uploads/WP20_BetterHealthCare_FINAL.pdf

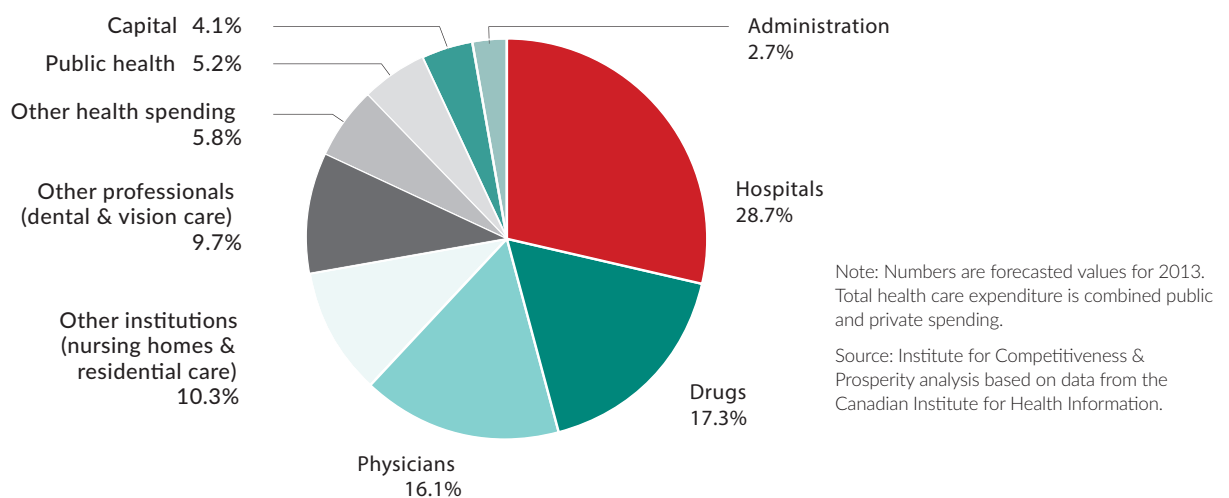
The Institute for Competitiveness and Prosperity's Working Paper #20 describes the need to avoid a lose/lose scenario in Ontario in which proportionately higher health care costs diminish the capacity for public investments in infrastructure and other economic growth opportunities, thereby worsening the underlying socio-economic conditions that contribute to higher health care costs. The Working Paper identifies eight opportunities for improving the outcomes from Ontario's health care system investment as the authors believe that Ontario's system is under-performing relative to other countries with similar standards. None of the opportunities is related to diet and nutrition although the authors recognize the cost burden of chronic diseases in Ontario, especially Type II diabetes.¹

Ontario's public health care accounts for 68% of total expenditures. There is a substantial bill, representing 32% of total costs, that is paid for directly by consumers or private health insurance plans offered by their employers for services such as optometrists, chiropractors and dental care.

In assessing the role of food and beverages on the health care cost for Ontario, the focus is often solely on the publicly funded costs. There is significant evidence that diets that are high in sugar, especially in youth, contribute to dental decay and the build-up of plaque.² While this report does not investigate that connection, it is important to recognize that consumers pay directly for health care services, such as dental, that are also impacted by diet and nutrition.

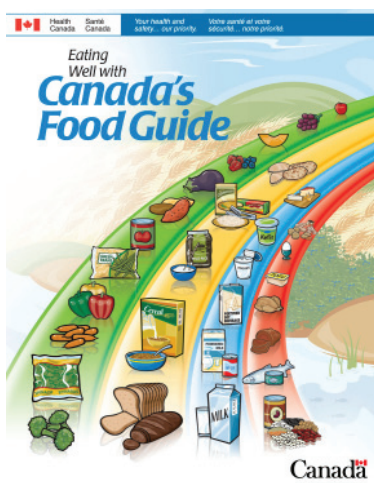
The chart below provides an accounting for the entire \$80 billion health care expenditure in Ontario.

Figure 4 Total Ontario health expenditure equals \$80 billion¹



1. BUILDING BETTER HEALTH CARE, Policy opportunities for Ontario, Institute for Competitiveness and Prosperity, Working Paper # 20, (April, 2014), http://www.competeprosper.ca/uploads/WP20_BetterHealthCare_FINAL.pdf

2. The Ontario Dental Hygienists' Association website contains a section entitled "Foods/Beverages That Contribute to Poor Oral Health." <http://www.odha.on.ca/drupal/system/files/pdf/NutritionF.pdf> Many of the same foods on their list are also associated with youth obesity.



OPPORTUNITY

Ontario's agriculture and food sector is in a unique position to serve the whole healthy eating spectrum with over 200 commodities produced on Ontario farms. ***Eating well with CANADA'S FOOD GUIDE*** identifies four food and beverage categories for a balanced and nutritious diet. Ontario produces the full variety of whole grains, lean protein from meat and alternatives, fruits and vegetables, and dairy for eating well as recommended in *Canada's Food Guide*. Coupled with access to advanced processing and product development capacity, there is a growth opportunity to fulfill the expanding consumer focus on nutrition and contribute to healthier diets in Ontario and other parts of the world.

Nutrition Trends in Canada

Over the past 20 years, there have been seven surveys in the Tracking Nutrition Trends (TNT) series.¹ The sample size is sufficiently large to provide a detailed analysis of adult Canadians' eating habits and health, knowledge and understanding of nutrition, influences on food choices, awareness and attention to food product labels, and sources of information about food and nutrition.

Eating Habits and Health

Three distinct segments appeared, two of which are knowledgeable about nutrition and food, and are receptive to making healthy choices and living healthy lifestyles. These are the Weight/Ingredient Conscious group (49%) and the Health Conscious group (26%).

The third group is "Not Engaged in Healthy Living/Eating" and represents 25% of Canadian adults. They rate their eating habits and health as poor to fair and lack the motivation to make changes to improve their overall health.

The 2013 survey showed notable positive changes from responses the last time the survey was done in 2008. More Canadians now report eating breakfast each day – 63% of respondents now, up from 58% in 2008. As well, more Canadians now believe they are knowledgeable about food and nutrition (82% now, vs. 78% in 2008).

Nearly all Canadians (92%) have done something to improve or change their eating and drinking habits over the past year. The top three improvements/changes made by Canadians are: eating more fruits and vegetables (68%), reducing salt/sodium (50%) and reducing sugar (50%) in their diet.

Canadians generally eat meals prepared at home at least five days a week. Consistent with 2008 results, breakfast is the meal Canadians are the most likely to prepare at home (52%), followed by dinner (48% vs. 43% 2008) and lunch (37% vs. 38% 2008).

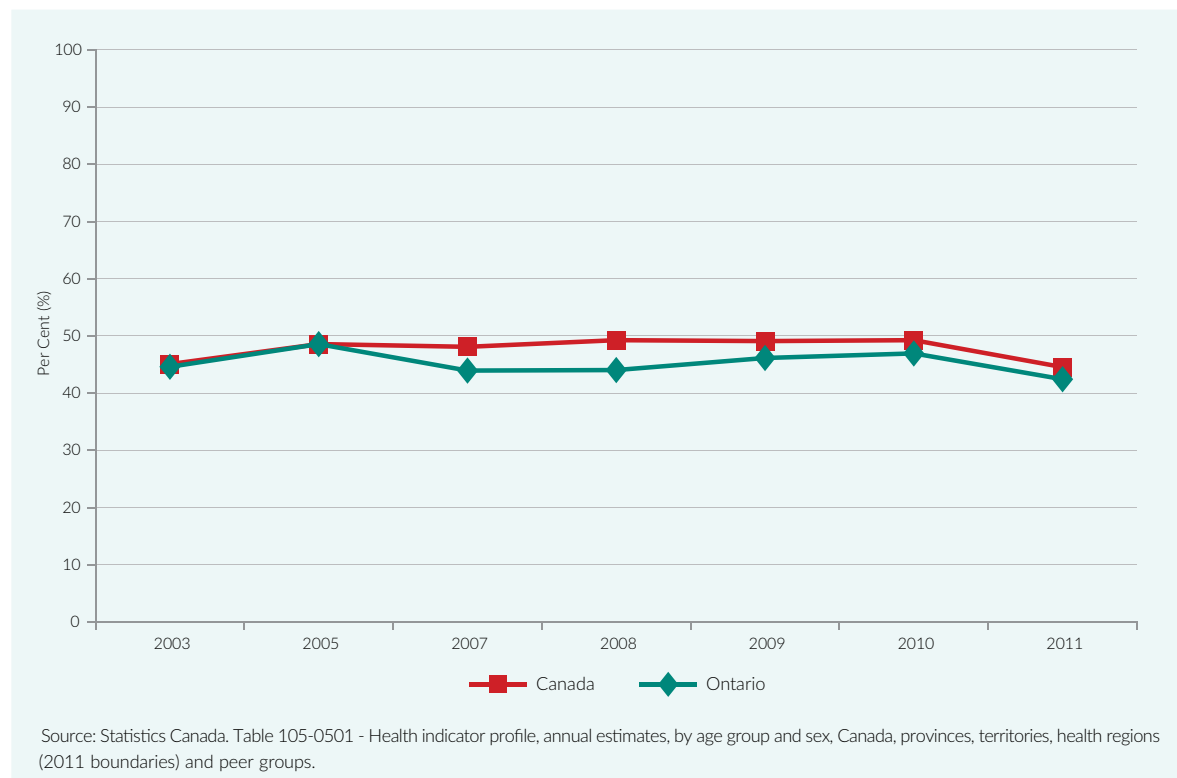
Many Canadians (59%) look for nutritional information when they eat out. Consistent with 2008 results, menus are seen as the most useful way to obtain nutritional information when eating out.

