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Healthy food procurement and nutrition standards in public facilities: evidence synthesis and consensus policy recommendations

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Abstract

Introduction: Unhealthy foods are widely available in public settings across Canada, contributing to diet-related chronic diseases, such as obesity. This is a concern given that public facilities often provide a significant amount of food for consumption by vulnerable groups, including children and seniors. Healthy food procurement policies, which support procuring, distributing, selling, and/or serving healthier foods, have recently emerged as a promising strategy to counter this public health issue by increasing access to healthier foods. Although numerous Canadian health and scientific organizations have recommended such policies, they have not yet been broadly implemented in Canada.

Methods: To inform further policy action on healthy food procurement in a Canadian context, we: (1) conducted an evidence synthesis to assess the impact of healthy food procurement policies on health outcomes and sales, intake, and availability of healthier food, and (2) hosted a consensus conference in September 2014. The consensus conference invited experts with public health/nutrition policy research expertise, as well as health services and food services practitioner experience, to review evidence, share experiences, and develop a consensus statement/recommendations on healthy food procurement in Canada.

Results: Findings from the evidence synthesis and consensus recommendations for healthy food procurement in Canada are described. Specifically, we outline recommendations for governments, publicly funded institutions, decision-makers and professionals, citizens, and researchers.

Conclusion: Implementation of healthy food procurement policies can increase Canadians' access to healthier foods as part of a broader vision for food policy in Canada.

Keywords: *policy, obesity, chronic disease, food procurement, nutrition guidelines, public facilities*

Highlights

- Unhealthy foods are widely available in public settings across Canada.
- Healthy food procurement policies, which support procuring, distributing, selling, and/or serving healthier food in public settings, have emerged as a promising strategy to promote healthier food environments.
- Healthy food procurement policies may positively impact sales, intake, and availability of healthier food.
- A consensus conference was held in September 2014 to develop expert recommendations for healthy food procurement in Canada.
- Consensus recommendations outline roles for governments, publicly funded institutions, decision-makers and professionals, citizens, and researchers in implementing healthy food procurement policies as part of a broader vision for Canadian food policy.

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Introduction and background

Unhealthy foods, particularly those high in sugar, salt and saturated fats, have become widely available in public settings across Canada, including schools, recreation facilities, workplaces, and health care facilities, contributing to societal health issues, such as obesity and chronic disease.[1-3] This is concerning as public facilities provide significant amounts of food for consumption by vulnerable populations, such as children and seniors.[4] Promoting healthier food environments in public settings may help mitigate adverse health outcomes.[5]

The development and adoption of healthy food procurement policies and/or nutrition standards have emerged as promising strategies to tackle societal health issues associated with unhealthy food environments by increasing access to healthier foods in public settings.[6,7] Healthy food procurement refers to the process of procuring, distributing, selling, and/or serving food to facilitate healthier dietary behaviours.[8] Nutrition standards/guidelines help determine the types of food obtained and purchased throughout these processes.[8] While precise definitions of "healthy" foods vary, generally, nutrition standards promoting healthier foods would minimize foods high in sugar, salt and saturated fats, while promoting fruits and vegetables, whole grains, and lean protein.[9]

As stewards of public institutions and funds, municipalities around the world have taken action to promote healthy choices through healthy food procurement policies. In 2009, New York City (NYC) introduced the *NYC Standards for Meals/Snacks Purchased and Served*. These *Standards* influence, directly or through city contracts, an estimated 260 million meals and snacks provided annually at more than 3000 sites.[4] At the time, these *Standards* were the first to outline nutrition recommendations covering all government-purchased foods.[4] In 2010, the Los Angeles County Department of Public Health similarly launched several initiatives to increase healthy food procurement in selected institutions.[8] Targeted institutions incorporated new or updated existing nutrition standards and recommended practices related to food services and vending machines. However, these standards/practices varied by institution according to their specific priorities.[8]

