

# ADDRESSING OBESITY IN CANADA

## A Think Tank on Selected Policy Research Priorities

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# EXECUTIVE SUMMARY

Obesity is a health issue of epidemic proportion in Canada. Six organizations that support research invited approximately one hundred individuals from widely varying backgrounds to participate in a two-day Think Tank to help identify and explore key policy questions and concerns that could be informed through a targeted research agenda.

The Think Tank was structured to be a springboard for ideas that could direct future research toward innovations in the fight against obesity. Discussions focused on enhancing the policy-related evidence base in two important dimensions: economic policy and the built environment.

**Obesity results from complex inter-related factors.** Participants identified an overwhelming number of factors that could be, or are known to be, associated with obesity. Factors ranging from the availability of fresh food to municipal zoning bylaws to profitability of new food products were discussed. What is much less clear is the precise nature of the relationship between the various factors and obesity and health related outcomes; or the range of factors that influence (either making it worse or lessening the effect of) these relationships.

**Policy research is a unique field of study.** Policy-relevant research answers questions about why something should be done, what should be done, and how it should be done. The full spectrum of policy-relevant research responds to various filters that are used in making decisions about policy; e.g., the magnitude of the problem, the effectiveness of the solution, and the cost and feasibility of implementation. A central consideration in policy research is the very tight coupling between the research, itself and the “real life”, complex context within which it exists.

**Significant gaps in knowledge exist.** Priority areas for future, policy-relevant research were identified. Two key themes that emerged throughout the discussions in both policy areas (economics and the built environment) included the centrality of a focus on children, and the importance of intervention research. Intervention research includes planned interventions and their evaluation, as well as, the evaluation of existing “natural experiments”.

With respect to the Built Environment, research priorities included clarification of the links between the built environment and behaviours, social determinants, and health outcomes; and increased understanding of barriers and enablers in the built environment and their impact on health outcomes related to obesity.

Economic policy-oriented research priorities included increasing the knowledge base related to creating children-, youth-, and adolescent-friendly environments that will facilitate healthy living; exploring the implications of economic incentives and disincentives on obesity and health outcomes; and understanding the role of the agri-food sector in contributing to, and addressing obesity in Canada.

**Policy-relevant research to support efforts to reduce obesity requires specific approaches.** Several general themes emerged as suggested mechanisms and approaches for addressing policy questions.

**Multiple approaches** are required to address policy-relevant questions related to obesity. Among the methods mentioned were action research, econometrics, historiography, case studies, comparative policy analysis, surveillance, and feasibility analysis.

**Learn from the past:** Establish baseline practices on a national and international level to analyze what works and what doesn't. Conduct environmental scans, database analyses, policy inventories, and syntheses of literature. Consider parallel evidence from other initiatives (and other countries), such as tobacco use prevention.

**Learn in the present:** Build on existing data through surveillance, qualitative and historical methods, inter-disciplinary and inter-sectoral approaches, and comparative analysis. Most importantly, learn from actions taken now, whether they are “natural experiments”, where a community or agency decided to implement a particular policy or intervention, or new, planned interventions within a research and evaluation component.

**Create linkages** between the various sectors and perspectives (e.g., research, community, policy)—engage those who could enable change in various communities, and include the expectation for knowledge exchange within projects.

**It is critical to engage a broad range of stakeholders with varying interests in building and understanding the knowledge base.** Participants recognized the value of bringing the various sectors together and talking about obesity across various disciplines—they used the term “horizontality” to describe this phenomenon. Continuing opportunities to establish foundations for collaboration across disciplines and across sectors was deemed critical.

The range of stakeholders involved in this Think Tank (e.g., researchers, agri-food, food service industry representatives, non-governmental organizations, policy-makers, property developers) was an important beginning in bringing different perspectives to the discussion. The community of interest needs to be expanded even further. Participants noted the importance of continuing opportunities to establish foundations for collaboration across disciplines and across sectors. This Think Tank was an important beginning, but was only that. There is much to be done, and participants reflected considerable energy for moving ahead.



# SETTING THE STAGE

## Introduction

Stephen Samis, Director of Health Policy at the Heart and Stroke Foundation of Canada and chair of the Think Tank Planning Committee, welcomed participants and acknowledged the importance of having representatives from diverse sectors and backgrounds address this important health issue. He acknowledged that it is simply not enough to “exhort Canadians to eat well and be physically active”. If that were enough, there would be no need for this Think Tank, and two-thirds of our population would not be overweight or obese. He acknowledged the support of the Think Tank funding partners (the Canadian Institutes of Health Research, the Canadian Institute for Health Information’s Canadian Population Health Initiative and the Public Health Agency of Canada) and reinforced the sponsoring organizations’ interest in improving the understanding of what we don’t know and stimulating action on the things we do know.

In the opening Keynote Address, Dr. Kim Raine recalled a comment from Dr. Diane Finegood, Scientific Director of the CIHR Institute of Nutrition, Metabolism and Diabetes, that tackling the obesity question in Canada wasn’t rocket science—it was harder than rocket science. That statement was supported during two days of discussion involving approximately 100 stakeholders: key researchers, policy-makers, and representatives of non-governmental organizations working in health and other sectors relevant to obesity. (See Appendix 1 for a list of participants.) The ultimate goal of the workshop was to help us understand better the effectiveness of policy interventions aimed at reducing obesity in Canada by focusing on two important areas: economic-policy and the built environment.

Participants identified gaps in our knowledge (or our use of existing knowledge) and critical policy questions related to obesity, and discussed potential approaches to dealing with those gaps through research. The foci of discussion were economic interventions to encourage healthy eating & physical activity and the relationship between the built environment, physical activity, and obesity. These two areas had been chosen by the Planning Committee as embodying key policy questions relating to obesity for which additional research and evidence were required in the Canadian context.

The workshop was funded by the Heart and Stroke Foundation of Canada, three of the Canadian Institutes of Health Research (Nutrition, Metabolism and Diabetes; Population and Public Health; Institute of Gender and Health), the Canadian Institute for Health Information (through its Canadian Population Health Initiative), and the Public Health Agency of Canada. A committee comprising representatives of those organizations and other key groups involved in addressing the obesity issue planned, organized, and helped facilitate the Think Tank. (See Appendix 3 for members of the Planning Committee.) The sponsoring agencies are involved in a wide range of activities related to obesity, and all have identified obesity as a priority.

## Objectives of the Think Tank

1. Define policy-relevant research in the context of obesity.
2. Identify and prioritize knowledge gaps that prevent policy-makers and decision-makers from initiating practical policy changes that will impact obesity in Canada.
3. Enhance understanding of policy-relevant research.
4. Identify gaps in research capacity (e.g., personnel, data sources) in Canada.

To supplement the considerable experience and expertise of those who participated in the Think Tank, two literature reviews were prepared as background material for participants. These papers provided a summary of the state of current knowledge related to (a) the built environment and obesity<sup>1</sup>, and (b) economic policies and obesity<sup>2</sup>.

## Overview: Obesity in Canada

*Kim Raine, author of the recent report published by the Canadian Population Health Initiative titled "Overweight and Obesity in Canada" provided highlights. Dr. Raine is the director of the Centre for Health Promotion Studies and a Professor in the Department of Agricultural, Food and Nutritional Science at the University of Alberta in Edmonton.*

Dr. Raine's main message was that obesity is an epidemic with major health and social consequences. The economic impact of obesity in Canada is estimated to be \$1.8 billion per year, and indirect costs, which involve decreased productivity, disability, and absenteeism, bring the total cost up to \$4 billion annually.

Compelling evidence shows that the incidence of obesity has increased dramatically over the past 30 years, and that certain groups are disproportionately affected—for example, the socio-economically disadvantaged, children, and members of First Nations. Among lower-income people, increased access to fast foods with higher calorie-to-dollar ratios may add to obesity risk. The World Health Organization cites heavy marketing of energy-dense foods and fast-food outlets as probable contributors to rising obesity rates. Dr Raine noted that Transportation policies, practices and urban design that discourage rather than facilitates active living, as well as, the sedentary nature of office work are a few of the factors that result in an increase in obesity in this country.