Fruit and Vegetable Consumption as a Marker for Healthy Eating

Fruit and vegetable consumption data is important because it “can be used **as a marker** for a more general pattern of healthy eating and is an important source of vitamins, minerals and fibre.”²

In 2013, 40.8% (roughly 11.5 million) of Canadians aged 12 and older reported having consumed fruit and vegetables five or more times per day. This rate has been unchanged since 2011. Females continued to be more likely than males to eat fruit and vegetables five or more times a day. In 2013, 47.4% of females (6.8 million) consumed fruit and vegetables five or more times daily, compared with 34.0% of males (4.7 million).³

Figure 1 Self-Reported Consumption of Vegetables and Fruit at Least Five Times per Day in Youth Aged 12 to 19, Ontario and Canada, 2003 to 2011



Source: Addressing Obesity in Children And Youth: Evidence To Guide Action In Ontario, (Public Health Ontario 2013), p. 19 (emphasis added)

Knowledge and Understanding of Nutrition

In 2013, Canadians considered themselves knowledgeable about nutrition (82% vs. 78% 2008). Overall, people who think they are knowledgeable generally have a good understanding of nutrition, a trend also seen in 2008.

When asked true or false statements to test their knowledge nutrition, overall, Canadians answered most of the questions correctly with the exception of the statement about “the amount of cholesterol people eat is a major factor that affects their blood cholesterol” and “non-hydrogenated or soft margarine contains less fat than butter”. Both of those statements are false.

Influences on Food Choices

Taste is important to nearly all Canadians (97%). While most Canadians think that nutrition is important, cost is also a consideration for many. The importance of food cost increases among those with an annual household income of less than \$80K.

The majority of Canadians say that maintaining good health (88%), weight management or body image (73%) and gaining energy or stamina (70%) influence the food choices they make. Overall, the results have stayed the same since 2008.

Over 70% of Canadians indicate that the following influence their food choice—if the food is: a source of protein, low in fat (total, saturated fat or trans fat), a source of fibre, a source of whole grains, low in sodium/salt and low in sugar. Previous experience with a product as well as where it is produced—locally (within their province) or in Canada—are also important factors when making food choices.

Canadians who rate their eating habits as excellent/very good say they are comfortable with

selecting, preparing and storing food. Younger Canadians 18-34 are less comfortable with peeling, chopping or slicing vegetables (82% vs. 90% 55+), selecting and cooking non-processed cuts of meat or meat alternatives (71% vs. 81% 55+) and preparing a meal for themselves or their family using only basic food ingredients (77% vs. 86% 55+). However, they are more comfortable preparing a meal using prepared ingredients (68% vs. 54% 55+).

Women are more comfortable than men with peeling, chopping or slicing vegetables (90% vs. 83%), preparing a meal for themselves or their family using only basic/whole food ingredients (85% vs. 76%).

Food Product Labels

When looking at a food label, most Canadians always/usually look at the best before date (78%). The ingredient list (59%) and nutritional facts table (54%) are also frequently consulted.

Canadians are less interested in statements about health benefits (22%), health or better choice slogan, symbol or logo (21%) and religious or cultural symbol, logo or program (7%). Consistent with 2008, less than half of Canadians use the information on food packages to determine how much of the product they or their family should eat.

In terms of why people read food labels, most say they compare the nutritional quality in similar types of foods, to get a general idea of the caloric content of food, to see if there is a little or a lot of a nutrient in a product and to see where the product comes from. Only half of Canadians report making decisions based on the ingredient list and nutrition facts table.

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Sources of Information about Food and Nutrition

Canadians access information about food and nutrition from various sources, the most popular being those that are easily accessible. Consistent with 2008, food product labels top the list (70%). Other common sources include the nutrition facts table (51%), the internet (50%), friends/relatives/colleagues (49%) and magazines (48%).

The sources considered to be the most credible are underutilized. For example, the most credible are family physicians/health professionals (94%) and dietitians (88%). However only 50% and 21% respectively received information from these sources.

How These Trends Are Affecting The Marketplace

- *Parents are increasingly purchasing BFY (better-for-you) products, a premium category that is positioned in the marketplace as offering BFY health benefits, such as reduced fat, sugar and/or salt content, while maintaining great taste and texture. The BFY marketing term cannot be used in advertising or as an attribute on food and beverage labels. Parents are choosing naturally healthy, organic and fortified/functional food products for their children, in order to help them maintain a healthy lifestyle.*
- *Senior consumers are highly interested in maintaining a healthy lifestyle and a certain level of vitality long into their retirement. As a result, this consumer segment spends a significant amount of money on healthier foods, exercise equipment, and supplements, and has now become a major target group for the health and wellness industry.*
- *There has been an overall snacking trend internationally, with particularly healthy snacking experiencing significant growth. Consumers are now shopping for quick food solutions that are both nutritious and satisfying.*
- *Due to consumers now opting to purchase healthier products, with no preservatives, pesticides or other chemicals, sales of unprocessed and naturally healthy products have significantly grown.*
- *There has been a slight shift towards more traditional distribution channels for health and wellness products, with supermarkets/hypermarkets accounting for the largest share from 2005 to 2010.*

Source: Health and Wellness Trends For Canada and The World, Agriculture and Agri-Food Canada, October, 2011 accessible at <http://www5.agr.gc.ca/resources/prod/Internet-Internet/MISB-DGSIM/ATS-SEA/PDF/4367-eng.pdf>

1. Information in this section has been summarized from the following sources:
 - 1.1 <https://www.cfdrc.ca/Downloads/CCFN-docs/TNT-2013-Summary-Report.aspx>
 - 1.2 <http://www.dietitians.ca/News-Releases/2014/TNT-Survey-CFDR.aspx>
2. Information in this section was obtained from Statistics Canada, The Daily, Canadian Community Health Survey 2013 released in June, 2014
3. Addressing Obesity in Children And Youth: Evidence To Guide Action In Ontario, (Public Health Ontario 2013), p. 19

Key Health Issues Affected By Diets

The analysis revealed three issues, obesity, Type II diabetes and cardiovascular disease, to be major health issues for Ontario that can be significantly affected by diet. These issues are often related. For example, obesity has been considered a major contributor to the burden of chronic diseases such as cardiovascular diseases (hypertension, heart disease and stroke). The following is a summary of the research findings on these three issues.

Obesity

Obesity is a major risk factor for chronic diseases such as cardiovascular diseases (hypertension, heart disease and stroke), Type II diabetes, musculoskeletal disorders (e.g. osteoarthritis), and some types of cancer (e.g. endometrial, breast, and colon).^{1,2} In Ontario, 60% of men and 45% of women are overweight or obese. Excessive weight and obesity are not restricted to adults; of special concern is the increasing incidence of childhood obesity. In 2004, 18.8% Ontarian children and youth aged 2-17 were overweight and 8.4% were obese, a combined overweight or obesity rate of 28%.³ Furthermore, evidence has showed that childhood overweight and obesity increases the likelihood of becoming obese adults later in life.⁴

Childhood Obesity

Canada's Federal-Provincial-Territorial Health Ministers recognize childhood obesity as a major public health issue that has international reach:

"Canada is in the midst of a childhood obesity epidemic. Childhood overweight and obesity has been rising steadily in Canada in recent decades. Between 1978/79 and 2004, the combined prevalence of overweight and obesity among those aged two to 17 increased from 15 per cent to 26 per cent. Increases were highest among youth, aged 12 to 17 years, with overweight and obesity more than doubling for this age group, from 14 per cent to 29 per cent. In addition, young people of Aboriginal origin (off-reserve) had a significantly high combined overweight/obesity rate of 41 per cent.

More than one in four children and youth in Canada are overweight or obese.

Childhood obesity has both immediate and long-term health outcomes. Increasingly, obese children are being diagnosed with a range of health

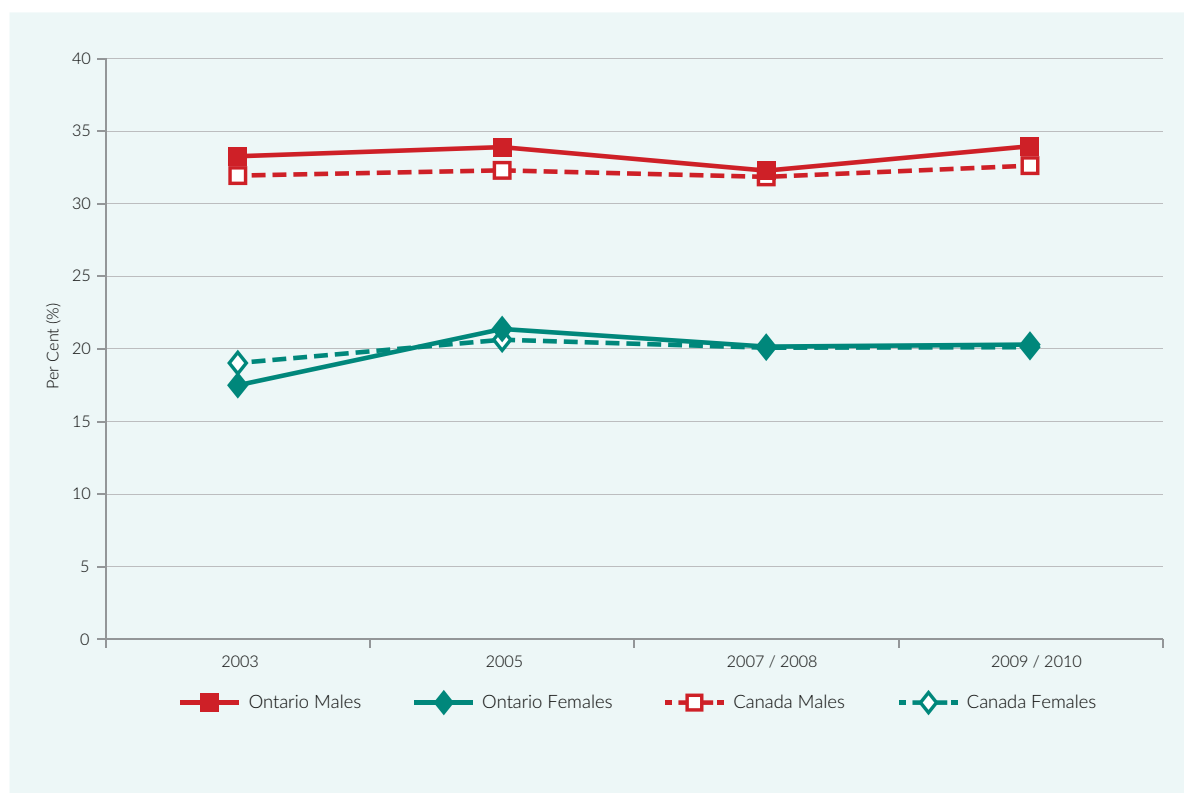
conditions previously seen almost exclusively among adults, including high cholesterol, high blood pressure, Type II diabetes, sleep apnea and joint problems. As noted previously, being overweight or obese in early childhood significantly increases the likelihood of being overweight or obese in adolescence and adulthood, with all the accompanying health problems.