A few Canadian municipalities/regions have adopted healthy food procurement strategies, such as the Region of Peel[10] and City of Hamilton in Ontario.[11] In Toronto, healthy food procurement projects have been implemented through the *Toronto Food Strategy*, including transforming convenience stores into "healthy corner stores" to increase healthy food accessibility in underserved communities.[12] In addition, Canadian jurisdictions have introduced policies, mandatory and voluntary, in settings such as schools[13-15] and recreational facilities.[16] Concerning workplaces, Hypertension Canada developed a free online tool, entitled the "4 STAR Food Environment Program," to help employers develop healthy food environments.[17]

Opportunities and challenges

Prominent Canadian health and scientific organizations have called for implementation of healthy food procurement policies by governmental and non-governmental organizations.[18] The 2015 election of the Liberal government arguably opened a window for change, given their expressed interest in addressing social determinants of health,[19] which include food accessibility.[20] Recently, survey data have shown public and decision-maker support for improving "obesogenic" food environments.[21-23] The Standing Senate Committee's obesity report also acknowledged that obesogenic environments facilitate poor eating behaviours, thereby challenging Canadians to make healthy choices.[24] In October 2016, Health Canada addressed these priorities by announcing their vision for improving food environments in Canada's "Healthy Eating Strategy.[25]"

Despite recommendations, healthy food procurement policies have not been broadly implemented in Canada. This may be due to issues and challenges hindering implementation, such as limited knowledge of potential positive impacts.[6] Additional factors, such as logistical barriers (e.g. lack of cooks or kitchens in schools), financial issues (pressures to create revenue streams from food service and/or franchising), and inconsistent nutrition standards and policies may be further impediments to change.[26-28] It is important to note that public facilities serving vulnerable populations, such as schools and hospitals, may call for stricter procurement criteria than those frequented predominantly by healthy adults.[29] Nutrition standards and policies may also need to be adapted to local contexts based on differing cultural, social, and spiritual values.[29,30] Similarly, a universal approach to change may not suit all settings. For example, the use of choice architecture or nudging[31] may help to promote healthy choices through subtle environmental cues, particularly with populations that prefer slower, progressive approaches to change.[28] Alternatively, regulatory approaches involving stricter implementation guidelines may more effectively promote healthy choices in other settings.[32]

A key duty of government is to provide conditions that facilitate healthy choices on the part of citizens.[33] However, with unhealthy options flooding the food environment, Canadians are not always supported to do so.[24] As public stewards, governments are obliged to intervene when current conditions damage health.[33] In taking action on healthy food procurement, examples exist of top-down (e.g. NYC Standards for Meals/Snacks Purchased and Served[4]) and bottom-up (e.g. Toronto Food Strategy[12]) approaches to change. Integrating both top-down and bottom-up strategies has been deemed beneficial[34] to sustain public engagement and avoid unsustainable changes made primarily for political gain.[35] Additional benefits of such integrated approaches to healthy food procurement are the novel opportunities it affords for progressive collaboration with the food industry.[36] In light of the significant role that industry plays in food production and distribution, these innovative partnerships can strengthen healthy food procurement initiatives.

Objectives: the next best steps

To inform action on healthy food procurement in Canada, we hosted a consensus conference with public health and food procurement experts in Edmonton, AB in September 2014 to craft recommendations for action across multiple sectors. In preparation for this consensus conference, we conducted an evidence synthesis informed by a rapid review approach to explore the impact of healthy food procurement policies and nutrition standards on sales, intake, and availability of healthier food, as well as indicators of health and of weight status (overweight/obesity). The purpose of this paper is to summarize findings from the evidence synthesis and to describe the consensus conference process and emergent recommendations. In

the interest of rapid dissemination to practitioners and policy-makers, an earlier version of the evidence synthesis and preliminary recommendations were reported on the website of the Alberta Policy Coalition for Chronic Disease Prevention, a partner in a funded project on policy interventions to address obesity and chronic diseases.[37,38]