Dr. Raine presented results of some promising new Canadian research. An intervention study in Nova Scotia, for instance, showed that it is possible to reduce the prevalence of obesity and overweight by implementing a comprehensive school health program. This successful intervention has also been the impetus for policy change, as the program will be expanded to all schools within the province. She added that more practice-based evidence was needed and cautioned that if we look at recent tobacco reduction initiatives, it becomes obvious that evidence of harm is not enough to bring about change. We have to move away from individual responsibility for obesity, look for collective action, and work with industry. Because the determinants of obesity are embedded in contexts of changing environments, there is a need for upstream efforts to promote healthy weights at the various ecological levels—institutional, community, and in public policy.

<sup>1</sup> Frank, L. & Niece, J. 2005. "Obesity Relationships with Community Design: A Review of the Current Evidence Base". Prepared for the Heart and Stroke Foundation of Canada, Ottawa, Canada.

<sup>2</sup> Rutledge, K. & Raine, K. 2005. "Economic Incentives and Disincentives for Healthy Eating and Physical Activity: A Summary of Evidence". Prepared for the Heart and Stroke Foundation of Canada, Ottawa, Canada.

# > THE PANEL DISCUSSIONS

## The “built environment”

Karen Dufton from Infrastructure Canada chaired a panel that included four other individuals with specific interest and broad experience in the built environment—which Dr. Larry Frank has defined as “the arrangement of activities or land uses within urban settings, and the nature of the physical connections between the places where we live, work, and play”. Because of the unique accomplishments in the British Columbia lower mainland, three of the panelists were from that area. Glen Murray, a former mayor of Winnipeg, offered a balancing perspective.

### > Larry Frank: A researcher’s perspective

*Dr. Frank arrived from the Georgia Institute of Technology last year to take up the University of British Columbia's newly established J. Armand Bombardier Chair in Sustainable Transportation. His research focuses on the links between public health and land use, travel choices, the environment, land development, and transportation investment.*

Dr. Frank discussed various characteristics of the built environment that research suggests have impact on health. He highlighted the results of research findings showing that built environments which are developed with attention to the principles of proximity, land-use mix, and connectivity are conducive to healthier, more active communities. The benefits of walking as a means of transportation include decreased exposure to pollution and decreased obesity rates. Strategies for increasing the walkability of communities include placing amenities and recreation facilities within walking distance, and providing wider sidewalks and longer crossing lights.

Nevertheless, research that examines the link between the built environment and obesity is still very new; if policy-makers are to implement this research, it must be strengthened. Dr. Frank noted that research should also examine transportation, air quality, energy consumption, and global warming, as well as land-use development. He emphasized the benefits of talking across disciplines when investigating obesity.

### > Larry Beasley: A municipal planning perspective

*Larry Beasley is co-director of planning for the City of Vancouver. Among his recent initiatives are new land-use and transportation plans that are dramatically reshaping Vancouver's inner city. In 1996, the United Nations recognized Mr. Beasley's work as one of the “world's 100 best planning practices”, and the Royal Architectural Institute of Canada conferred on him its 2003 Medal of Excellence as “Advocate for Architecture”. Mr. Beasley is also a professor at the University of British Columbia.*

As a practitioner, Mr. Beasley set out to inform researchers on what he needs in his work. He introduced the notion “New Urbanism”, an urban-development strategy he is implementing in Vancouver. New Urbanism aims to “create places people want to be”, to generate culture, business, a sense of beauty, and memories in humane cities; it is about diversity, social mix, car alternatives, transit cycling, housing choices, proximity, and connectivity. There is a need to make cities safe, attractive, and conducive to creativity, while being environmentally friendly and fostering vitality and spontaneous energy. By moving away from conformity, we should promote health and personal activity.

All these characteristics are essential to provide alternatives to the suburb, which represents the most dramatic form of a living arrangement that is destructive to the environment and health. Mr. Beasley noted that he is in the business of enticement: he aims to entice inhabitants to stay out of suburbs and live in the city. What he needs to support this type of development is reliable research, as well as solid proposals for applied initiatives from trusted sources. Researchers should form partnerships with urban experts to influence politicians, presenting information in an accessible manner and communicating it to popular media, planners, and decision-makers.

### > **Michael Geller: A developer's perspective**

*Michael Geller is a registered architect, planner, and property developer with 35 years of experience in the public and private sectors. During the past five years, he has served as president and CEO of the SFU Community Trust overseeing the planning and development of UniverCity, a new community on approximately 200 acres of land adjacent to Simon Fraser University's Burnaby campus.*

Mr. Geller presented the Burnaby community of UniverCity, which is designed to combine leading research with exemplary development to create a healthy community. The community offers a variety of housing choices, is connected by pedestrian walkways, has amenities located nearby, and features a traditional street pattern where narrower streets increase the perception of safety. He noted that sidewalk width, the "furniture" of the street, speed limits, the relationship between buildings, and car-unfriendly measures all increase aesthetic appeal and facilitate walking in communities.

He pointed out that engineers, architects, and fire marshals often make crucial decisions about neighbourhood development in the process of creating and enforcing zoning codes; however, zoning requirements have actually had detrimental effects on the healthfulness of communities. It is essential that we examine zoning bylaws and consider their implications for community health. Health-impact assessments should become the norm for development projects.

### > **Glen Murray: A municipal government perspective**

*Glen Murray is research associate for the Centre for Urban and Community Studies and a visiting scholar and urban policy coordinator at the University of Toronto. He is a former mayor of Winnipeg, best known for his vision to build culturally dynamic urban centres. His vision for a New Deal for Cities started with the formation of the C5, a coalition of five Canadian cities. It was during that time that he became the first chair of the Big City Mayors Caucus 2002.*

Mr. Murray pointed to various societal trends which have collectively contributed to increasing obesity rates and environmental pollution. Transportation and urban-development practices that facilitate sprawl create an automobile-dependant and inactive population. Because of current property-tax policies, it is more expensive to live in the city than to move to the suburbs; thus, taxes inadvertently subsidize those who live in the suburbs and are car-dependant, further encouraging urban sprawl. Built environments should make walking and public transit a viable option and have disincentives in place for driving. To encourage physical activity, we need to consider how current practices, such as box stores and uniform franchise restaurants, contribute to a "geography of nowhere". We should promote development that brings back a sense of authenticity and uniqueness to our environments.

Mr. Murray suggested that greater municipal autonomy can contribute to urban-development practices that are healthier for people and the environment. He pointed out that Vancouver has more ability than other cities to place restriction on development because the City collects and retains more revenues than other municipalities, which increases its autonomy.

With respect to research evidence, Mr. Murray advised that rather than increasing efforts to create new knowledge, we should concentrate on translating existing research into solutions and breaking down academic credentializing, or the "culture of professions".

Speaking from his experience as a former mayor, Mr. Murray added that changes in government can bring re-interpretation of legislation that can cause excellent past decisions to be overruled. Where there is a lack of political will to match rhetoric, community members and activists, a participatory approach and advocacy, and citizenship become very important.

## > Karen Dufton: A statistical perspective

*Karen Dufton is the Director of Communications at Infrastructure Canada.*

Karen Dufton spoke about the federal government's "New Deal for Cities". She also presented the findings of a Statistics Canada research project which examined obesity rates in 27 Canadian cities. The research showed that Vancouver and Victoria had the lowest obesity and commuting rates; further, Victoria's residents had the longest lifespan in the country.

Ms. Dufton also presented key findings of a survey on public perception of the built environment. Respondents generally reported that needs for green space, accessibility, and sports amenities were not met in their communities. They did not prefer compact neighbourhoods, and only 37% saw the reduction of urban sprawl as desirable. Respondents noted that responsibility to address these issues should fall mainly to voluntary organizations and individuals rather than the government.

## "Economic Policies"

Mary Bush, Director General, Health Canada's Office of Nutrition Policy and Planning, Chaired a spirited panel discussion focusing on economic aspects from the perspectives of four individuals who brought differing experiences and backgrounds to the topic.