Childhood obesity is an international epidemic.

There will also be an increase in health care costs and a high risk of lost productivity in the Canadian economy as a result of an anticipated greater level of absenteeism and weight-related illnesses among Canada's aging and more obese workforce.

Although childhood overweight and obesity is a critical health issue across all socio-economic groups in Canada, like most other health problems, the influence of socio-economic status is clear. For example, young people in households where no members had more than a high school diploma were more likely to be overweight/obese than were those in households where the highest level of education was post-secondary graduation. The prevalence of poor health or poor health behaviours is less common at every step up the socio-economic scale. This is a critically important fact to acknowledge and address as programs that fail to address these factors can inadvertently increase disparities in health status or behaviours.

Figure 1 Self-Reported Overweight and Obesity Using WHO BMI-For-Age Cut-Offs in Youth Aged 12 to 17, by Sex, Ontario and Canada, 2003 to 2009/2010

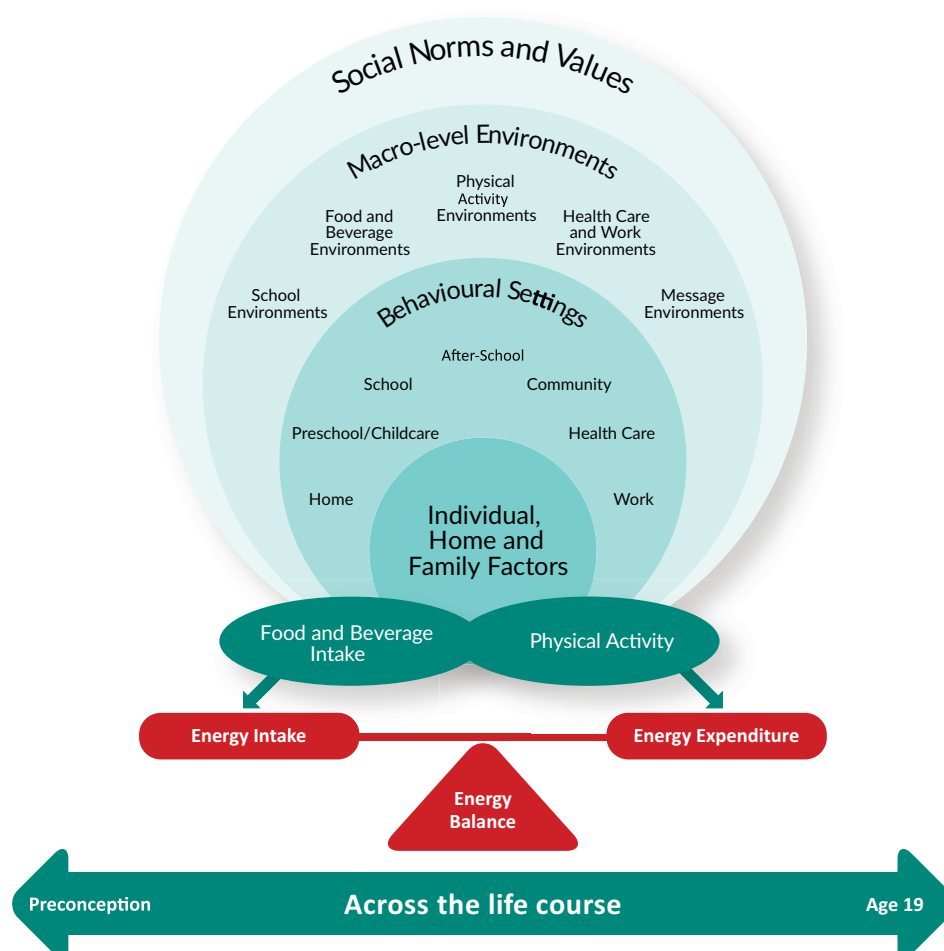


Source: Addressing Obesity In Children and Youth, p. 5 (Public Health Ontario, 2013) <http://www.publichealthontario.ca/en/BrowseByTopic/HealthPromotion/Pages/Addressing-Obesity-in-Children-and-Youth.aspx#.VDI88fidXL8> Public Health Ontario

A complex and interacting range of factors contributes to increasing rates of overweight and obesity. These factors include biological, behavioural, social, psychological, technological, environmental, economic and cultural conditions. The factors are operating at all levels from the individual to the family to society as a whole. Examples of these factors include more sedentary “screen time” for children, uneven access to physical activity opportunities, the marketing of foods and beverages high in fat, sugar and/or sodium to children, and increased food availability and increasing portion sizes. These complex and interacting system factors are further complicated by a wide variety of policy decisions made in a number of different sectors that influence childhood obesity.

Canada is not alone. Childhood obesity is an international epidemic. In 2004, Canada endorsed the WHO Global Strategy on Diet, Physical Activity and Health. In May 2010, the United States White House Task Force on Childhood Obesity released a report to the President entitled Solving the Problem of Childhood Obesity Within a Generation. This presents an opportunity for Canada to build on existing relationships (e.g. with Mexico and the United States) to act on this urgent obesity problem from a North American perspective. We must continue to learn from each other and find new ways to work together to identify and implement effective local, national and international solutions for action.⁵

Figure 2 Evidence Review Framework



This framework indicates that a range of social and environmental factors affect individual behaviour which, in turn, affects the balance between energy intake and energy expenditure. In simplest terms, an overweight condition results from consistently consuming more calories than the body uses for energy. That condition can result from either excessive calorie intake or from sedentary life style or a combination of both. Genetic factors may also be indicative of a predisposition towards obesity.

Governments, at both the federal and Ontario levels, have implemented strategies to address childhood obesity.

Source: Addressing Obesity In Children and Youth, p. 5 (Public Health Ontario, 2013) <http://www.publichealthontario.ca/en/BrowseBy-Topic/HealthPromotion/Pages/Addressing-Obesity-in-Children-and-Youth.aspx#VDI88fdXL8> Public Health Ontario

Overweight and Obese Adults

The information in this section is based on Canadian statistics, not specific to Ontario. Ontario data is typical of the national average. “The rates of adults who reported height and weight that classified them as overweight in 2013 were 41.9% for men and 27.7% for women. The percentage of men who were overweight was about the same as in 2012, while the rate among women has been stable since 2003. In 2013, 18.8% of Canadians aged 18 and older, roughly 4.9 million adults, reported height and weight that classified them as obese. The rate of obesity among men rose from 18.7% in 2012 to 20.1% in 2013. Among women, the rate of obesity in 2013 (17.4%) was almost the same as in 2012. In total, 62.0% of men (8.8 million) and 45.1% of women (5.8 million) in Canada were classified as either overweight or obese. For men, the combined rate in 2013 was significantly higher than in 2012, while the rate of overweight and obese women has remained stable since 2010.”⁶

Type II Diabetes

One of the most common chronic diseases in Ontario is Type II diabetes. It is estimated that the number of people with diabetes in Ontario will reach 1.9 million by 2020 (about one in every eight Ontarians), up from 546,000 in 2000, a 287 percent increase in the prevalence of diabetes. On average, medical expenses for diabetics are twice that of non-diabetics. The cost of diabetes to Ontario's health care system is estimated to grow from \$4.9 billion in 2010 to \$7 billion by 2020. Since 2008, Ontario has invested close to \$900 million in its Ontario Diabetes Strategy to enhance prevention and management of diabetes. The 2012 Auditor General's report remarked that only a small share of this funding was allocated to prevention. The strategy was also criticized for a lack of consistent outcome evaluation, and availability of primary care supports.⁷ Unhealthy eating is usually considered a diet low in fruit

and vegetables, low in fiber, high in sodium and high in calories.¹ Eating at least five servings of vegetables and fruit a day is a good marker of overall good diet. However, less than half of Ontarians (42.6%) report eating vegetables and fruit at least five times a day.⁸

80% to 90% of Type II diabetes and heart disease could be prevented if individuals adopted a healthy diet, were more physically active, maintained a healthy body weight, reduced stress and avoided smoking.

Cardiovascular Disease

As mentioned earlier, obesity has been considered a major contributor to the burden of chronic diseases, and psychological disorders. Increased Body Mass Index (BMI) is a major risk factor for chronic disease such as cardiovascular diseases (hypertension, heart disease and stroke). In 2007, chronic diseases were responsible for 79% of all deaths in Ontario. Cardiovascular disease (CVD), cancer, diabetes and respiratory illness are the major chronic diseases and represented the leading cause of death in Ontario.⁹