Methods: evidence synthesis approach

Development of the evidence synthesis was informed by a rapid review approach. The rapid review approach is an emerging methodology that allows for the timely synthesis of information, which is often required by decision-maker and stakeholder audiences.[39] As outlined by Khangura et al.,[39] evidence syntheses developed using a rapid review approach can serve as a useful tool to prepare stakeholders for discussion on a policy issue, such as a consensus conference. While methodologies vary, rapid reviews often focus on a specific topic of interest, limit the number of databases searched, and occur at the review level.[39-41]

Our evidence synthesis collected comprehensive or systematic reviews from two databases (Ovid Medline and CINAHL) and three grey literature sources (UConn Rudd Center for Food Policy & Obesity website,[42] National Center for Disease Control and Prevention [U.S.] website,[43] and the Public Health Agency of Canada website[44]). An information specialist, well versed in the rapid review approach, designed and executed the literature search. An example of search terms used in CINAHL included: (beverage* or food* or meal* or nutrit*), (distribut* or procure* or purchas* or sell*), (guideline* or policy or policies or standard*), and (health* or obes* or weight*); detailed search methodology is available upon request from the authors. Inclusion criteria were: (a) French or English reviews published between January 2003 and July 2016; (b) reviews identified as comprehensive or systematic in nature, outlining specific methods and inclusion/exclusion criteria; (c) reviews that examine the impact of healthy food procurement policies/programs and/or nutrition standards on sale, intake and/or availability of healthier food, and/or on health, obesity or weight status; (d) reviews that focus predominantly on public facilities. The first and second round of screening involved reviewing titles and abstracts, respectively, to remove irrelevant studies. The third-level screening consisted of a full-text review of remaining articles to ascertain relevance to inclusion criteria. Data were extracted by one individual, and reviewed by a second. Two individuals rated the quality of included reviews using the AMSTAR appraisal tool.[45] While the initial search was conducted in June 2014, an updated search was performed in July 2016 to capture additional reviews.

Results: synthesis of evidence

Characteristics of systematic/comprehensive reviews

Five reviews met inclusion criteria.[6,46-49] Review characteristics are outlined in Table 1. This synthesis reports on outcomes of interest described earlier. The first review by Niebylski et al.[6] included 34 studies, and focused on impacts of healthy food procurement policies/programs on sales, intake, and availability of healthier food, and BMI as an indicator of body weight status. The second review by Jaime and Lock[47] reported on 18 studies, and explored impacts of school food and nutrition policies on sales, intake, and availability of healthier food, as well as menu composition and BMI.[47] The third review by Chriqui et al.[46] included 24 studies, and examined the influence of state and district-level competitive food and beverage (CF&B) policies in schools on sales, intake, and availability of healthier food, and BMI. In this review, competitive food and beverages refer to items high in fats, added sugars, and calories[46], widely available in schools. The fourth review by Driessen et al.[49] included 16 studies and focused on isolated school food environment interventions, with outcomes related to eating behaviours (including food purchasing) and BMI. Thirteen studies overlapped in these four reviews, resulting in 76 total unique studies. The fifth review by Afshin et al.[48] assessed 73 articles (individual studies were not reported), which evaluated the effectiveness of school procurement policies in effecting dietary change. Three reviews[46,47,49] were judged to be moderate quality, receiving five out of 11 possible points using AMSTAR criteria.[50,51] Two reviews[6,48] were judged to be low quality, receiving between zero to two out of 11 points. Due to the limited number of reviews overall, low and medium quality reviews were included in the synthesis. However, findings should be interpreted with caution.

Impact in schools

In contrast to other settings, a significant body of research has focused on impacts of healthy food procurement policies/programs and/or nutrition standards in schools. In total, reviews included 120 articles related to schools, with 23 articles included in two or more reviews.