## > Sean Cash: A researcher's perspective

*Dr. Cash is an Assistant Professor in Health and Environmental Economics with the Department of Rural Economy at the University of Alberta.*

Dr. Cash discussed the impact of economic incentives and disincentives on health outcomes. He cited various examples of economic interventions that have been tried or proposed to address obesity. Some of these interventions included giving tax breaks for healthy behaviours, such as obesity treatments or health-club memberships, and levying higher taxes on unhealthy foods. He explained that consumers respond to price; and therefore, increasing the costs for certain items will impact their consumption. However, he cautioned we have to recognize that small price changes have small impacts; further, there is insufficient evidence regarding the impact of large price changes on consumer behaviour.

Dr. Cash noted that health policies should not be created in a vacuum. The effects of taxing policies on lower socio-economic families must be considered. We must also contemplate how policies involving food incentives and disincentives interact with agricultural policies and what the outcome of this interface is. Unfortunately, he maintained that the health and agricultural sectors are not collaborating sufficiently at this time to determine how their policies interact. Dr. Cash suggested that a health filter should be in place on all policy decisions to ensure that the health effects of policies are given priority in all sectors and decisions.

## > Gabriel Sekaly: A public policy perspective

*Mr. Sekaly has served the Ontario government for over 16 years. In the last five years, he has been the Assistant Deputy Minister of Finance in the Fiscal and Financial Policy Division and latterly the Associate Deputy Minister of Finance in the province of Ontario. He is a Professor in the School of Policy Studies at Queen's University, where he is the Amethyst Fellow for 2005-2006. Currently, Mr. Sekaly is conducting research in the field of public policy, specifically on accountability, transparency, and modern controllership in the public service.*

Speaking from the perspective of a senior government executive, Mr. Sekaly addressed the rationale and possible roles for government in the reduction of obesity. He highlighted that obesity has devastating impacts on economic growth; Canada spent \$1.8 billion in 1997 in healthcare expenditures to handle the impacts of obesity, and the annual figure is now closer to \$3.2 billion and growing. Based on American studies, it is estimated that 20% of the US healthcare budget will be consumed by the impact of obesity. He noted that the reduction in the population's

ability to work because of obesity-related health issues will have devastating impact on our economy and healthcare. This is why, he said, government intervention is necessary, although the most appropriate means is still unclear.

Mr. Sekaly proposed possible roles that government could play to decrease obesity rates, such as addressing energy output through infrastructure (recreational facilities), education (school and social marketing), and taxes (incentives and disincentives). To address energy input, some suggested strategies included food labelling, taxation (e.g., a “fat tax”), and pricing controls. According to research, the subsidizing of healthy foods is a more promising strategy than taxing fat foods—if one could actually define what a fat food is. Nevertheless, Mr. Sekaly emphasized that obesity is a complex issue, and that proposed solutions must have comprehensive action plans that include advertising campaigns, community development, food labelling, and tax incentives. Since the government links outcomes to money invested, these proposed solutions must be supported by evidence and evaluated to gauge their effects.

### > **Gaétan Lussier: A non-profit perspective**

*In 2004, Gaétan Lussier was requested by the Federal Government to create the Canadian Agri-Food Policy Institute, where he is presently Chairman of the Board. This Institute is dedicated to identifying future issues and opportunities affecting the future of the Canadian agri-food economy. Mr. Lussier has had a long and influential career as a senior public servant with the Government of Canada as the Deputy Minister of Agriculture Canada and of Employment and Immigration Canada, as well as President of the Unemployment Insurance Commission. He was also a Deputy Minister of Agriculture for the Government of Quebec.*

Mr. Lussier’s main message was the need for policy to consider the links between agriculture, food, health, and society. This connection is missing in existing policies, despite the fact that agriculture has the potential to apply promising solutions to reduce obesity. Mr. Lussier noted that a fundamental change must occur in our policy frameworks. He suggested a “horizontal policy approach”, where health and agri-food are part of a wider policy framework; for example, we can explore the production of healthier agri-foods as a strategy to decrease obesity rates.

Mr. Lussier also emphasized that prevention and education must be at the forefront of initiatives, and that partnerships should not be limited to government sectors. He highlighted the potential key role of the Canadian farming community in obesity-reduction strategies where they could collaborate with scientists to help develop and produce healthier foods.

### > **Sherry MacLauchlan: An industry perspective**

*Sherry MacLauchlan is the Manager of Government Relations for McDonald’s Restaurants of Canada.*

Ms. MacLauchlan acknowledged that McDonald’s is usually at the centre of the obesity debate; however, she was at the Think Tank because McDonald’s wants to be part of the solution. She noted how McDonald’s has already made healthy changes to its menus, and want to do more. She indicated that some of these healthier choices are subsidized by McDonald’s, as they bring in less profit than some other menu offerings.

Ms. MacLauchlan noted that only 1 in 10 meals is eaten outside of the home; thus, fast food takes a disproportionate blame for the obesity issue. The relationship between calories and cost is also complex, since pricing is based on input; perishables are costlier since they require packaging and care in transportation.

She added that the Canada Food Guide says all foods can be healthy; all we know is that calorie imbalance causes obesity. We need more research on what policies are needed to change behaviours. In her company’s experience, more choices do not lead to different choices. McDonald’s wants to know how it can help consumers be healthier, and how it can partake in policy-making. Regarding the proposed taxation of unhealthy foods, Ms. MacLauchlan noted that restaurant food is already taxed more than food purchased in other venues. She suggested that it would be impossibly complex to determine what foods should be taxed, and at what levels, since items high in fat may have other nutrients, while some low-fat items may have no nutritional value. She concluded that the industry sincerely wants to be involved in addressing obesity—it makes business sense to give consumers what they want.

# > POLICY-RELEVANT RESEARCH

*Barb Riley is a scientist at the Centre for Behavioural Research and Program Evaluation at the University of Waterloo. She is the first recipient of the Dr. Andres Petrasovits Fellowship Award in Cardiovascular Health Policy Research.*

Dr. Riley built on the morning's discussions about real-world problems and real-world solutions to talk about "real-world evidence". Her main message was that policy-relevant research includes, but is not limited to, evidence about intervention effectiveness. Policy-relevant research answers questions about why something should be done, what should be done, and how it should be done. This full spectrum of policy-relevant research responds to the various filters that are used in making decisions about policy (described in Table 1).

Table 1. Some Filter Criteria for Making Policy Decisions

FILTER CRITERIA	DESCRIPTION
Magnitude and severity of the problem	the societal burden associated with the problem, including health, social, and economic consequences (e.g., mortality, morbidity, PYLL)
Effectiveness of solutions	the degree of certainty that the intervention will achieve desired results/impact, which can be judged by the quality of the evidence, the strength of the program logic, and the sensitivity and certainty of modelling assumptions
Potential side effects	positive or negative consequences of the intervention, such as stigmatization; social capital; traffic congestion; household costs
Feasibility of implementation	the ease of implementing an intervention, considering such factors as the availability of a trained workforce; the strength of the organizations, networks, systems, and leadership involved; existing pilot or demonstration projects
Cost	resources required for development and for ongoing support, including direct (financial) and indirect costs (e.g., human resources)
Sustainability	the durability of the intervention, considering such factors as the extent of environmental or structural change; the level of policy support; and the likelihood that behaviours, practices, attitudes, etc. will become normalized
Acceptability to stakeholders	the degree of acceptance of the intervention by the various stakeholders, including policy-makers, the general public, health professionals, the private sector, and government

Adapted with permission from "Obesity Prevention: A Proposed Framework for Translating Evidence into Action", by B. Swinburn, T. Gill, and S. Kumanyika, 2005, *Obesity Reviews*, 6, p. 23-33.

Dr. Riley also challenged participants to think about a wide variety of research methods for policy-relevant questions (Table 2). She noted that the most underdeveloped, yet most promising methods may be “natural experiments” (naturally occurring opportunities to learn about what works in what context) and experiential evidence.

Notwithstanding these opportunities, some challenges remain; for example, we need to

- ask more research questions that are policy-relevant;
- refine and expand our use of participatory research methods;
- fund more policy-relevant research; and
- align academic incentives with policy-relevant research.