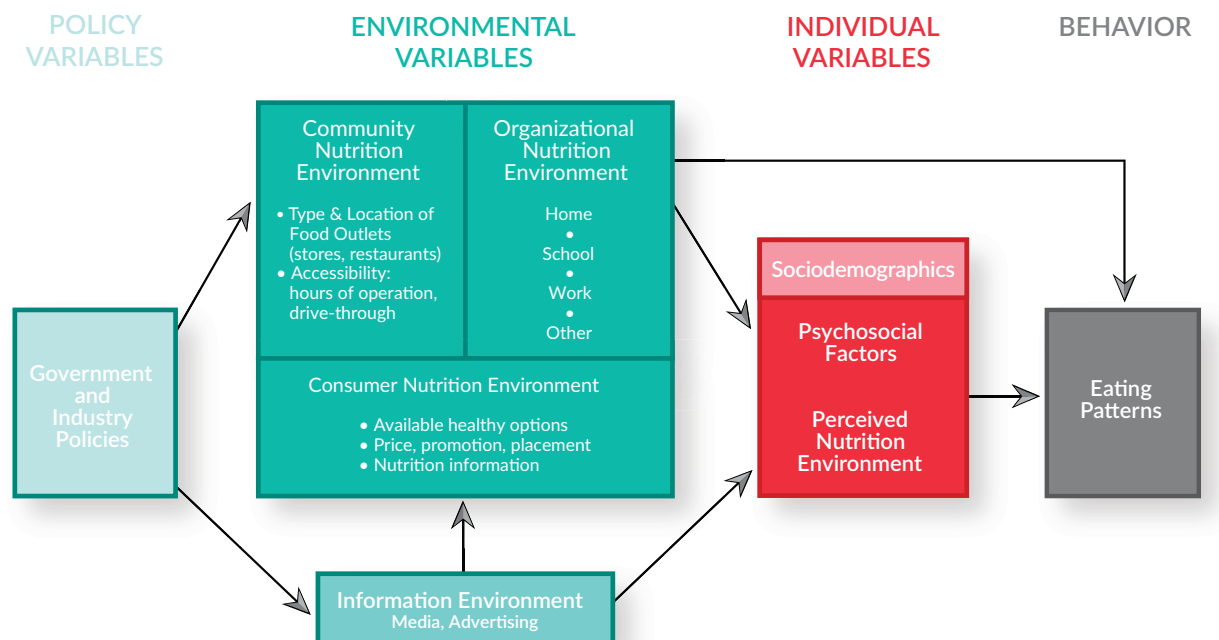
According to a Health Canada report, dietary sodium reduction is a cost-effective and efficient health intervention to reduce blood pressure and the risk of cardiovascular disease. In Canada, it has been estimated that if the average sodium intake is decreased by 1,840 mg a day, high blood pressure prevalence would decrease by 30%. This would result in approximately one million fewer Canadians with high blood pressure and direct annual cost savings of \$430 million due to fewer physician visits, laboratory tests and prescriptions for associated medications. This reduction would also prevent an estimated 23,500 cardiovascular disease events per year in Canada - a decrease of 13% over current numbers, with an additional \$949 million annually in direct savings.¹⁰

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Barriers To Healthy Eating

To address the two major health issues affecting Ontario's population (which are themselves inter-connected), as documented in the previous section, namely, obese and overweight consumers and Type II diabetes, there is a need to modify consumer behaviour. The following chart from a Health Canada study indicates the range of variables that influence consumer behaviour when it comes to dietary choices. The context of people's lives is a major determinant of their health and eating choices.


Figure 1 Model of Community Nutrition Environments



Source: Measuring The Food Environment in Canada, Health Canada, 2013, p. 11

Barriers to achieving a healthy, nutritious diet need to be addressed so that individuals can be in a better position to make healthier choices.

Income-related food security¹ impacts healthy eating. Without consistent economic access to sufficient nutritious food, healthy eating goals cannot be achieved, increasing the risk of individuals to poor health. In Ontario, 8.2% of the population is food insecure. Studies have shown that household food insecurity is associated with a number of poor physical and mental health outcomes, including multiple chronic conditions, distress and depression (Statistics Canada, 2014).



In Ontario, all public health units measure annually the cost of healthy eating using the Nutritious Food Basket survey. It has shown repeatedly that low-income families do not have adequate funds to afford healthy eating, after meeting other essential needs for basic living.²

The environmental conditions play a fundamental role in enabling or preventing individuals to make healthier food choices. Scholars agree that the “obesogenic environment” or the environment with widespread availability and increased energy-dense and high-fat food as well as increased opportunities for sedentary behaviour, and an environment with economic and socio-cultural factors are contributing to the rise of obesity.^{2,3,4,5,6}

The obesogenic environment is characterized by a persuasive marketing of processed food or palatable, energy-dense food, and a distribution system that makes those foods much more attractive, accessible and convenient.^{7,8,9,6} Studies have shown that processed foods may artificially stimulate appetite due to imbalances in hormones associated with satiety, causing individuals to eat more, thus increasing caloric consumption beyond functional requirements.¹⁰

In Canada, almost 30% of Canadians aged 31-50 consumed more than the recommended calories from fat. Sugar-sweetened beverages (SSBs) also increase energy intake and weight according to experimental and longitudinal studies.^{11,12,13,14,15} Ludwig and colleagues found that the likelihood of children becoming obese increased 1.6 times for each can or glass of SSBs they consumed per day.¹¹ Scholars noted that the higher the energy density of food and beverage, the more calories individuals consume in a single meal or snack.^{16,8,9,17,18}

Neighbourhood attributes, such as lack of availability of shops selling affordable fresh

products and good quality food, have been associated with an increased risk of obesity and higher rates of Type II diabetes.^{19,20} In Toronto, a study found that large sections of the city, particularly the northwest and east ends, had limited access to grocery stores and fruit and vegetable stands. Those areas also have high prevalence of diabetes, low annual household income levels, high rate of immigration and poorer access to public transportation.¹⁹

Nutritional Knowledge = Healthy Food Behaviours.

There is strong evidence that diets high in vegetables and fruit provide protection for heart disease, stroke and certain types of cancer.^{21, 22} However, complex barriers exist to accessing fresh vegetables and fruit. Those include income, education, age, geographic location, availability, quality, insufficient transportation.²² A survey conducted in Ontario found that individuals who eat fewer than five servings of vegetables and fruit daily, as recommended by the Canada’s Food Guide, are more likely to be male; be less educated (high school graduate or less); be a current smoker, and be physically inactive (<1 hour/week). Those individuals are also less likely to believe that they need at least five servings of vegetables and fruit daily, and less likely to agree that vegetables and fruit are an important part of their diet. In addition, women who eat fewer than five servings are more likely to think vegetables and fruit are too expensive, and men are more likely to think that vegetable and fruits require too much preparation.²¹

Other perceived barriers to fruit and vegetables consumption range from lack of food skills (e.g., food preparation, handling and storage);^{22, 23, 24} perceived high cost;^{23, 24} lack of motivation to eat healthy;²⁵ absence of parental rules regarding purchasing less healthy food options for their children;²⁶ lack of fruit and vegetables advertising;²⁶

level of knowledge of the health benefits of eating fruit and vegetables;²⁴ lack of attractiveness of food presentation;²⁴ to unknown taste.²⁷

In Canada, there are limited data on the association between Canadians' nutritional knowledge and dietary quality.²⁸ Studies elsewhere have shown connections between nutritional knowledge and healthy food behaviours. In the U.K., for example, research found that knowledge was significantly associated with healthy eating. Participants in the highest quintile for nutritional knowledge were almost 25 times more likely to meet recommendations for fruits, vegetables and fat intake than those in the lowest quintile.²⁸

Research has also shown a connection between households' label reading and their intention to consume foods that reduce the risk of chronic diseases. They have also reported that there is a relationship between households' self-reported high level of cooking skills and their intention to consume foods that minimize chronic disease risks.²⁸

Eating out and large portions of food have also been associated with weight gain.^{29,30,31,32} Food prepared away from home is higher in total energy, total fat, saturated fat, cholesterol and sodium and overall has poorer nutritional quality than home-cooked meals.¹⁴ Eating away from home often means a large variety of low-cost, energy-dense food in large portions.³³ Portion size offered by fast-food restaurants is often two to five times larger than when fast food was introduced 20 years ago.³⁴ Besides containing more calories, large portions encourage people to eat more without realizing the number of calories they are consuming.³⁵ A study conducted in Canada analyzed nutritional information from 4,178 side dishes, entrées, and individual items and concluded that serving size was shown to be a more important driver of calories per serving in restaurant foods.²⁹

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Effective Intervention Opportunities

The literature review, research and stakeholder interviews revealed several categories of interventions that are opportunities for the Ontario agriculture and food sector.



1. A More Collaborative, Multi-Sector Approach

The food environment includes many influences on individual diets and lifestyle choices. In order to be effective, policies and programs need to incorporate actions that positively change the food environment in which individuals and their families live, work, study, and play. Interventions to address diet-related chronic diseases need to integrate the agriculture/food and health sectors, as these two sectors have the potential to create an environment conducive to promoting healthy eating.¹

Most nutrition or diet-related policies have originated in the health side of the government and tend to have a vertical focus on a specific risk factor (e.g. salt reduction or increased fruit and vegetable consumption).¹ Identifying entry points for nutrition and agriculture in the health agenda is largely driven by context, and requires a process of priority setting across policies, sectors and stakeholders and will depend on high-level leadership, dialogue and mutual understanding.¹

Adequate collaboration among stakeholders in the health, nutrition and agriculture fields is essential to ensure a multi-sectoral response to diet-related challenges. Financial or policy incentives may trigger such collaborations. For example, the European Directorate-General for Agriculture and Rural Development of the European Commission partly funded the European School Fruit Scheme, a EU-wide voluntary program that provides educational and awareness-raising initiatives as well as fruit and vegetables to school children aiming to encourage good eating habits in young people.¹

Interventions for increasing consumption of healthy food in those settings can include the following components:

- increased availability and access to healthy food
- food/menu reformulation
- economic incentives (e.g. reduced prices and coupons)
- point-of-purchase information (e.g. menu labelling)
- promotion and communication²

With these factors in mind, a collaborative and multi-sector approach, including agriculture and food processing, is required to be effective.

2. Food Availability And Access

Increased availability of healthy food in food establishments refers to interventions that offer healthful food options through targeted menu items (e.g. more and/or default fruit and vegetable side dishes), and healthier food preparation (e.g. low-in-fat, low-in-cholesterol and low-in-sodium) of menu choices.

Increased access to healthy food options means to make healthy menu items easier to locate (e.g. fruit and vegetables and/or healthy food options in multi-location restaurants, convenience stores, corner stores, community places) and/or take healthful choices to “the people” (e.g., offering healthy lunch/snack wagons or trucks).