Sales and intake of healthier food

All reviews discussed impacts of healthy food procurement policies/programs and/or nutrition standards on sales or intake of healthy/unhealthy food.[6,46-49] Concerning sales, Niebylski et al.[6] found that healthy food procurement strategies in schools, paired with price reductions or education, increased healthier food sales. Regarding food intake, all reviews suggested healthy food procurement policies/programs and/or nutrition standards can promote healthy food consumption and/or decreased unhealthy food consumption.[6,46-49] In Chriqui et al.'s review,[46] CF&B policies were associated with reduced in-school consumption of unhealthy food and beverages, although results for overall consumption were mixed. Driessen et al.'s review[49] emphasized that stand-alone food environment interventions, without additional education or promotion, appeared effective in improving eating behaviours. The authors highlighted the importance of this finding, given the comparative ease in implementing such interventions.[49] However, in Niebylski et al.'s review,[6] findings were stronger for interventions that involved healthy food procurement paired with additional strategies, such as education or price reductions.[6]

Availability of healthier food

Results from reviews indicated that healthy food procurement policies, programs, and/or nutrition standards can positively influence healthy food availability in schools.[6,46-49] Niebylski et al.[6] outlined a number of school-based healthy food procurement interventions that increased healthy food availability.[52,53] Further, Jaime and Lock[47] found that in all cases, nutrition guidelines led to increased availability (i.e. provision of more servings at a meal) of fruit and vegetables (ranging from +0.28 servings/day to +0.48 servings/day). This review also found that in three of four cases, nutrition

TABLE 1
Characteristics of reviews evaluating the impact of food procurement policies/programs and/or nutrition standards

Authors	Years	Study design	Number of studies included	Types of studies included	Setting of studies	Location of studies	Outcome types	AMSTAR ranking
Afshin et al. (2015)[46]	1980–2013	Comprehensive review examining the impact of school nutrition standards and procurement policies	n = 73[a]	Randomized or quasi-experimental studies	Schools (n = 73)	Not specified in article	Intake of healthier food; availability of healthier food; BMI	0/11 (weak)
Niebylski et al. (2014)[6]	1965–2012	Comprehensive review examining the impact of healthy food procurement policies and programs	n = 34	Randomized and non-randomized controlled trials; prospective and retrospective studies	Schools (n = 19); worksites (n = 6); hospitals and other settings (n = 6); remote communities (n = 3)	Canada (n = 6); U.S. (n = 21); England (n = 3); Scotland (n = 1); Denmark (n = 1); Ireland (n = 1); U.K. (n = 1)	Sales of healthier food; intake of healthier food; availability of healthier food; BMI	2/11 (weak)
Chriqui et al. (2014)[44]	2005–2013	Systematic review examining the impact of competitive food and beverage policies	n = 24	Cross-sectional studies; longitudinal studies; combination of cross-sectional and longitudinal studies	Schools (n = 24)	U.S. (n = 24)	Sales of healthier food; intake of healthier food; availability of healthier food; BMI	5/11 (moderate)
Driessen et al. (2014)[47]	2006–2013	Systematic review examining the impact of food environment interventions	n = 16	Randomized trials; prospective studies; cross-sectional studies	Schools (n = 18)	U.S. (n = 14); U.K. (n = 4)	Sales of healthier food; intake of healthier food; availability of healthier food; BMI	5/11 (moderate)
Jaime and Lock (2009)[45]	1991–2007	Systematic review examining the impact of nutrition policies	n = 18	Randomized and non-randomized controlled and uncontrolled trials; cross-sectional studies	Schools (n = 18)	U.S. (n = 11); Europe (n = 7)	Sales of healthier food; intake of healthier food; availability of healthier food and menu composition; BMI	5/11 (moderate)

Abbreviations: BMI, body mass index; U.K., United Kingdom; U.S., United States.
[a] This paper reports on articles, not individual studies.

guidelines contributed to significant decreases in total and saturated fat on school menus.[47] Chriqui et al.[46] found that CF&B policies decreased availability of unhealthy food and beverages, with most studies reporting results in the expected direction. However, CF&B policies aimed at reducing availability of unhealthy items did not always translate into increased healthy food availability.[54]