Table 2. Types of Evidence Relevant to Obesity Prevention

EXPERIMENTAL	
Experimental studies	intervention studies where the investigator has control over the allocation and/or timing of interventions; e.g., randomized controlled trials, or non-randomized trials in individuals, settings, or whole communities
Program/policy evaluations	assessment of whether a program or policy meets both its overall aims (outcome) and specific objectives (impact) and how the input and implementation experiences resulted in those changes (process)
EXTRAPOLATED	
Effectiveness analyses	modelled estimates of the likely effectiveness of an intervention, incorporating data or estimates of the program efficacy, program uptake, and (for population effectiveness) population reach
Economic analyses	modelled estimates that incorporate costs (and benefits)—e.g., intervention costs, cost-effectiveness, or cost-utility
Indirect (or assumed) evidence	information/observation which strongly suggests that a specific situation ; e.g., a high and continued investment in food advertising is indirect evidence that the advertising increases sales
EXPERIENCE	
Parallel evidence	evidence applicable to another public health issue using similar strategies (e.g., the role of social marketing in health-related behaviours such as smoking, speeding, sun exposure, or dietary intake), including information about how effectively multiple strategies influence behaviours in a sustainable way (e.g., comprehensive tobacco control programs, or coordinated road-toll reduction campaigns)
Theory and program logic	the rationale and described pathways of effect based on theory and experience; e.g., linking changes in policy to changes in behaviours and energy balance, or ascribing higher levels of certainty of effect to policy strategies like regulation and pricing compared with other strategies such as education
Informed opinion	the considered opinion of experts in a particular field (incorporates “expert” and “lay” knowledge)—e.g., scientists able to peer-review and interpret the scientific literature; or practitioners, stakeholders, or policy-makers able to inform judgments on implementation issues and modelling assumptions

## PRIORITY ISSUES

Workshop participants were divided into 2 broad categories:

1. Economic policies to facilitate health eating and physical activity.
2. The Built Environment and Obesity relationships

Working in small groups, participants were asked to discuss three themes:

1. The means by which policy change could be affected (levers);
2. The areas where evidence is missing;
3. The areas where we have knowledge that could be applied in the policy arena, but is not.

Small discussion groups addressed each area (built environment and economic policies), and at the end of the day they combined their lists for each of the broad areas and prioritized the issues that emerged. Tables 1 and 2 list the highest-ranking issues; (detailed results of the prioritizing process are given in Appendix 4).

The following sections summarize the opinions expressed by participants in the groups. The viewpoints represented were wide-ranging, but every attempt has been made to ensure an accurate reflection of what was said.

# Built environment

With respect to the built environment, discussions focused generally on understanding the links to health outcomes; the importance of intervention research; barriers and enablers to a healthy built environment; and the importance of engaging multiple partners in improving the data related to obesity and the built environment.

Table 3. Top-rated Areas for Attention Related to the Built Environment

Prioritized themes (in order of importance)	TOP THREE ISSUES
Links between built environment, behaviours, and health outcomes	<p>Existing data gaps must be addressed to increase our capacity to measure the impact of the built environment on health. Longitudinal research on such indicators as land use, travel, time use, and quality of life is a priority.</p> <p>There is a need to prove the links between intensity, density, mixed use development, proximity of amenities, street connectivity, and quality of the built environment, and their relationship to health, including obesity.</p> <p>We need to define the various dimensions of the built environment and how these interact with health; further, what policy interventions are needed to increase health outcomes. What changes have already occurred that can be measured for effect?</p>
Intervention research	<p>Intervention research should explore natural experiments; topics should include neighbourhood design and its impact on health.</p> <p>We should build on existing International and Canadian research, pilot studies, and success stories.</p> <p>Research should be contextual and based on local needs.</p>
Barriers and enablers	<p>We must understand what the countervailing forces and resistance to healthy built environments are; e.g., transportation and housing-related investment policies.</p> <p>We should explore barriers to adopting identified solutions.</p> <p>We need to examine the impacts on obesity of existing zoning by-laws, and if possible identify how these by-laws can become a better tool to help reduce obesity.</p>
Engaging partners	<p>Partnerships across different sectors should be engaged to facilitate integrated solutions (e.g., SWAT teams to support communities by sharing best practices from other jurisdictions, champions).</p> <p>Research on the policy-development process related to the built environment should be realized through horizontal and multidisciplinary approaches.</p> <p>Integrated syntheses of work from various stakeholder groups (health, planning, and economy) are needed.</p>

## Economic Policy

The top themes discussed in this area were agriculture, taxation (in fact, all strategies that affect pricing and ability to pay), children, and access to food across various groups and in various settings. Table 4 presents the priority topics that emerged; they turned out to be rather broad in scope, and needed more discussion and refinement in order to provide helpful direction for future, target research to move policy forward in future..

Table 4. Top-rated Areas for Action Related to Economics

Prioritized themes (in order of importance)	TOP THREE ISSUES
Agriculture	<p>We need to understand the impact of agricultural subsidies on food production and supply, as well as cost, and consumption patterns.</p> <p>We must examine the impact of the changes to the price structure of food through both subsidies and taxes.</p> <p>We must seek closer alignment between agri-food and health policies at the federal, provincial and local levels.</p>
Economic interventions	<p>We need to explore the unintended consequences of taxation of food costs and consumption.</p> <p>We must confirm that tax disincentive do not impact on behaviour sufficiently to impact obesity.</p>
Focus on children	<p>Healthy policies for children are of paramount importance.</p>
Access to healthy alternatives (food and physical activity)	<p>We must learn more about the availability of various types of foods and the opportunity to access it across income groups.</p> <p>Closer examination of the Family Food Expenditure Survey is required; we need more current information on food choices through evidence on the effects of tax incentives intended to facilitate healthy eating and physical activity. A new wave of this survey to understand current measures.</p> <p>We need to know if incentives are effective in school, community and workplace settings.</p>

## Day 2

On the second day, small groups were asked to articulate specific policy-relevant questions, the answers to which would be helpful in directing future research. Their point of departure was: "On what types of things could/should research-funding agencies spend resources, in order to have these obesity-related policy-relevant questions addressed?" All groups developed long lists of questions (detailed in Appendix 5), and then went on to suggest potential approaches to having those questions answered.

# > THE POLICY QUESTIONS

## Built environment

Research questions in this discussion area aimed to clarify the link between the built environment, behaviours, social determinants, and health outcomes. This related to the theme of understanding barriers and enablers in the built environment and their impact on health outcomes. For example, one research question asked what the role of the built environment was in relation to the availability of affordable healthy food, income, schools, and opportunities for physical activity. A recurring issue with respect to enablers and barriers concerned the role of zoning bylaws and their impact on the built environment and, in turn, behaviours and health.

A number of questions concentrated on investigations of interventions and “natural experiments”, one example being the Federal Government’s planned investment in strengthening community infrastructure. It was suggested that research should explore the impact of the same intervention in different contexts. Other questions addressed the issue of engaging partners across sectors and environmental disciplines. Table 5 presents prioritized policy questions arising from the built environment working groups.

Table 5. Policy Questions Related to the Built Environment

KEY THEME	PRIORITIZED QUESTIONS
Understanding link between the built environment and health outcomes	What can we learn, by examining existing data, about how health behaviours, attitudes and outcomes, and social determinants are linked to the built environment?
Intervention research	Does the same intervention produce the same effects in different contexts?
Understanding barriers and enablers	What are the factors that enable and those that pose challenges to a healthy built environment (including community capacity)?
	What can we learn from examining the process of policy development and implementation with respect to the built environment?
	What is the potential return on certain types of infrastructure investments?
Engaging partners	What are elements of successful intersectoral collaboration? How can partners best be engaged across sectors and disciplines?
	What can be achieved by building more unlikely and non-traditional partnerships; in particular, by increasing links between research, planning, policy, and health-practitioner communities?
	What types of relationships are needed, and at what stage of the research process, to best ensure that research results are used in policy and practice settings?