There are several programs from other areas that have been successful in increasing healthy food access. In the U.S., the Bronx Healthy Hearts Restaurant, supported by New York’s Healthy Heart Initiative, recruits and promotes restaurants that are willing to modify recipes or cooking techniques, add healthier foods or offer reduced portion sizes. The program targets small, family-owned neighbourhood restaurants and establishes the criteria for healthier menu items.³

Another example is the Colorado Smart Meal™ Seal program, which helps restaurant patrons identify healthier food options. The program establishes nutrition standards for food that merit the Smart Meal™ Seal, which is displayed next to the menu items. More than 1,600 Smart Meal™ Seal menu options are available in 200 locations in Colorado, U.S.³

The availability of affordable, nutritious food in local stores also influences the food choices and eating habits of area residents.⁴ Studies have shown that individuals with access to supermarkets have reduced risk of obesity and

increased consumptions of fruit and vegetables.³ Strategies to improve access to healthy food in supermarkets and/or small stores (e.g., convenience stores, corner stores, specialty stores) include the following:

- Attracting new food stores to underserved areas
- Improving public transportation to retail food stores
- Upgrading the facilities at existing stores to enable them to carry fruit and vegetables and other healthier foods
- Increasing supply of and shelf space dedicated to high-quality, affordable healthier food.

In-store promotion and on-site education encourages sale of healthier foods. The Baltimore Healthy Stores program promotes healthier food choices through store promotions and on-site education at the point of purchase. The program was implemented in seven corner stores and two supermarkets in East Baltimore, which is a low-income community of minority population. This program showed an increase in the availability and sale of healthy foods, and an evaluation conducted six months after the intervention showed sustainability of the increased sales.³

3. Food Literacy

Conference Board of Canada⁵ recommends that governments, businesses, and households, as well as the health and education sectors, play a role in food literacy by:

- Making nutritional information more effective, understandable, and accessible for household use.
- Tailoring food literacy programs to high-risk populations and community needs.
- Incorporating food literacy into school curricula.
- Fostering parental involvement in hands-on experiential opportunities to develop food literacy.
- Creating guiding principles for children's advertising.
- Replicating highly successful international food literacy programs.
- Tracking, studying, and evaluating food literacy initiatives.

Communication and public education campaigns are important to support interventions for improving healthy eating. The impact of nutrition information on eating habits depends on how effectively nutrition messages are communicated to consumers. For example, simply labelling food as "healthy" may stigmatize food as being less tasty, particularly among young people.⁶ Eating practices are dynamic and influenced by many factors, including taste and food preferences, weight concerns, physiology, time and convenience, environment, abundance of foods, economics, media/marketing, perceived product safety, culture, and attitudes/beliefs.⁷ Communications and educational programs are enhanced when educators implement active, behaviorally focused approaches that include the larger context of food choices and healthy lifestyles.

School Programming To Reach Youth

Schools present a unique opportunity to help students adopt healthier lifestyles, including healthy eating, by creating an attractive environment where healthy choices in foods and beverages are appealing and easily available, while limiting access to high-energy foods. Steps for ensuring that students have appealing, healthy choices in foods and beverages are proposed and include, among others, the following:

- Establish strong nutrition standards for competitive foods
- Make more healthful foods and beverages available
- Revise existing food and beverage contracts so that only healthier food options are available to students
- Adopt marketing techniques to promote healthful choices
- Use fundraising activities and rewards to support healthy eating.³

In the 2012-13 school year, Ontario's Student Nutrition Program provided nutritious school meals to over 695,000 children and youth across Ontario.

In the Heart and Stroke Foundation's statement on Schools and Nutrition there are references supporting the importance of school nutrition programs:

- Between the ages of six and 12, children develop eating habits and attitudes that they may carry with them for the rest of their lives.
- Schools are an ideal setting to establish and promote healthy eating among children and youth. The school environment influences healthy eating in children and youth through the foods that are available, nutrition policies, health curricula, as well as teacher and peer-modeling.

- Adapting food policies that promote healthy food choices at school (e.g. healthy menus for school meals, snacks, and tuck shops, as well as guidelines for healthy bag lunches) has been shown to have a moderate to high impact on children's eating practices.

Facts on the School Nutrition Programs

The Ontario Ministry of Children and Youth Services is expanding the Student Nutrition Program. On April 7, 2014 Ontario announced the investment of more than \$32 million over the next three years to enhance existing Student Nutrition Programs and establish 340 new breakfast and morning meal programs in schools across Ontario. As part of the Healthy Kids Strategy, Ontario invested an additional \$3 million to the Student Nutrition Program in 2013-14, helping to create over 200 new breakfast programs over two years. These investments will also support the expansion of Student Nutrition Programs in some First Nations communities, beginning in the north.

The Northern Fruit and Vegetable Program provides fruit and vegetable snacks to 42,000 students in the North every week. The programs are delivered locally by 14 Lead Agencies. The Ontario Fruit and Vegetable Growers' Association (OFVGA) and the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) staff have collaborated with the Ministry of Children and Youth Services to make their purchase of local food for this program more efficient. A workshop for the 14 food buyers was held by OFVGA to educate these groups on food procurement, distribution, liability and food safety.

4. Food Skills

In addition, nutrition education is important as a positive influence on food-related knowledge and skills, eating and physical activity behaviours, and health status. However, families are increasingly eating out and relying on fast and prepared foods, while children are missing the opportunity to develop food skills for healthy eating.⁸

Healthy eating is a skill and practice that must be learned.

Although cooking skills alone, without other diet-related education, will not completely change eating behaviors, there is a connection between confidence in cooking abilities and healthy eating habits.⁹ Therefore, hands-on culinary nutrition outreach programs focused on producing sustainable healthy eating behavior through culinary confidence and nutrition awareness are a successful approach to increase good health.

In another study, the most common barrier to food preparation mentioned was lack of time, reported by 36% of young adults. Young adults who reported frequent food preparation reported less frequent fast-food use and were more likely to meet dietary objectives for fat, calcium, fruit, vegetable and whole-grain consumption. The report concludes that to improve dietary intake, interventions among young adults should teach skills for preparing quick and healthful meals.

The Canadian Federation of Agriculture National Food Strategy, which is elaborated on p. 32, includes a recommendation that “By the age of 16, each Canadian child can plan and prepare at least six nutritious meals”.

5. Information Sharing and Disclosure

Both the federal and Ontario governments are actively engaged in making changes to information that will be made available to consumers to guide them in making healthy food choices.

The Nutrition Facts Education Campaign

In 2010, industry-government collaboration led to the launch of the Nutrition Facts Education Campaign. Food and Consumer Products of Canada (FCPC) and Health Canada worked together in a multi-media campaign to increase Canadian consumers’ understanding of the nutrition facts table. Using the % Daily Value is a quick way to know if a packaged food contains a lot or a little of a nutrient. This information helps consumers choose and compare food products. The campaign uses on-package and in-store messaging, national media advertising such as print and television advertising, and an educational website to communicate with Canadians. The grocery retail sector including the Canadian Federation of Independent Grocers’ members, as well as Loblaws and Walmart, participated in the campaign together with Dietitians of Canada. McDonald’s displays the campaign messaging on posters in their restaurants, on their tray liners and in coupon books that were mailed to every household in Canada.

Nutrition Facts Valeur nutritive	
Per 3/4 cup (175 g) / par 3/4 tasse (175 g)	
Calories 170	
% Daily Value (DV) % valeur quotidienne (VD)	
Fat / Lipides 5 g	1 %
Saturated / saturés 3.5 g	18 %
Trans / trans 0.2 g	10 %
Cholesterol / Cholestérol 20 mg	
Sodium / Sodium 450 mg	20 %
Carbohydrate / Glucides 23 g	
Total Sugars / Sucres totaux 18 g	18 %
Added Sugars / Sucres ajoutés 12 g	
Fibre / Fibres 0 g	
Protein / Protéines 7 g	
Vitamin D / Vitamine D 1.3 µg	9 %
Calcium / Calcium 220 mg	17 %
Iron / Fer 2 mg	10 %
Potassium / Potassium 150 mg	4 %

The familiar Nutrition Facts table appearing on food package labels is shown on the left, with changes as proposed as a result of Health Canada’s consultation in 2014.

In 2012, an assessment was undertaken of the success

of the campaign in increasing the utilization of the Nutrition Facts table by consumers.¹⁰ 160 million media impressions were created during the first two years of the multi-media campaign.¹¹

Improving Nutritional Information on Food Labels

Health Canada completed a major public consultation on food label information in September 2014. As a result of the input received, the following changes will be introduced:¹²

- New guidelines to help make serving sizes declared in the Nutrition Facts table more consistent among similar food products. These serving sizes would be based on the most current information on the amounts of food that Canadians actually eat in one sitting, also known as reference amounts.
- Changes to the list of nutrients that must be declared in the Nutrition Facts table, and updates to the Daily Values to reflect the most recent dietary recommendations. Health Canada is also proposing to change the way the sugars content of food is presented on the label.
- Of particular interest to Canadian consumers are the changes proposed to the appearance of the Nutrition Facts table and the list of ingredients, and the proposal to create an optional information box highlighting the presence of certain bioactive components, such as caffeine.

Ontario's Proposed *Making Healthier Choices Act*, 2014

Ontario is reintroducing legislation that, if passed, will require large chain food service premises, like fast food restaurants, to post calorie counts to help Ontarians make well-informed choices of

what they eat and feed their children. *The Making Healthier Choices Act*, 2014, if passed, will:¹³

- Require calories for standard food and beverage items, including alcohol, to be posted on menus and menu boards in restaurants, convenience stores, grocery stores and other food service premises with 20 or more locations in Ontario.
- Require food service operators to post contextual information that would help to educate patrons about their daily caloric requirements.
- Authorize public health inspectors to enforce menu labelling requirements.

The proposed menu labelling legislation is a key component of the Healthy Kids Strategy, which responds to the Healthy Kids Panel's recommendations for reducing childhood obesity.

6. Voluntary Industry-Government Collaboration

A further opportunity identified during the interviews and research is that voluntary industry-government programs can be an effective way to achieve a broad change in nutritional components of processed food products, rather than regulatory changes.

For example, Health Canada has a voluntary program working with Canada's food and beverage processing industry to achieve voluntary sodium reduction targets. The program has been achieving results. The Health Canada website describes this program and the benefits it aims to deliver:

"The current average intake of sodium by Canadians is about 3,400 mg per day. This is more than double the amount that Canadians

require. Data from the 2004 Canadian Community Health Survey (CCHS) 2.2 indicate that among people aged nine to 70, over 85% of men and between 63% and 83% of women had sodium intakes exceeding the UL. Similarly, in young children, 77% of those aged one to three and 93% of those aged four to eight years had intakes exceeding the UL.