BMI

Findings related to the impact of healthy food procurement policies/programs and/or nutrition standards in schools on BMI were limited and mixed.[46-48] Reviews by Niebylski et al.[6] and Jaime and Lock[45] each included one study relevant to this area, with neither intervention significantly impacting BMI.[53,54] In contrast, the Chriqui et al.,[46] Afshin et al.,[48] and Driessen et al.[49] reviews reported mixed findings related to BMI, with three studies reporting results in the expected direction (reduced odds of obesity or overweight)[57-59] and seven reporting a mix of significant and non-significant results, and/or unexpected results (increased odds of obesity).[60-66]

Impact in workplaces

The Niebylski et al.[6] review included six studies exploring the effectiveness of healthy food procurement policies/programs in workplaces on sales, intake, and/or availability of healthier food.

Sales and intake of healthier food

Six studies examined the impact of healthy food procurement policies/programs on sales and intake of healthier food in workplaces. Findings related to sales of healthier food were mixed, while

those related to intake were positive.[6] Regarding sales, one intervention added low-fat snacks to 55 vending machines and subjected them to four price conditions (price reductions of 10%, 25%, and 50%), significantly increasing low-fat snack sales in adults and adolescents compared to a usual price comparison condition. While all levels of price reduction led to significant increases in purchases, the largest price reductions were associated with the greatest sales increases.[67] In contrast, sales of healthful entrées were unchanged in one Kansas workplace cafeteria when healthier entrées were introduced.[68] In terms of food intake, several multicomponent workplace interventions involving healthy food procurement and strategies such as education reported significantly increased fruit and vegetable intake and reduced fat intake.[69-72]

Availability of healthier food

One study reported on outcomes relevant to healthy food availability. This study examined changes in fruit and vegetable consumption after an intervention that aimed to improve quality of lunches in five worksite canteens.[69] It also included staff training, goal setting, and support groups.[69] The study found that all five canteens, in both public and private settings, served significantly more fruit and vegetables per day at follow-up (70-g average increase per customer from baseline).[69]

Impact in hospitals, care homes, correctional facilities, government institutions and miscellaneous settings

Three studies in the Niebylski et al. review[6] explored impacts of healthy food procurement policies/programs in hospitals, care homes, correctional facilities, government institutions, and other settings.

Sales and intake of healthier food

All three studies found that healthy food procurement policies/programs increased healthy food intake. For example, one study that implemented a hospital catering initiative to increase provision of nutritious food and decrease provision of foods high in sugar, fat, and salt, resulted in significantly lower intakes of total sugars and fats, saturated fat, and salt in intervention participants.[6,73]

Impact in remote communities

The Niebylski et al.[6] review included three studies examining the impact of healthy food procurement policies/programs on sales and intake or availability of healthier food in remote communities.

Sales and food intake

All three of the above studies reported impacts on food sales or intake. The Food Mail Project program, which aimed to reduce costs of healthy perishable food and improve nutrition, resulted in increased healthy food purchases across all communities.[6,74] The second study involved a retail-based intervention to promote healthier grocery store environments in Northern First Nations and Inuit communities in Canada.[6,75] In this study, increasing the availability and affordability of 32 targeted food items along with providing educational resources resulted in increased healthy food sales, although this increase was not maintained when promotional activities ended.[6,75] The last study focused on the Healthy Food North program, a culturally appropriate nutrition and physical activity intervention, and resulted in decreased intake of calories and carbohydrates.[6,76]

Availability of healthier food

The Healthy Food North Program and Food Mail Project demonstrated that it is possible to increase healthy food availability in remote communities despite logistical challenges.[6] In the Food Mail Project, household survey respondents in two communities reported that fresh fruit and vegetables were more available post-intervention, while respondents from a third community reported no change in food availability.[74]