## Economic Policy

On a general level, the policy questions were divided into three main themes concerning children, economic interventions, and agri-food. Participants recommended various questions which would guide research to explore implications of economic incentives and disincentives on obesity and health outcomes related to diet and wellness. This would also address current gaps in knowledge about the relationship between effective and less effective economic intervention, such as taxation.

An overarching theme in the sessions was the importance of research specific to children. Participants proposed that research should explore how we can create child-, youth-, and adolescent-friendly environments that will facilitate healthy living across all determinants of health—including social, economic, geographical, and cultural. It was suggested that a “children’s health” filter could be applied across sectors at a macro level.

Another major theme was the intersection of agri-food and health policies, which prompted a number of research questions necessary to explore this relationship. For example, how do policy/programs and regulations along the food chain contribute to the development of an obesogenic environment? Further, how can we retool agri-food policies and subsidies to meet healthy dietary requirements? Table 6 shows some of the prioritized policy questions deriving from the economic policy working groups. (Appendix 5 provides a complete list.)

Table 6. Economics Policy Questions

KEY THEME	PRIORITIZED QUESTIONS
Children	<p>How do we create environments for children, youth, and adolescents that will facilitate healthy living across all determinants of health (e.g., social, geographical, cultural)?</p> <p>What are the current policies and practices—government and non-government—with regard to children’s environments?</p>
Access to healthy alternatives (food and physical activity)	<p>How do policies/programs and regulations along the food chain contribute to the development of an obesogenic environment?</p> <p>How do we retool agri-food policies and subsidies to meet dietary requirements? What kind of impact can we expect of such interventions (international trade policy implications, health, economic, and environmental benefits and risks)?</p> <p>What is the cost/impact of comprehensive school health programs? What is their impact?</p>
Economic interventions	<p>What are the implications of incentives and disincentives on obesity and health outcomes related to diet and wellness?</p> <p>How do we implement needed long-term interventions to determine what is effective or ineffective? For example, how can we affect overall energy intake and expenditure, and what types of incentives and disincentives are most effective (e.g., tax vs. subsidy vs. education, a non-economic method)?</p>



## MECHANISMS AND APPROACHES FOR ADDRESSING POLICY QUESTIONS

Participants were asked for suggestions about “what to do” to address the policy-relevant questions from a research perspective, and also what characteristics those approaches should have. Although mechanisms and approaches were discussed separately for economic policy and the built environment, there were some general themes which emerged both from the small group reports and from plenary discussions. Several common themes emerged: the need to consider existing data; the importance of intervention research; the need for a variety of methods; the need to involve a wide range of groups in future work; and the importance of knowledge transfer and exchange. A summary of these themes is given below, and details emerging from the various working sessions are included in Appendix 6. Several issues requiring further discussion were identified.

### Analysis of existing data and evidence

Groups looking at the built environment and economic policy issues recommended that existing research and data should be explored to address the aforementioned policy questions for each area. They recognized a need to establish baseline practices on a national and international level to analyze “what works and what doesn’t”. Environmental scans, database analyses, policy inventory, and syntheses of literature were suggested approaches. To this end, it was recommended that that we should consider parallel evidence from alcohol-use interventions, recycling programs, seat-belt promotion, and tobacco initiatives (so-called “extrapolation evidence”, in Dr. Riley’s framework).

In order to build on existing research, participants recommended such strategies as surveillance, qualitative and historical data-collection methods, interdisciplinary and intersectoral approaches, and comparative analysis. A major realization in both areas was the need to explore the intended and unintended impact of policies—which explains why historical research was seen as necessary.

## Intervention research

A predominant theme within the discussions was that of “act and learn”. It was acknowledged that we would rarely have enough evidence a priori to plan interventions for various subgroups and focal areas of concern. Intervention research includes consideration of natural experiments, where a community or agency decides to implement a particular policy (which researchers can then follow and evaluate), as well as interventions that are planned and implemented intentionally for the purpose of adding to our body of knowledge. The call for intervention research (which may include action research) was tempered by the caution that we should not abandon the quest for research that is somewhat “upstream”; in other words, research that may not seem relevant in the short term, but that, at a later date, may yield important knowledge upon which to base intervention research, or that may help us to understand why interventions are or are not effective.

## Varied methods

The discussions made it clear that many methods are required to address policy-relevant questions related to obesity, including action research, econometrics, historiography, case studies, comparative-policy analysis, and surveillance. Feasibility analysis was suggested as an important mechanism for establishing the cost-benefit of particular interventions. These methods, of course, are more or less relevant depending on the type of question being addressed. A predominant theme (which would involve econometric and epidemiological methods) was the exploration of the nature and extent of links between various dimensions of interest (specific aspects of the built environment, for instance) and health behaviours (food availability, perhaps, or physical activity such as walking).

## Horizontality: Involvement of broad groups

Those present acknowledged the essential nature of involving a variety of groups who could be part of the solution in shaping the policy-research agenda and projects. Building on the example demonstrated in this Think Tank, there was a call for continued engagement of multiple sectors that needed to be involved in obesity solutions; in fact, some groups were identified who were very important but not involved in this workshop. There was also a suggestion that rather than just inviting individuals from other sectors to meetings arranged by the health community, those from the health sector could be more assertive about engaging other communities of interest (such as policy-oriented groups from the fields of municipal planning or agriculture and food).

In the built environment area, for example, “buy-in” from policy-implementers, engineers, and planners was seen as paramount. A number of organizations that had been invited to the Think Tank did not attend, and they need to be engaged. Among these are the Federation of Canadian Municipalities (FCM), the Canadian Institute of Planners (CIP), the Urban Development Institute (UDI), and the Canadian Homebuilders Association (CHBA).

Participants in the economics area also saw intersectoral partnerships as key to moving forward. They explored the involvement of the public, communities, policy-makers, and a variety of research disciplines, as well as industry.

## Knowledge transfer and exchange

Knowledge transfer and exchange was mentioned as being important, but not enough specifics were suggested about how to achieve this. One strategy recommended was to engage those who could enable change in various communities; another was to create linkages between the various sectors and perspectives alluded to above, such as research, community, and policy. Some participants noted that policy-implementers could enhance knowledge transfer and the uptake of research findings within projects by requiring multisectoral research teams and including the expectation for knowledge transfer and exchange.

## General principles

Throughout the discussions, some dimensions emerged that were relevant across various topics:

- *Learn from the past, and learn in the present.* Relative to research to add to the general body of knowledge (without some direct application in real time), the discussion emphasized the value of what we could learn from analyzing effects of past policy decisions; and the value of monitoring and evaluating policy interventions currently being implemented (whether planned primarily by policy-makers or industry).
- *Attend to the multiple lenses* through which one could consider obesity—industry, for instance; civic government; agriculture; or specific target groups such as aboriginal people or children. Each lens may lead to the identification of different key factors that require attention. The real challenge is to align several perspectives, so that action taken is complementary and not counterproductive.
- *Understand what contributes to obesity.* Given the obvious need to be certain of the evidence, we would benefit from increased understanding of those forces that promote or provide incentives for action that increases obesity risk. For example, parents' concern for their children's safety often militates against allowing them to walk to school. We need to better understand the forces behind the observation that availability of more fresh fruits and vegetables does not always lead to higher consumption.
- *Be careful with extrapolated evidence.* While it may have value in many areas related to obesity, participants advised that the context must be assessed very carefully for its similarity to the obesity issue.

## Issues for further consideration

While there was general enthusiasm for and commitment to a policy-research agenda related to obesity, there were several issues raised in the final plenary that may warrant further discussion at some point in the future:

- If intervention research is a major thrust, who will pay for the intervention, as this may very well be out of the research-funding agency's mandate to fund? This is particularly relevant if it is not a "natural" experiment (where it is assumed that the sponsoring or implementing agency will pay for the intervention).
- Are there some situations where it makes most sense for government to do the research? For example, because they have access to various databases that need to be accessed and analyzed.
- What is the range of options for having industry money support research? Which are the most appropriate mechanisms, and under what circumstances? Is there a danger that research funded directly by industry will always be associated with bias (rightly or wrongly)?