In October 2007, the federal Minister of Health, Tony Clement, announced the creation of the expert Sodium Working Group (SWG). The SWG's mandate was to develop a population-health strategy to reduce sodium in the diets of Canadians. This mandate was achieved with the SWG's release of its report, the Sodium Reduction Strategy on July 29, 2010. In September 2010, the Canadian Health Ministers met and agreed to work towards lowering the average sodium intake of Canadians to 2,300 mg per day by 2016. Health Canada will continue to consult its Food Expert Advisory Committee (FEAC) on its initiatives to support Canadians in their efforts to reduce sodium intakes.

While reformulation of processed food products with lower levels of sodium and corresponding approved label disclosures, Canada's program also incorporates collaboration in the delivery of the message: "British Columbia's Ministry of Health, Dietitians of Canada, EatRight Ontario and Health Canada worked collaboratively to develop and test sodium reduction messages and tips with the public and Registered Dietitians across Canada. These national sodium reduction messages and tips can be used collectively or separately when developing healthy eating resources aimed at helping Canadians reduce their sodium intake."

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Current Engagement of the Agriculture and Food Sector

A scan of the Ontario agriculture and food sector indicated that there are already several healthy food strategies and initiatives that are in place or under development. The following are the major strategies that have been identified and can be building blocks for the Presidents' Council.

The Canadian Federation of Agriculture's National Food Strategy

The National Food Strategy (NFS) takes into account everything from promoting the Canadian brand and healthy lifestyles to sustaining economic growth and ecosystems. The NFS was developed by the agriculture and food industry to ensure a more holistic and strategic approach to food and agriculture to meet the needs of the food system and future generations, as well as the global community.

Two of the nine strategic objectives are particularly relevant to the Presidents' Council commitment to a healthy food strategy.

Consumers choose foods and healthy eating patterns that promote optimal health.

- Food product innovation is aligned with Canada's Food Guide.
- Research focuses on current food offerings and new food product innovation that maintains or improves the health of Canadians and citizens in other markets.
- Canadians understand healthy eating patterns, nutritious foods and how to choose, prepare and include these foods in daily meals.
- The Canada Food Guide is clear, simple and widely distributed.
- Food claims and images are clear, factual, informative and not misleading.
- By the age of 16, each Canadian child can plan and prepare at least six nutritious meals.

Consumers always have access to safe and nutritious food.

- Nutritious foods are readily accessible in public buildings, schools and worksites.
- All people have access to affordable, nutritious food. Where this is not possible, access is facilitated through public and/or privately funded programs.
- Coordination and collaboration between the food industry and health sector ensures food availability and choice addresses the health interests of Canadians.
- Consumers have easy access to accurate and science-based information about the safety and nutritional value of the Canadian food supply.

Food and Beverage Ontario - Ontario's Food and Beverage Processing Industry Strategy: The NEW Engine of Ontario's Economy

Released in October 2013, this strategy includes a SWOT analysis of Ontario's food and beverage processing sector which identified the following opportunities. Two of the five opportunities explicitly recognize the market represented by developing healthy food products:

- **Shifting consumer preferences.** Consumers are increasingly targeting healthier food and beverage options and, in doing this, are becoming more aware of the contents of the products they consume. Sought after functional qualities (e.g. gluten-free, zero trans fat) are being incorporated into processed foods, providing manufacturers with opportunities to innovate to develop healthier food products that satisfy consumer preferences.

- **Demand for innovative products.** The manufacturing and promotion of new, value-added and niche products, such as foods promoting health attributes can provide new opportunities for processors in the province.

These specific opportunities were highlighted in more detail in Food and Beverage Ontario's Economic Impact Study Report: Ontario Food and Beverage Processing Sector. In the section of this report predicting consumption trends to 2020, the authors identified five that bear specifically on healthy eating (pages 7 and 8):

- **Aging population** – The aging population will impact the type and quantity of food demanded as well as where it will be consumed.
- **Food for health** – There will be a move to adopt healthier lifestyles but it will be slow.
- **The educated consumer** – Consumers will become more conscious of nutrition and food ingredients than ever before and foods with a function beyond just energy will be in demand, as consumers seek to manage their health and prevent disease.
- **No trade-off convenience** – The next wave of product differentiation will be to provide fresher, more nutritious, great tasting and/or ethnic foods in the most convenient forms possible.
- **Vegetables** – True vegetarianism may not grow dramatically, but consumption of meatless meals will continue to increase.

Sustain Ontario - Ontario Food and Nutrition Strategy: A Plan For Healthy Food and Farming

Approximately 12 NGOs from the health care and agricultural sectors, together with six Ontario universities and representatives from the government of Ontario, form the study design team, led by Sustain Ontario. A draft overview of the strategy was released in September 2013 with the full report released in October 2014. The following goals and strategic direction were articulated:

The *Ontario Food and Nutrition Strategy* is a cross-government, multi-stakeholder coordinated approach to food policy development. The vision is for productive, equitable and sustainable food systems that support the wholistic health and well-being of all people in Ontario. It is a plan for healthy food and food systems in Ontario.

Goals

- To promote the wholistic health and well-being of all people in Ontario.
- To reduce the burden of obesity and chronic disease on people in Ontario and the Ontario health care system.
- To strengthen the Ontario economy and resiliency of food systems.

Strategic Directions

- People in Ontario have access to and the means to choose and obtain safe, healthy, local and culturally acceptable food.
- People in Ontario have the information, knowledge, skills, relationships, capacity and environments to support healthy eating and make healthy choices where they live, gather, work, learn and play.

- Ontario has diverse, healthy and resilient food systems that promote health and contribute to an equitable and prosperous economy.

One advantage of this approach is the goal of bridging representatives of the health and agriculture and food communities into adopting and implementing a cohesive plan. As the name of the lead organization, Sustain Ontario, implies, the strategy has a green agenda to move towards farming and food processing practices that are deemed to be more ecologically sound as well as addressing the needs for using the food system to better address health issues. The Presidents' Council has recognized the importance of sustainability in its strategy and has dedicated a separate emphasis to it as the third pillar of the strategy.

Food and Consumer Products of Canada (FCPC) Health and Wellness Report

Aligned with direction given in its 2004 Global Strategy on Diet, Physical Activity and Health, in which the World Health Organization (WHO) laid out a series of measures for governments, civil society and industry to promote and protect public health and combat the rise of non-communicable disease, FCPC member companies balance the needs and tastes of consumers with the evolving health and wellbeing priorities of government and society in four ways:

- Creating new, healthier products and categories
- Reformulating existing products and categories
- Educating and empowering Canadians to make healthier choices and develop balanced nutrition and activity patterns
- Partnering with government and stakeholders to develop sound, evidence-based health and wellbeing policies

FCPC undertook a comprehensive survey in late 2013 to assess progress made in the three years 2011 to 2013.¹

Highlights from the 37 participating food and beverage processors:

- 750 better-for-you food and drink options were introduced offering benefits that include reduced saturated fat, removed or reduced transfat, fewer calories, more whole grains or fibre, more protein, and more vitamin D
- 90% of FCPC food manufacturers introduced new, better-for-you food products
- 94% of FCPC members offer information and resources to Canadians on making healthier diet and lifestyle choices

The Presidents' Council's Ontario Agriculture and Food Strategy Pillar 1 - Economic Growth

The first pillar recognized such importance of health to the strategy that it was set out as the second pillar to complement economic growth. The economic growth pillar acknowledges,

“Health and healthcare costs are high priorities for Ontarians and for the Ontario government. Healthy food products offer high growth potential for farmers and food processors, in addition to benefits to consumers. There is also growing pressure to reduce unhealthy ingredients in many processed food products. Improving the health profile of foods produced in Ontario is, to some extent, a precompetitive issue that can be addressed by industry and government working collectively.” The preliminary focus areas were set out as:

- **Improving health profiles of processed food**
– expanded industry cooperation and co-development for precompetitive issues like salt, fat and sugar reduction
- **Market development** – creating market demand for healthier products, expanding fruit and vegetable programs in schools, new education programs supporting healthy product development
- **Regulation** – Health claims – improving the approval process, the breadth of claims and the speed of approvals
- **People** – Connecting with health professionals, attracting skilled labour at all levels of the industry, support for training, access to labour
- **Research, development and commercialization**
– Support for health focused R&D and technical assistance, importing ideas and technologies for healthier food products from around the world

Other Activities of Note:

Ontario Agri-Food Education (OAFE)

OAFE is currently delivering several health and nutrition lessons in Ontario classrooms through their Teacher Ambassador program that support food literacy and a greater understanding of the agriculture and food sector. In addition, OAFE has resources available for teachers such as “All About Food: Exploring Canada’s Food System (5th edition)”. In partnership with Health Canada, OAFE has also developed “Eat Well and Be Active” Educational Toolkit teacher supplements that include assessment tools and extension activities for teachers to use in grades four to six.

1. The full Health and Wellness report is available at http://www.fcpc.ca/Portals/0/Userfiles/PAResources/Public2014/HealthWellness_Report1.pdf

Summary: Shared Goals For The Same Positive Outcome

The overall goal for the Presidents' Council's Ontario Agriculture and Food Strategy is clear – Build a successful and sustainable future for Ontario farmers, food processors and bio-economy firms, who collectively contribute to a stronger economy, create jobs and a healthier society in Ontario.