Discussion

Findings indicate that healthy food procurement policies/programs and/or nutrition standards can result in positive outcomes related to availability, sales and intake of healthier food, while findings related to health status (in particular BMI) were mixed.[6,46-49] Evidence of effectiveness in these areas was particularly strong in school settings.[6,46-49] Overall, the strength of the evidence regarding impact of healthy food procurement policies was limited by evidence gaps for certain settings (e.g. remote communities) and outcomes (e.g. BMI), as well as the lack of rigorously designed studies.[6,46,49]

Several factors limited the strength of included reviews. For example, most studies were conducted in developed countries, such as the U.K., Canada, and the U.S.[6,47-49] Further, few studies were conducted in settings such as hospitals, care homes, and remote communities. Many included studies reported on multicomponent interventions, making it challenging to assess the specific impact of healthy food procurement.[6] In addition, reviews reported difficulty identifying healthy food procurement policies in the literature.[6,47] One reason for this may be that, while several jurisdictions worldwide have implemented policies, such policies may not have been evaluated[6,47] or published in peer-reviewed journals.[6] Another potential limitation is the lack of longitudinal research. It is also important to note that the reviews by Niebylski et al.[6] and Afshin et al.[48] were deemed to be of poor quality based on their AMSTAR rankings. Thus, their findings should be interpreted with caution.[50,51] Finally, while the rapid review approach allowed for the synthesis of information in a timely manner, there are notable limitations compared to a systematic review.[39] For example, our methods did not have as much rigor as a systematic review, opening up to the potential for greater degrees of bias and error.[39] Finally, the search strategy may not have been comprehensive enough to capture all literature pertaining to outcomes of interest, potentially excluding relevant reviews. Future syntheses could explore strategies for increasing rigour, such as following an explicit framework for the development of rapid reviews and including only high quality systematic reviews.[39,77]

Methods: consensus process

To inform action on healthy food procurement in Canada, we hosted a consensus conference with public health and food procurement experts in Edmonton, AB in September 2014. The conference was a deliverable to a funded project on policy interventions to address obesity and chronic diseases.[78] The goal of the conference was to reach consensus and to craft recommendations for action across multiple sectors. In preparation for this consensus conference, the evidence synthesis[37] was distributed to all invited participants for review. The consensus conference brought together experts from Canada, the USA and Australia to review the evidence on healthy food procurement and share key stakeholders' experiences related to

implementation of healthy food procurement policies and nutrition standards. Members of the funded project's Policy Advisory Committee were also invited participants.

To set the stage, the conference opened with presentations from invited experts* in research, practice (particularly those with experience implementing procurement policies), and policy fields. Presentations touched upon justification for healthy food procurement policies by researchers (NC, KR), development of nutrition standards by a researcher with previous high level government/regulatory experience (ML), barriers and facilitators to adoption and implementation of healthy food procurement policies in provincial (LM), and municipal (BC, AL, DM) contexts. These practice-based presentations included representation from those responsible for implementing the sentinel *NYC Standards for Meals/Snacks Purchased and Served* (AL), as well as two of Canada's leading municipalities with respect to healthy food procurement; Toronto (BC) and the Region of Peel (DM). Adoption and implementation experience was also shared by those working in unique settings, including schools (DB), universities (JM), health care (SB), and sports and recreation (DO) contexts. Additionally, presentations and discussions highlighted key lessons learned, such as the need for intersectoral collaboration, multi-pronged approaches involving environmental and educational components, legal and regulatory implications (JSh), and stakeholder engagement (JSt) from intervention design through to implementation and evaluation. Drawing from these presentations and findings from the evidence synthesis, an experienced facilitator led group discussions around targeted questions (e.g. what is needed to move healthy food procurement forward with different stakeholder groups?). The discussions established consensus and developed recommendations around effective and feasible strategies for implementing these policies in Canada. Draft recommendations were edited for clarity by the organizers. Participants reviewed and approved the final recommendations via electronic communications.[38] Highlights from the consensus conference were documented in a video.[78]

Results: consensus statement

Despite potential barriers to implementation of healthy food procurement policies, governments are compelled to provide environments that allow citizens to make healthy choices. Consensus discussions revealed that although future research is still needed to understand the impact of healthy food procurement, there is ample evidence to support policy action in this area.