## REFLECTION AND NEXT STEPS

Determining how best to invest research dollars into projects and directions that will help to reduce the obesity crisis in Canada is a complex undertaking. Nonetheless, some important ground was covered in this Think Tank. There was agreement on the big areas that need attention:

- the importance of agri-food policies in relation to obesity;
- the centrality of children in this discussion (if we provide supportive and healthy environments that prevent obesity in children, everyone will benefit);
- the importance of pricing interventions through subsidies or tax incentives as levers;
- the importance of working to clearly understand the relationships between characteristics of the built environment and those intervening processes and behaviours that lead to obesity; and
- the importance of policy intervention research in both of the areas addressed in this meeting.

During the Think Tank, some suggestions emerged that may be worthy of consideration as the funding agencies determine next steps. These are mentioned briefly below.

### **Provide opportunities to establish foundations for “horizontality”**

This was the first meeting of such varied interest groups on the topics of the built environment and obesity-related economic policy. For the most part, the conversations were separate, although there was some crossover; for example, one of the economics working groups suggested doing comparative analysis of various types of tax incentives and disincentives from fields outside of health such as education.

Given the early stages of development of these relationships, it may be worth providing further opportunities for smaller groups to meet, to further develop research ideas and evidence discussions. Effective long-term relationships are built on a series of smaller, lower-risk encounters (such as this one was). Building effective and productive

working relationships requires a longer-term view. Relationships between researchers and those whose actions may be influenced by research are essential to effective knowledge transfer and exchange. Given the stage of development and the limited crossover expressed at this workshop, consideration could be given to enabling groups interested in the built environment or economic policies to meet separately, without losing sight of the potential synergies and interactions that may exist (for example, economic policies affecting the built environment). The time and investment needed to find common ground among diverse groups should not be underestimated. In order to nurture these relationships, consideration could be given to supporting small projects and enterprises in the short run; hopefully, this will provide the foundation upon which larger, more complex projects could be established in due course.

## **Support opportunities for exposure to another sector or organization**

It was clear that many participants were learning new things or learning about new organizations or groups that need to be involved in learning about policy changes. People were hearing about important organizations that could potentially be involved for the first time. Perhaps some sort of fellowship or exchange program would enable a core of individuals to learn to appreciate in substantive ways another perspective different from their own. This type of appreciation would seem to be key to working effectively across boundaries.

## **Establish working relationships between sponsors of this meeting**

Ongoing relationships among the agencies who sponsored this think tank (and perhaps other agencies) would provide opportunities to discuss some topics that emerged from the meeting—topics that are not truly in the domain of things which could be influenced through a research agenda, but that may be important in the quest to reduce obesity. For example, there was a suggestion to add questions related to the built environment and associated health behaviours into the upcoming Canadian Health Measures Survey. This is an example of an institutional-level action, which could influence the ability to do various kinds of research related to obesity. No doubt there are many other examples relating to existing databases. There was discussion from several perspectives of policy lenses that could and perhaps should be applied to decisions in wide-ranging fields; a “children’s lens”, for instance, or a “health lens”. This type of approach does not occur primarily through a research avenue (although it may well be informed and shaped by it).

## **These suggestions are by no means exhaustive and will be supplemented by considerations of the sponsoring agencies.**

As representatives of the funding agencies commented at the closing of the Think Tank, this meeting was about doing things in a new way—engaging new partners in different sectors, working to find common ground among parties who have apparently very different interests, but who all share a commitment to reducing the impacts of obesity in Canada.

# > APPENDIX 1

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## APPENDIX 2

### Steering Committee

The funding partners wish to thank the following members of the Think Tank Steering Committee, who provided advice and direction on the development of the Think Tank Agenda as well as the types of researchers, policy makers and others to be invited to attend.

Jim Evanchuk, Manitoba Health  
Margaret de Groh, Public Health Agency of Canada  
Penny Lightfoot, Capital Health, Edmonton  
Mary Jo Makarchuk, Ontario Ministry of Health  
Kim Raine, University of Alberta  
Barb Riley, University of Waterloo



## APPENDIX 3

### Planning Committee

The following individuals were members of the Planning Committee that took the lead in planning the Think Tank:

Paul Bélanger, CIHR (Canadian Institutes of Health Research) Institute of Nutrition, Metabolism and Diabetes  
Erica Di Ruggiero, CIHR (Canadian Institutes of Health Research) Institute of Population and Public Health  
Jean Harvey, Chronic Disease Prevention Alliance of Canada  
Nicola Lewis, Heart and Stroke Foundation of Canada  
Stephen Samis, Heart and Stroke Foundation of Canada  
Lisa Sullivan, Canadian Population Health Initiative, Canadian Institute for Health Information (CIHI)

#### Other Support:

Judy Birdsell, On Management Health Group (Facilitator and author of Final Report)  
Kim Kelly, Kim Kelly Associates (Event Planning consultant)

# > APPENDIX 4

## Priority Topics for Attention

### > 4A. Built environment

During the sessions, groups identified topics as “Missing evidence” or “Evidence exists, but is not used”. These two categories have been combined in the lists below, but (ME) at the end signifies it was classified as missing evidence; (ENU) means that there is evidence, but the group deemed that it was not used.

The summary below presents priority themes ranked from most important to least important (as determined by number of votes), and includes examples of the areas that were mentioned as contributing to that theme.

#### **Understanding the link between built environment, behaviours, and health outcomes**

- Collect or identify data that makes it possible to examine the relationship between health and land use, quality-of-life indicators, or travel data. (ME)
- Clarify the nature of the links between health and various characteristics of the built environment (e.g., intensity, proximity, connectivity). (ME)
- Identify what policy interventions may result in health (vs. obesity) benefits. (ME)
- Measure attitudes, preferences, and perceptions related to housing types, neighbourhoods, and travel preferences and perceived safety. (ME)
- Identify what influences or motivates healthy choices in various target groups (e.g., families, children, rehabilitation). (ME)
- Clarify the nature of relationships between various characteristics (e.g., sedentary versus active behaviours; travel patterns) and health-related outcomes. (ME)

#### **Intervention research**

- Study the impacts of natural and experimental interventions such as varied neighbourhood design; i.e., what interventions work? (ME)
- Identify and describe barriers to adopting identified solutions. (ME)
- Build on existing, definitive Canadian research, pilot studies, success stories. (ENU)
- Do research that pays attention to local context and needs. (ME)
- Use best-practice tools that exist. (ENU)
- Do more research on community planning and health. (ME)

#### **Understanding barriers and enablers**

- Identify and describe those factors or forces that create barriers or increase resistance to obesity-reducing behaviours. (ME)
- Identify what is required to implement zoning bylaws that enable and support physical activity and healthy eating. (ENU)
- Describe the impact of varying regulations and fiscal policies; what are best practices? (ME)
- Use evidence about the characteristics and actions of those factors or entities that work against obesity preventions. (ENU)
- Explore the impact of seasonal differences on possible solutions. (ME)

**Engaging partners**

- Learn how to most effectively engage different sectors and facilitate integrated solutions (e.g., SWAT teams, champions). (ME)
- Increase understanding of the policy-development process related to the built environment (including consideration of horizontality and multidisciplinary approaches). (ME)
- Synthesize knowledge from different stakeholder groups (e.g., health workers, planners, economists). (ENU)

**Other**

- Use the results of international comparisons to leverage action in Canada. (ENU)

**> 4B. Economics**

During the sessions, groups identified topics as “*Missing evidence*” or “*Evidence exists, but is not used*”. These two categories have been combined in the lists below, but (ME) at end signifies that it was classified as missing evidence; and (ENU) means that there is evidence, but the group deemed that it was not used.

The summary below presents **priority themes** ranked from most important to least, based on the number of votes and provides examples of the type of specific points made.