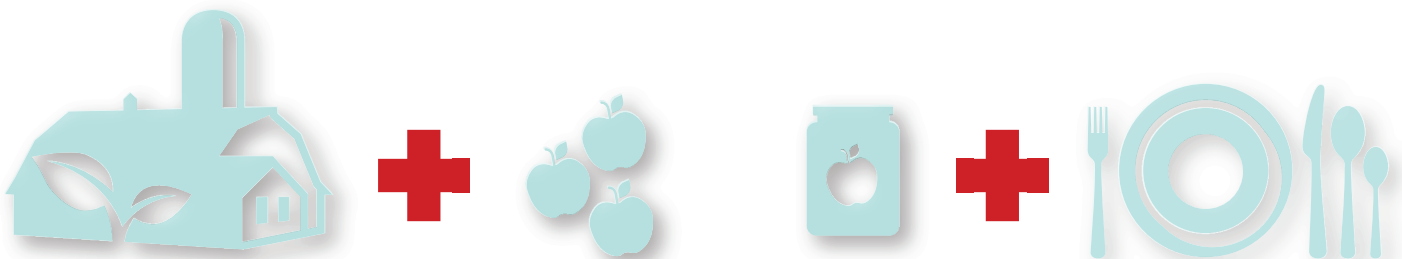
The Health Pillar for this Ontario strategy can have shared goals with other existing strategies that seek to achieve the same outcome. The Canadian Federation of Agriculture National Food Strategy, for example, includes the following two health-related goals:

- Consumers choose foods and healthy eating patterns that promote optimal health.
- Consumers always have access to safe and nutritious food.

Similarly the Ontario Food and Nutrition Strategy developed in part by Sustain Ontario includes the following three goals:

- To promote the wholistic health and well-being of all people in Ontario.
- To reduce the burden of obesity and chronic disease on people in Ontario and the Ontario health care system.
- To strengthen the Ontario economy and resiliency of food systems.

The question is, how to increase the positive impact...



Recommended Agri-Food For Health Strategies For Greater Positive Impact

1. Support A More Collaborative Multi-Sector Approach

A more collaborative multi-sector approach among stakeholders in business and in governments representing agriculture, food processing, nutrition and health will ensure consistent messaging and optimal use of resources. Possible activities include:

- Actively participate in and contribute to multi-sectoral working groups, including inter-ministerial and inter-governmental collaborations that are committed to addressing major health concerns in Ontario's population.
- Increase collaboration with the health community to build trust and understanding of the health issues facing society and in determining the evolving role of the agriculture and food sector in contributing to healthier life-styles.

For example, invest in staff resources who are qualified and experienced in nutritional issues to represent the agriculture and food sector in building understanding and trust and in supporting common strategies with the health sector.

- Continue to work with government on voluntary approaches to reformulating food products to improve their positive nutritional characteristics and label disclosure.
- Encourage public-private awards and recognition for companies that make achievements such as the Premier's Award for "Ontario's Healthiest Food Product Innovation of the Year" with the health and agriculture and food communities involved.

2. Support Co-ordinated Programs that build Food Literacy and Food Skills

Increasing food literacy and food skills, especially in school age children, is a key priority identified during the research for this strategy. There are already several existing programs or initiatives that are underway in this area. However, a more coordinated and expanded approach will increase the combined impact.

Possible activities include:

- Enhance food literacy and food skills in schools by giving these areas prominence in core curriculum as critical life skills.
- Utilize and expand existing educational expertise and networks (example: Ontario Agri-Food Education) to achieve better food and health outcomes for students at both primary and secondary level in a coordinated, multi-commodity approach (not a single product/commodity approach).
- Recognizing the importance of parental engagement as necessary to maximize the benefits to be achieved from classroom programming, pilot and implement programs to influence parents' eating habits through their students' learning for the mutual benefit of the whole family.
- Encourage more public resources be directed to health issue prevention through proactive nutrition awareness and literacy.

3. Support Increased Healthy Food Availability and Access through Innovation

Support increased availability and access to healthy food through innovation. While the issue of food access and availability is complex and will require a range of interventions, the agriculture and food sector can make a significant impact through developing healthier crops, livestock, food products and processes that will contribute to increased access. Possible activities include:

- Make an industry-led, collaborative 10-year commitment to expand research capacity in food nutrition that strengthens relationships and enhances outcomes across research institutions.

For example, endow a new research chair in "Applied Food Nutrition" at the University of Guelph's Ontario Agricultural College with a cross appointment to the University of Toronto's Department of Nutritional Sciences in the Faculty of Medicine in order to increase collaboration between these two leading research institutions in the field in Ontario.

- Work with government to ensure that future programs are designed to equip the agriculture and food sector with enhanced tools to accelerate the pace of successful commercial introduction of healthier food and beverage products.

Propose that priority be given to investments and projects that deliver measurable health benefits, through such means as:

- Developing technologies that optimize the nutritional value of food and beverage products through handling, processing, storage and distribution.
- Developing world-leading expertise in defining, measuring and achieving desirable nutritional attributes in crops, livestock, food and beverage products.

4. Walk The Talk

The Presidents' Council can engage in proactive steps to change the culture in which the importance of nutrition is given prominence and focus by all organizations within the Council. Possible activities include:

- Create a standing working group of Presidents' Council organizations focused on health and nutrition to enable Presidents' Council members to co-ordinate efforts and financially support combined outreach programs.
- Feature relevant stories about nutrition-consciousness in publications to the organizations' members and place nutrition-related topics on the agenda of annual meeting presentations and other industry events.
- Many organizations have developed a 'local food' emphasis when choosing food to serve on the organizations' premises or at events. Overlay that focus with a nutrition-conscious focus in order to "walk the talk" for a healthy Ontario.

Topical Questions and Answers

Question # 1 -

What is the agricultural production sector doing to improve human nutrition?

As noted in the fundamental principles section of this report, the agriculture and food sector is responsive to consumer needs relayed by the market. As consumers have identified the need for less fat in products they eat, there has been significant work done to reduce the amount of fat in many food products. An excellent example of the role of agriculture relates to the reduction in fat and the increase in lean yield in market hogs in Canada. According to genetic change data presented in the 2014 Annual Report for the Canadian Centre for Swine Improvement Inc., over the period from 2007 to 2013 when key traits were evaluated, there has been a 15% increase in lean yield and 29% reduction in backfat in the evaluation samples. This kind of genetic selection enables consumers to have access to meat that has less fat and is an example of the kind of positive work occurring across many commodities to respond to consumer needs for nutritional attributes.

Question # 2 -

Does processing food have an impact on its healthfulness?

Processing food and beverages are essential steps in their preservation and in ensuring a 12 month supply of safe, healthy food to consumers. Many different technologies are employed including thermal processes, freezing, drying, and fermentation. Packaging is a vital part of processing in order to ensure the safety and integrity of the product.

One of the promising fields of nutrition research relates to optimizing the bioavailability of nutrients in food. Bioavailability is a term used to describe the extent to which the human body is able to absorb and actively utilize nutrients. Research results indicate that processing increases the bioavailability of certain nutrients such as lycopene, the phyto-chemical responsible for the red colour in tomatoes and watermelon.¹ The Food and Agriculture Organization provides this summary concerning how processing relates to the bioavailability of carbohydrates:

“Processing of foods affects carbohydrate and micronutrient content and bioavailability in different ways with either desirable or adverse effects on the nutritional value...The bioavailability of starch is affected dramatically through processing, regarding both rate and extent of

small-intestinal digestibility. This permits optimizing the digestion of starch by choice of raw materials and processing conditions... Processing effects on dietary fibre include solubilization and depolymerization, that can influence physiological effects both in the upper and lower gastrointestinal tract. Formation of resistant starch and use of resistant oligosaccharides as food ingredients provide new opportunities to increase the amount of carbohydrate available for colonic fermentation.”²

A perception held by some consumers that processing food reduces its nutrient value is not accurate. That may be the effect for certain foods as a necessary trade-off to ensure that they can be safely preserved but it is not the case with all food. As a better understanding of how the human digestive tract absorbs nutrients is gained, food processing technologies will adapt to maximize the bioavailability of nutrients.

Question # 3 -

The strategy references that consumption levels of vegetables and fruit are commonly used as marker for measuring healthy eating. Is protein also an essential part of the human diet?

Yes. That is why *Canada's Food Guide* has four food groups, only one of which is vegetables and fruit. A balanced, healthy diet draws on daily food servings from all four groups. The other groups are (a) Grain Products (b) Milk and Alternatives and (c) Meat and Alternatives. Protein can be obtained from all three of these groups. The Dietitians of Canada website elaborates on the vital importance of meat and alternatives in our diet:

Meat and Alternatives provide a variety of essential nutrients including protein, iron, B vitamins and zinc.³

- Protein is a part of every cell in our bodies. Without enough of this essential building block, your body could not maintain or repair itself.
- Iron is important because it carries oxygen to all your body parts. It also helps to prevent anemia that can make you feel tired.

- B Vitamins (e.g. thiamine, riboflavin, niacin, folacin, and vitamins B6 and B12) offer several benefits. For example, vitamin B12 helps keep your nervous system healthy, while thiamine, riboflavin and niacin help your body to use the energy (calories) found in the foods we eat.
- Zinc is needed for proper growth and helps your body fight infections.

While protein is vitally essential in our early years when our bodies are growing, it also has a key role in contributing to our health as we age. While the references below are to US guidelines, the author takes the position, based on his research, that their recommended dietary allowance guidelines underestimate the amount of protein needed by senior adults:

“Body composition changes as people get older. One of the noteworthy alterations is the reduction in total body protein. A decrease in skeletal muscle is the most noticeable manifestation of this change but there is also a reduction in other physiologic proteins such as organ tissue, blood components, and immune bodies as well as declines in total body potassium and water. This contributes to impaired wound healing, loss of skin elasticity, and an inability to fight infection. The recommended dietary allowance (RDA) for adults for protein is 0.8 grams of protein per kilogram of body weight. Protein tissue accounts for 30% of whole-body protein turnover but that rate declines to 20% or less by age 70. The result of this phenomenon is that older adults require more protein/kilogram body weight than do younger adults. Recently, it has become clear that the requirement for exogenous protein is at least 1.0 gram/kilogram body weight. Adequate dietary intake of protein may be more difficult for older adults to obtain. Dietary animal protein is the primary source of high biological value protein, iron, vitamin B(12), folic acid, biotin and other essential nutrients. In fact, egg protein is the standard against which all other proteins are compared. Compared to other high-quality protein sources like meat, poultry and seafood, eggs are the least expensive. The importance of dietary protein cannot be underestimated in the diets of older adults; inadequate protein intake contributes to a decrease in reserve capacity, increased skin fragility, decreased immune function, poorer healing, and longer recuperation from illness.”⁴

Question # 4 -

Will there be a reduction in long-term health care costs, if the Ontario population adopts healthier eating habits?