The consensus statement outlines recommendations for healthy food procurement and nutrition standards in Canada, encouraging all publicly funded institutions to implement healthy food procurement policies as part of a broader vision of food policy that promotes health, environmental sustainability, and supports local economies.

Key recommendations for government, publicly funded institutions, health care facilities, decision-makers and professionals, citizens, and researchers are outlined in Box 1.

Conclusion

Healthy food procurement policies in public facilities can promote environments that facilitate healthy choices. The consensus statement reflects a synthesis of the evidence from peer-reviewed literature, along with experiences that were shared and discussions at a consensus conference with experts from the public health community. Evidence synthesis findings showed that healthy food procurement policies can positively impact sales, intake, and availability of healthier food, though findings related to BMI varied.[6,44-47] Stakeholder experiences emphasized the role of contextual factors, such as institutional history, stakeholder engagement, and high-level support, in ensuring successful development and implementation of healthy food procurement policies. Offering healthy foods in public settings normalizes healthy eating in different contexts and contributes to a broader public health goal of creating equitable access to healthy food and improving the quality of citizens' diets. We propose that governments take a leadership role in mandating healthy food procurement policies. But, the participation of a range of stakeholders (e.g. publicly funded institutions, health care facilities, the food industry, decision-makers, professionals, citizens, and researchers) is essential to moving forward with recommendations. The recommendations herein provide concrete steps for governments, institutions, and civil society to increase Canadians' access to healthier foods through healthy food procurement policies.

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Conflicts of interest

The authors declare that they have no conflicts of interest.

Authors' contributions and statement

All authors reviewed and approved the final manuscript. All authors except ARF participated in the consensus conference. KDR contributed to drafting the evidence synthesis, chaired the consensus conference, drafted recommendations and contributed to drafting and finalizing the manuscript; KA led the evidence synthesis, drafted recommendations and contributed to drafting and finalizing the manuscript; ARF drafted the manuscript, CN contributed to drafting the evidence synthesis; DLO edited the manuscript; DLO, DB, SB, NC, BC, ML, AL, DM, JM, JSh and JSt presented evidence at the consensus conference as described in the "Consensus Process" section.

The content and views expressed in this article are those of the authors and do not necessarily reflect those of the Government of Canada.

* Presenters are included in the list of authors. Initials represent the authors who presented on the topic indicated in the text.

BOX 1
Key recommendations

All levels of government

Governments are responsible for stewardship of public funds and ensuring that food and beverages purchased promote the health of the population served. As such, all levels of government are urged to show leadership within their own institutions and facilities, as well as in institutions and facilities receiving public funds, by adopting and implementing mandatory healthy food procurement policies.

We recommend that all levels of government:

- Support implementation of healthy food procurement policies through:
  - Innovative funding models, including the provision of transition funds, subsidies, and incentives, to organizations that adopt healthy food procurement policies
  - Funding to support innovation through pilot projects, implementation and evaluation research, and knowledge translation to create an actionable evidence base
  - Long-term dedicated resources, such as technical expertise, to support policy implementation

Federal government

To support the implementation of healthy food procurement policies (both internal and external to government), we recommend that the federal government:

- Support and facilitate the development of standards and practices for healthy food procurement[a]:
  - Establish a nutrition profiling system to enable assessment of whether products meet an agreed-upon definition of "healthy" for procurement standards
  - Develop a repository of implementation experiences and best practices in healthy food procurement for jurisdictions across Canada

Provincial and territorial governments

We recommend that provincial and territorial governments:

- Adopt federal healthy food procurement standards, recognizing the need for flexibility with respect to cultural and geographic context
- In provinces where implementation of nutrition guidelines is voluntary, move toward mandatory healthy food procurement policies, at minimum, in settings where vulnerable populations are present (e.g. where decision-making capabilities are underdeveloped or impaired, such as daycares, schools, and long-term care facilities)
- Integrate healthy food procurement policies into accreditation standards for institutions subject to accreditation (e.g. daycares, long term care facilities)
- Provide technical expertise from the health sector to support jurisdictions and institutions in implementing, monitoring, and evaluating healthy food procurement policies, including developing and regularly updating a list of acceptable vendors and products that meet healthy food procurement standards

Regional and municipal governments

We recommend that regional and municipal governments:

- Move toward mandatory healthy food procurement policies, at minimum, in settings where children and youth gather (e.g. schools, recreation facilities)
- Create or support food policy councils that adopt and monitor healthy food procurement policies within a broader food policy mandate
- Support healthy food procurement from local providers when feasible
- Consider municipal regulations providing buffer zones excluding unhealthy food sales nearby schools

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BOX 1 (continued)
Key recommendations

Publicly funded institutions

We recommend that publicly funded institutions (e.g. hospitals, schools, universities, prisons):

- Develop healthy food procurement contracts that adhere to nutrition standards, encompassing all food and beverages served within the institution, including third-party vendors (e.g. franchises, pouring rights contracts, fundraising)
- Leverage contracts as motivators for organizational change, such as:
  - Develop or modify institutional procurement policies to ensure all future contracts adhere to healthy food procurement policies and nutrition standards
  - Terminate non-compliant contracts, or renegotiate existing contracts, where feasible
  - Use expertise from food services to inform technical criteria for contracts and food purchasing
  - Frame healthy food procurement policies as an investment in quality service delivery to boards and senior administration
  - Seize opportunities for aggregated healthy food procurement among consortia of small institutions/facilities
- Dedicate staff time to implementation and monitoring compliance with healthy food procurement policies
- Collaborate with vendors to develop, stock, and store products that meet nutrition standards. This includes:
  - Framing procurement as a benefit to vendors (e.g. filling a growing market niche, supporting local economies)
  - Applying penalties for vendors' noncompliance with healthy food procurement policies

Health care facilities

Whereas health care facilities (e.g. hospitals, health care system organizations) are providers of health care services and places of health and healing:

- Act as role models for public and private institutions by vigilantly supporting the development and implementation of healthy food procurement policies
- Given that meals are medically necessary hospital services under the Canadian Health Act, re-classify nutrition and food services from operations (cost focus) to patient care (health focus)

Decision-makers and professionals

We recommend that decision-makers and professionals:

- Engage and involve citizens, students, parents, and vulnerable populations in informing the development and implementation of healthy food procurement policies at both public and private institutions
- Help to generate public demand for healthy food through strategies such as earned media (media coverage generated through press releases, news items, etc.)
- Use innovative social marketing techniques to market healthy food procurement policies to the public to help citizens recognize their importance and potential health benefits
- Educate the public on the value of healthy food procurement
- Share success stories and best practices, as well as barriers and facilitators to healthy food procurement
- Empower citizens to advocate for healthy food procurement policies through training and capacity building initiatives (e.g. skill building in media advocacy)
- Serve as champions for healthy food procurement within their own institutions and as change agents

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BOX 1 (continued)
Key recommendations

Citizens

We recommend that citizens:

- Make institutions and governments aware of their desire for healthy food procurement policies
- Advocate, as part of citizen groups and coalitions, for development of healthy food procurement policies

Researchers

We recommend that researchers:

- Broker knowledge of solutions through implementation and evaluation research, including filling gaps in knowledge (e.g. effectiveness of healthy procurement beyond the school context)
- Explore potential synergies of healthy food procurement policies with other societal priorities within a larger wellness policy framework (e.g. promotion of active transportation, employee fitness, institutional hygiene, etc.)

[a] While our aim is not to be prescriptive, we understand this work to be coordinated through the Office of Nutrition Policy and Promotion, Health Canada.

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