**Agriculture**

- Analyze the impact of such things as local production and supply, cataloguing, and nutritional assessment on agricultural subsidies. (ME)
- Use knowledge of the impacts of the changing price structure of food (combinations of subsidies and tax). (ENU)
- Explore the alignment/misalignment of policies for agri-food and health. (ME)
- Identify barriers to creating healthy food products. (ME)

**Focus on children (children first; if you care for children, you care for all)**

- Identify policies that are healthy for children. (ME)
- Increase breastfeeding duration if consensus exists that this is an effective means of reducing future obesity in children. (ENU)

**Taxation**

- Identify unintended consequences of taxation. (ME)
- Acknowledge that taxation doesn’t impact obesity. (ENU)

**Access to food**

- Explain the impact of access to food on obesity. (ME)
- Do further analysis of the family food expenditure survey: increase our understanding of the use of food, and re-survey for current measures. (ME)

**Historical research**

- Do historical research to explore unintended consequences of health policies over time. (ME)
- Analyze how federal monies are allocated to impact obesity. (ME)

**Other**

- Determine the impact of wellness incentives, including population-based incentives. (ME)
- Increase public awareness and advocacy. (ENU)
- Encourage comprehensive workplace health programs in the workplace. (ENU)

# > APPENDIX 5

## Policy-relevant Questions

During Day 2 of the Think Tank, two small groups worked on economics and two worked on the built environment to generate policy questions and approaches to address them. This appendix presents the policy questions which the groups developed.

### > 5A. Built environment policy questions

This section summarizes the work of the built environment groups. The questions are grouped according to themes that emerged from the work of the working groups. The themes are: understanding the link between the built environment and health outcomes; intervention research; understanding barriers and enablers; and engaging partners.

The policy questions which the groups prioritized for discussion in the plenary are listed as “*Prioritized questions*” under each theme, while additional questions that were captured in the working groups are listed as “*Additional questions*”.

#### Understanding the link between the built environment and health outcomes

##### **Prioritized question**

- How can we go about establishing firm data links between built environment and health behaviours, attitudes, outcomes, and social determinants?

##### **Additional questions**

- What is the relation between obesity and neighbourhood design (or schools, or workplaces, etc.)?
- What can we learn by analyzing a variety of Canadian communities and looking at how they influence behaviours and health outcomes?
- How does metropolitan regional planning and design, such as transit, facilitate activity and health?
- What is the role of built environment in relation to food, income, schools, opportunity for physical activity, and how are these factors related? What is the relative importance of BE?
- What physical activity occurs inside buildings, considering the sedentary nature of work? Is there an overemphasis on the outside built environment? How can we improve our database on children in this matter?
- What are the results and outcomes relating to obesity at the population level and physical activity (by percentage)?

#### Intervention research

##### **Priority question**

- How can we bring about change through intervention research, “model bylaws”, policy changes, international comparisons, best practices, media/marketing/advertising?

##### **Additional questions**

- How can we place communities under the research “microscope” to look at the cost and benefit of interventions by examining natural experiments, existing communities, and analysis of like communities in contrast to unlike communities?
- What is the impact of the same intervention across different contexts?
- How can we facilitate pilot studies in communities seeking to change built environment and health problems, to evaluate the health outcome?
- How can we best replicate in Canada some of the more promising research in the US or other countries to look at outcomes here?

- How effective are interventions in the built environment at increasing physical activity levels?
- What adaptations to different interventions work in various contexts, especially SES (dose/response analyses)? Some interventions increase disparities, so we need to beware generalizing results in dose/response.
- How do we intervene without stigmatizing?
- How can we understand the consequences and unintended consequences of interventions?
- What can we learn by applying social marketing principles to encourage active transportation?
- Should we be developing indicators and measures (similar to those for sustainable development) to measure the efficiency of interventions.
- What changes at the population level would/could have significant impact?

### Understanding barriers and enablers

#### Prioritized questions

- How can we best explore the factors that enable and those that pose challenges (including community capacity)?
- What is involved in changing policy with respect to built environment?
- What is the potential return on investment of certain types of infrastructure investments?

#### Additional questions

- What are the factors in the built environment, physical activity, and obesity that enable and those that challenge health enhancement and a decrease in obesity (e.g., attitudes, perceptions, preferences, zoning bylaws, policy environment)?
- How can we analyze economic cost, political will, and public acceptance of changes in the community that are likely to increase its level of physical activity?
- What environmental factors make it easy for populations to build physical activity into every day? For example, what encourages people to cycle?
- Cost-benefit analysis:
  - What is the potential return on certain types of infrastructure investments (e.g., bike lanes)? How can media, cycling associations, NGOs, coalitions such as CAL, and all levels of government inform this discussion?
  - What resources do smaller cities need?
  - What are practical solutions for centers with varying levels of resources?
- What are local governments systematically doing that discourages/encourages physical activity?
- What indicators (links, connectivity, proximity) show your city has a problem?
- What complementary policies must be in place to support policies on the built environment?
- Are road-safety issues a deterrent to active transportation?

### Engaging Partners

#### Prioritized questions

- What are elements of successful intersectoral collaboration?
- What can be achieved by building more unlikely and non-traditional partnerships, and in particular, by increasing links between research, planning, policy, and health-practitioner communities?
- How can we best encourage consideration of the knowledge exchange and translation of results?

#### Additional questions

- What partnering opportunities can enhance/improve surveillance and enable research/data sets to measure better?
- What motivates unlikely partners and reluctant stakeholders to collaborate? What actions are possible, realistic, and likely to move forward?
- What are elements of successful intersectoral collaborations? What do successful research teams look like (e.g., interdepartmental teams: involving transport, industry, health, and NGO at federal, provincial, and regional levels)?

## > 5B. Economics policy questions

This section summarizes the work of the economics groups. The questions are grouped according to common themes which emerged from the work of the working groups. The themes are: children, agriculture and access to food, and pricing.

The policy questions which the groups prioritized for discussion during the plenary are listed as “*Prioritized questions*” under each theme while additional questions that were captured in the working groups are also listed.

### Children

#### Prioritized questions

- How do we create environments for children, youth, and adolescents that will facilitate healthy living across all determinants of health (social, geographical, cultural)?
  - Can we create a “healthy children” filter that all sectors can apply at a micro level? (We must consider all aspects of children’s environment: homes, community, school, media, built environment, leisure, parents, family, peers, daycare, educators, nurse-health, and curriculum.)
  - What can we learn by considering the links between implementation, education, impact, surveillance as research vehicles?
- What are the current policies and practices in the children’s environments, government, and non-government?
  - How do they create barriers or provide enablers?
  - How were good policies implemented?
  - How were these policies/programs evaluated?
  - Was the effectiveness impact against obesity sustainable over the short and long term?
  - What surveillance system do we need?
  - How do we link across sectors so that silos are not created? How do we sustain this over time?

#### Additional questions

- Is there excessive attention on school versus home?
- Is there a correlation between sports funding, and active healthy living for children?
- What is the impact of Employment Insurance and maternity leave on the duration of breast-feeding and obesity in kids?
- To what extent does alleviation of poverty lead to access to nutritious food?
- What can we learn by comparing school nourishment programs in Canada to those in other OECD countries? (An example would be subsidies of school lunch programs.)
- What has been the impact of the historical cutbacks to the educational sector on physical activity and nutrition?
- How do incentives for physical activity in schools increase physical activity?
- How much has been spent on school programs in terms of advocacy, pressure on government, etc.?
- What is the most appropriate mix of policies?
- What is the impact of mass advertising on children’s behaviour (good food, bad food, physical activity)?
- To what extent do subsidies for school programs affect healthy eating?
- How does targeting households influence children?
- What impact would universal food programs (in schools) have on obesity and children’s health?
- What is the real cost-benefit of implementing comprehensive school programs?

## Agriculture and access to food

### Prioritized questions

- How do we retool agri-food policies and subsidies to meet dietary requirements?
- Is there a relationship between the problem of eating and nutritional health and problems of production?
- How do policy/programs and regulations along the food chain contribute to the development of an obesogenic environment?
- What are potential international trade policy implications?
- Are there forces at play that are undermining the quality and price of the food supply?
- What is public involvement in the food chain?
- What are the health, economic, and environmental benefits and risks of local, regional, national food production?
- What are the implications of taxation incentives/disincentives for generic advertising, social marketing, product advertising?