While there may not be an absolute reduction in costs, the rate of growth in health care costs should be reduced and come more in line with the rate of growth in revenues so that the health care system model becomes more sustainable. The strategy proposes a way to achieve reductions in the cost of drugs by using food and nutrition as an alternative or complementary intervention much more frequently. Other recommendations, such as those in the *Institute for Competitiveness and Prosperity's Working Paper #20*, could also positively impact the cost of delivering health care.

In addition to cost savings resulting from lower incidence of Type II diabetes and many of the other health issues resulting from an obese and overweight population, there will be an implicit benefit from a population which is better positioned to contribute to the economy by continuing as productive members of the workforce for a longer period of time and as active consumers.

Question # 5 -

What is the difference between a “food swamp” and a “food desert”? Do they exist in Ontario? And, if so, how can they be addressed?

A food desert refers to areas where vulnerable populations have poor geographic access to nutritious food. A food swamp refers to areas of low socioeconomic status with high geographic access to non-nutritious food sources. Most of the Canadian literature published to date shows associations between the food environment and diet-related outcomes, even after adjusting for important confounding variables.

In the academic literature, there is not much evidence for the widespread existence of food deserts in Canada but there is evidence for the existence of food swamps

The review of Canadian community food assessments and the key informant interviews showed that food deserts may be more common than has yet been identified in the academic literature.

Food swamps, neighbourhoods where sources of high-fat, high-calorie foods were plentiful, were fairly consistently identified in the community food assessments, and may be more important than food deserts in influencing residents' diets.

Currently, there is a lack of information about food environments in remote northern communities. This is a significant research gap because rates of food insecurity and diet-related chronic diseases are much higher in these communities than elsewhere in Canada. There are many food environment assessments underway in Canada. Community-university partnerships can be an ideal way to conduct research that can be used for policy and program development. The research uncovered two initiatives that have been undertaken to address the 'food swamp' issue:

Toronto's Healthy Corner Stores Project

Healthy Corner Stores is an important project for Toronto Public Health. Research shows that proximity to convenience stores has a negative effect on health. If people don't have transportation to supermarkets they buy food at convenience stores. The Healthy Corner Stores project in Toronto looked at similar successful projects in Baltimore, Washington DC, New York City and Philadelphia. In Toronto there are nearly 2,000 convenience stores with an estimated 1.5 – 2 million linear feet of shelf space.

The Food Trust's Pennsylvania Fresh Food Financing Initiative (FFFI)

The Food Trust's Pennsylvania Fresh Food Financing Initiative (FFFI) aims to improve food access to underserved areas – both rural and urban. In 2004, legislation was passed to create an economic infrastructure for the FFFI loan/grant program through a public-private partnership (PPP) to help build new supermarkets and refurbish existing ones to offer a full selection of fresh foods.

In four years, the FFFI funded more than 83 projects across Pennsylvania, some with major national supermarket chains and other with smaller, independently operated stores. These projects have created or retained about 5,000 jobs and improved the availability of a variety of healthy foods in the community. FFFI has leveraged the initial \$30 million funding pool to \$120 million.⁵

Question # 6 -

How much does government spend on health promotion related to food and nutrition?

The actual spending for health promotion in 2013/2014 in Ontario was \$352,860,618 with the following description, "The Health Promotion Program works with its partners to deliver effective and accountable programs and services that contribute to the long-term wellness of Ontarians. The program provides tools and supports that advance the government's health promotion objectives through the implementation of the following priorities: Promoting Health and Wellness; Preventing Disease, Injury and Addiction; Smoke-Free Ontario Strategy; Nutrition and Healthy Eating; and Partnership Support for Healthy Communities."⁶ Of the total amount of spending noted above, \$12,440,567 relates to operating expenses such as salaries, services and travel. The balance is comprised of transfer payments for which the following breakdown is provided:

Official Local Health Agencies – Health Promotion	264,361,542
➤ Nutrition/Healthy Eating	9,634,512
Prevent Disease, Injury and Addiction	16,430,702
Healthy Communities Fund	6,734,238
Local Capacity and Co-ordination	1,079,000
Smoke-Free Ontario	42,180,057
Total	340,420,051

Question # 7 -

Is there opportunity to promote and increase the role of nutrition for better health prevention and maintenance?

Two primary indicators of the health of the Ontario population are the obese and overweight population, especially youth, and the incidence of Type II diabetes. As both of these have a relationship to food, nutrition and diet, there is a potential opportunity for Ontario's agriculture and food value chain to make a contribution that will lower the prevalence and thereby contribute to a healthier population with longer life spans and higher quality of life.

There is a complex interaction of many factors, such as reduction in physical activity and socio-economic factors, that has led to the increase in individual behaviours that are giving rise to these two negative health risk factors.

According to *the Institute of Competitiveness and Prosperity's Working Paper #20*, "...a basic principle of health care: when only the symptoms are treated and not the underlying conditions, then the patient, in this case the system, will not get any better." Many health conditions that could be addressed by making dietary changes are often treated with drug interventions. Using food and nutrition as a treatment strategy appears to be one area for easing public and private health care costs in Ontario by reducing the need or extent for some routine pharmaceutical interventions.

The website of the Canadian Diabetes Association notes the positive effect of nutrition on the condition,⁷ "It is well documented that nutrition therapy can improve glycemic control".⁸

In our view, the conclusions of *the Institute for Competitiveness and Prosperity in Working Paper #20* did not attach enough importance to the role of nutrition in impacting the health care system and contributing directly to cost savings and improved health status of the population. More analysis and research could be done to investigate the potential benefits in terms of health care costs and higher productivity if more of the population reached healthy body mass levels.

Question # 8 -

How does the issue of local food relate to the health strategy?

Local food is an important issue. The Presidents' Council is developing its comprehensive strategy around three pillars: (1) economic growth (2) health and (3) sustainability. The issue of local food will be covered as part of sustainability since it relates to reducing the carbon footprint associated with transporting food to distant markets. The report authors are not aware of significant research investigating the extent to which locally grown food has higher level of nutrients and the factors responsible.

Question # 9 -

Which organizations are members of the Presidents' Council?

The Council's membership currently represents 35 very diverse agriculture and food groups.

- Agri-Technology Commercialization Centre
- Bean Growers of Ontario
- Beef Farmers of Ontario
- Bioindustrial Innovation Canada
- Chicken Farmers of Ontario
- Christian Farmers' Federation of Ontario
- College of Business and Economics, University of Guelph
- Dairy Farmers of Ontario
- Egg Farmers of Ontario
- Farm and Food Care Ontario
- Food and Beverage Ontario
- Food and Consumer Products of Canada
- Ginseng Ontario
- Grain Farmers of Ontario
- Grape Growers of Ontario
- Flowers Canada (Ontario)
- Ontario Agriculture College, University of Guelph
- Ontario Agri Business Association
- Ontario Agri-Food Education Inc.
- Ontario Apple Growers
- Ontario Broiler Hatching Egg and Chick Commission
- Ontario Canola Growers' Association
- Ontario Federation of Agriculture
- Ontario Fruit & Vegetable Growers' Association
- Ontario Greenhouse Vegetable Growers
- Ontario Maple Syrup Producers Association
- Ontario Pork
- Ontario Potato Board
- Ontario Processing Vegetable Growers
- Ontario Sheep Marketing Agency
- Ontario Tender Fruit Producers Marketing Board
- Ontario Veal
- Organic Council of Ontario
- Turkey Farmers of Ontario
- Union des cultivateurs-franco-ontariens

1. See, for example, Stability of Lycopene During Food Processing and Storage, Food Ingredients Brasil No. 5 2008 at <http://www.revista-fi.com/materias/76.pdf>. This report, in turn, references a number of original research studies.
2. <http://www.fao.org/docrep/w8079e/w8079e0j.htm>, Effects of Food Processing on Dietary Carbohydrates, Food and Agricultural Organization of the United Nations
3. <http://www.dietitians.ca/Nutrition-Resources-A-Z/Factsheets/Grains/Meat-and-Alternatives.aspx> (October 2012)
4. Chernoff, R., Journal of the American College of Nutrition, December 2004, (abstract) http://www.ncbi.nlm.nih.gov/pubmed?term=Chernoff%20R%5BAuthor%5D&cauthor=true&cauthor_uid=15640517
5. Centers for Disease Control and Prevention, 2010.
6. PUBLIC ACCOUNTS, 2013-2014, MINISTRY OF HEALTH AND LONG-TERM CARE, p. 2-254
7. <http://guidelines.diabetes.ca/Browse/Chapter11>
8. J.G. Pastors H. Warshaw A. Daly The evidence for the effectiveness of medical nutrition therapy in diabetes management Diabetes Care 25 2002 608 613

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1. Healthy Kids Panel, Ontario Ministry of Health and Long Term Care
2. Tracking Nutrition Trends 2013, Canadian Foundation for Dietetic Research
3. Canadian Community Health Survey, Statistics Canada
4. 2010 US Foreign Agricultural Service document about Trends in Canadian Food Market
5. Ontario's Food and Beverage Processing Industry Strategy: The NEW Engine of Ontario's Economy, October 2013, Alliance of Ontario Food Processors
6. ECONOMIC IMPACT STUDY REPORT: Ontario Food and Beverage Processing Sector, Alliance of Ontario Food Processors, 2012
7. A New Menu for Ontario's Food Economy, Martin Prosperity Institute
8. Ontario Ministry of Agriculture, Food and Rural Affairs, Research and Innovation Branch - Examples of how research is satisfying consumer needs and creating markets for new products.
9. Developing a Framework for a Canadian Food Strategy, Conference Board of Canada
10. Towards a National Food Strategy, Canadian Federation of Agriculture
11. Ontario Food and Nutrition Strategy, Ontario Collaborative Group on Healthy Eating and Physical Activity
12. Measuring the Food Environment in Canada, Health Canada 2013
13. Health and Wellness Trends for Canada and the World 2011, Agriculture and Agri-Food Canada
14. Nutrition and Food Quality Attitudes by Region 2013, NPD Group
15. Building Better Health Care, Policy Opportunities for Ontario, Institute for Competitiveness and Prosperity, Working Paper # 20

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