### Additional questions

- What agricultural subsidies exist, and how do they impact on obesity, economics, and the environment?
- How do agricultural subsidies influence local production and access to food?
- What mechanisms can be used to transfer funds?
- What impacts do subsidies for healthy food production have on international agreements?
- What would be the effect on population nutritional status and obesity of an economically sustainable change in Canadian agricultural policy?
- Is there an effective model for whole-of-government policy?
- What is the impact of regulations on developing healthy products?

## Pricing

### Prioritized questions

- What are the implications of incentives and disincentives on obesity and health outcomes related to diet and wellness?
- How much do relative price changes affect behavioural choices around eating and activity? What are the impacts of this on population groups? For example, how do changes affect BMI?
- What are the implications of taxation incentives/disincentives for generic advertising, social marketing, product advertising?
- How can we implement longer-term interventions in order to determine what is effective and ineffective; e.g., how to affect overall energy intake and expenditure, or what types of incentives and disincentives are most effective—tax vs. subsidy vs. education (i.e., a non-economic method)?
- What is the impact of taxation (municipal, provincial, federal) on communities (e.g., the tax benefits to those who provide healthy foods cheaper to schools)?

### Additional questions

- Can we apply evidence from healthy-living programs for corporate tax breaks to individual tax breaks?
- What are the practical implications of snack taxes (from a business perspective)?
- How do food taxes impact other BMI and health impacts/outcomes?
- Would it be useful to create an inventory of existing and historical subsidy policies and their implementation?
- How do we assure that modelling of policy changes will assess impacts and their intended and unintended consequences?
- Is it feasible to create nutrition criteria that could be used to distinguish taxable from non-taxable foods in the effort to promote health?
- Can we use nutrition criteria in cataloguing and assessing agricultural food commodities and products?
- How effective are price, incomes, and cross-elasticity of products on consumption?
- Can we analyze the cost-benefit and feasibility of the current tax system?

# > APPENDIX 6

## Approaches to Further Knowledge Impact

During Day 2 of the Think Tank, participants were divided into four groups—two worked on economics and two worked on the built environment—to develop policy questions and approaches to address them. This appendix presents the approaches which the groups suggested.

The recommendations are grouped according to common themes that the facilitators determined after examining the data in combination with themes that surfaced in the working groups. The approaches that the groups prioritized for discussion in the plenary are **bolded** under each theme.

### > 6A. Approaches for Built Environment Topics

#### Existing data and evidence: Suggested strategies

**Establish firm data links between the built environment, health behaviours, attitudes, outcomes, and social determinants.**

Use existing research, evidence, and data to explore the various factors that impact obesity.

To do so we must review this existing body of knowledge. Environmental scans, literature syntheses, and secondary analyses of existing data can lead to new ways of linking existing data and comparative analysis.

By examining existing case studies, we can develop baseline “practices” at the national and international level regarding what works and does not.

Examine what guides our own thinking and assumptions about linkages between various factors related to obesity.

#### New data and evidence: Suggested strategies

**Consider creating new knowledge by utilizing action research approaches that examine research-based interventions, case studies, and natural experiments, particularly as they relate to certain populations (children and youth) and consider community characteristics, especially community capacity.**

**More surveillance research would also increase our knowledge on this issue.**

Qualitative methods and community-based approaches are very important strategies.

Consider ways to build community capacity to achieve effective policy change.

Current policies should be scanned to consider how they can be inherent barriers and enablers in the process of policy change.

The link between health outcomes indicators and policy accountability should be established.

In intervention research, consider who will fund the intervention: there is a need to bridge the intervention and research funding processes through joint funding programs.

Case study approaches which are population-specific can be used to obtain data related to the number of fast-food restaurants, built environment statistics, etc.

Questions related to the built environment and health behaviour should be incorporated into CHMS surveys.

Use actual physical measures along with self-reports to advance arguments with more weight.

## Knowledge Transfer: Suggested Strategies

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The knowledge translation and exchange of results among various stakeholders is very important.

Consider including knowledge transfer as part of the action research process.

Funds can be delegated specifically for knowledge transfer activities in RFAs.

## Partnerships

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**More unlikely and non-traditional partnerships should be forged. In particular, the links between research, planning, policy and health practitioner communities should be strengthened.**

We should consider inter-disciplinary and inter-sectoral approaches.

Buy-in from policy implementers has to be promoted and we must consider ways to fully engage them through conferences, release time, etc.

In particular, we should establish partnerships and engage organizations involved in planning the built environment such as the FCM (Federation of Canadian Municipalities), CIP (Canadian Institute of Planners), UDI (Urban Development Institute), CHBA (Canadian Homebuilders Association), and CMHC. Other national and provincial entities involved in built environment planning that could be potential partners include:

- CFLRI (Canadian Fitness and Lifestyle Research Institute)
- Go for Green (Active transportation)
- Canadian Parks and Recreation Association (active communities)
- CPHI/CIHR
- Heart and Stroke Foundation
- CHSRF (Canadian Health Services Research Foundation)
- PHAC (Public Health Association of Canada)
- CAL (Coalition for Active Living)
- CDPAC (Chronic Disease Prevention Alliance)
- engineers, economists, and evaluators
- Infrastructure Canada

Public dialogue and involvement should be pursued using the media and by engaging end-users through consultation processes.

## Suggestions Specific to the Funding Process

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When developing RFAs, we have to consider that the stages of assembling teams and building capacity must precede the formulation of the research question.

The benefits and downfalls of grants as opposed to 'grants and contributions' should be examined.

There is a need to develop results management accountability frameworks.

We should consider what we can learn from others, such as the Canadian Health Initiative.

Build capacity to do quality peer review in this complex intersectoral type of research.

We should keep in mind the limited capacity of communities to sit at research tables.

## > 6b. Approaches for Economics Topics

### Existing data and evidence: Suggested strategies

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**Reviews of international findings should be conducted, to facilitate comparisons and learnings.**

**There is a need to explore "best practices".**

**We should make use of existing data from such sources as FoodEx, CCHS, Nielson, and NPD and adjust methods as necessary. Analyses of existing databases should be considered.**

**We should consider parallel evidence about other health and social issues e.g. alcohol, recycling, seat-belt, and tobacco initiatives.**

**An inventory of policies and their implementation would be very useful.**

We can learn from other cases, such as the stories of canola, Trans fat, or the greenhouse industry.

### **New Research, Data and Evidence: Suggested Strategies**

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**There is a need for more analysis regarding the interrelations between health, economics, and the environment.**

**Research should be systems-oriented.**

**Attempt to model policy changes and assess their impact, and intended and unintended consequences. Particular consideration should be given to the implications of international trade policies on health outcomes.**

**We should consider policy participants as co-creators of research knowledge.**

**The approaches of action research and natural experiments should be used.**

**Long-term interventions are needed to determine what is effective and ineffective.**

**Qualitative methods, which include key informants and consultative round tables, should be pursued; case studies and historiography are suggested strategies.**

**The impact of wellness advice and guidelines on individual and corporate incentive programs and health should be investigated.**

**Feasibility analyses should be conducted from both business and government perspectives.**

**Econometrics should be used as a research approach.**

**Consider epidemiology as a method to assess the impact of the broader determinants of health on obesity.**

**There is a need to further examine consumption patterns.**

**It is important to develop theoretical modelling.**

Longitudinal and population-based surveys should be developed.

We need to determine the price elasticity of all foods.

There is a need to examine combinations of incentive and disincentive packages and their consequences on health outcomes.

Policy analysis is an important strategy.

An inventory of historical and existing subsidy policies and their implementation should be created.

### **Knowledge Transfer**

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**Strive to build consensus on nutrition advice.**

Knowledge transfer should be included as part of the research process.

### **Partnerships**

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**There is a need to develop multidisciplinary and multi-sectoral approaches, which include balanced research teams.**

**We should consider:**

- **How can various sectors inform others?**
- **What linkages are necessary to create social change?**
- **How are enablers of change best engaged?**

New funding partnerships should be explored.

We have to carefully consider the terms of business/industry partnerships for public-policy issues, as these may not be appropriate.

Members of the legal research community, international NGOs, social sciences, supply chain support, finance, government public health agencies, social marketing, and business should be involved in examining policy implications in various areas.



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