Strategies for Ontario's Provincial Food Procurement

Recommendations for Achieving Canadian Sodium Targets

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Introduction

According to Canadian surveys, 85% of men and 60% of women in Canada between 18 and 70 consume more sodium than the tolerable upper intake level (UL), and well in excess of the recommended intake for adults of 1200-1500 mg/day (1). The average intake of sodium from foods in Canada is 3092 mg/day (1) and when discretionary sodium from salt added to foods or in cooking is included, intakes are over 3400 mg/day (2), well in excess of the 2300 mg/day UL for sodium. This is not a level that is conducive to health, as high sodium intakes have been implicated in elevated blood pressure, increasing the risk of heart disease and stroke, two of the leading causes of death in Canada (3) as well as a number of other health conditions.

Joffres et al (4) modeled the medical cost-savings that could be achieved in Canada if a population-wide reduction in sodium intake by 1840 mg/day were achieved. This would bring the average sodium intake in Canada to approximately 1560 mg/day, almost in line with the current guidelines for adequate intake for sodium of 1500 mg/day. If achieved, direct medical cost savings (laboratory costs, physician visits, and medications) for hypertensive individuals alone were estimated to be about $430 million per year in Canada (4). A sodium reduction of this size was also estimated to prevent approximately 11,550 cardiovascular disease events per year in Canada (5).

An analysis of the amount of sodium consumed by Canadians by food group was prepared in 2009 using Canadian Community Health Survey data (2). The top six contributors to Canadian sodium intake by food group are: breads/bread products, processed meats, vegetable dishes/juice, soups, pasta dishes, and cheese. These findings suggest that sodium in the Canadian diet is largely due to consumption of processed foods.

In late 2007, Health Canada created the Sodium Working Group (SWG), a multi-stakeholder working group organized to develop a national strategy to reduce the sodium consumption of Canadians. The resulting document, "Sodium Reduction Strategy for Canada" (6) includes six overarching recommendations and three broad areas containing more specific recommendations. These three areas include: food supply, awareness and education, and research, as well as an area cross-cutting the other

three: monitoring and evaluation. Most of the recommendations in the food supply section include federal initiatives, such as working with industry to develop sodium targets in the food supply or changing the way foods are labelled. However, this section also contains recommendation 1-10 that suggests developing sodium guidelines for publicly-procured foods. Recommendation 1-10 states:

> The Working Group recommends that the federal government, together with provincial and territorial governments, develop more consistent sodium guidelines and procurement policies for use by food service operations in publicly-funded institutions such as schools, daycares, hospitals, care facilities, correctional institutions and the armed forces (6).

Applying this recommendation provincially would entail working with sectors such as hospitals, long-term care facilities, daycares, correctional facilities, youth corrections, schools, and others to develop procurement policies that call for a sodium reduction. This would be one initiative within the broader recommendations, intended to achieve the 2016 goal of 2300 mg of sodium per day, recommended by the SWG (6) and agreed to by the provincial ministers of health and health promotion in September 2010 (7). In addition, this would be an effective way to role-model sodium reduction through government-procured food, to hopefully achieve the final target of 1500 mg of sodium per day agreed to by the provincial premiers in August 2010 (8). If Ontario were to act as a role model by reducing sodium levels in publicly-procured food, the sectors that would be affected by this, as well as the associated acts, bills, and directives would need to be fully understood. The purpose of this project is to interview stakeholders within government and the broader public sector to identify the areas that could be targeted and to help understand their associated food procurement policies and practices.

Methods

A literature search was conducted using Ovid and Scopus and results were limited to 1990 or later. Variations on the search terms: sodium, salt, food purchasing, food procurement, policy, legislation and bylaw were used. Approximately 200 article abstracts were scanned for relevance and those appearing to have some relevance to the topic of sodium guidelines or regulation, were downloaded. Grey literature was also examined by developing a list of organizations that would have an interest in sodium reduction and then searching their websites for “sodium” or “salt.” All the academic and grey literature reference lists were scanned for additional sources that may have been missed. Public Health Ontario’s library services were also consulted and they provided additional lists of abstracts, based on an explanation of the project. Thirty-two articles or guides were downloaded and reviewed in full.

Ten key informants were recruited from: Ontario ministries that fund organizations who purchase food, provincial associations representing provincially-funded organizations or interest groups, and those within the food-purchasing organizations themselves. Potential participants were contacted by email or telephone and were given a letter of information outlining the project. This letter, as well as the interview guide, was developed in consultation with Public Health Ontario’s personnel responsible for developing research ethics guidelines for the organization.

In consultation with Public Health Ontario’s personnel, it was decided that formal ethics approval was not required based on the level of risk to participants. These risks were mitigated by ensuring confidentiality, informing participants of their right to decline participation or have their responses used, and obtaining informed, verbal consent to their participation.

Background Reports

Numerous organizations and notable individuals have been calling on government to deal with sodium levels within the Canadian diet. The 2011 report, "Governing Food: Policies, Laws, and Regulations for Food in Canada" (9) provides a useful overview of sodium reduction strategies used by different groups. The 2010 Institute of Medicine (IOM) report "Strategies to Reduce Sodium Intake in the United States" (10) provides probably the most comprehensive overview of all the issues surrounding population sodium reduction in the U.S. This report emphasizes the need for an intervention that regulates the whole food system (i.e., a national initiative) because voluntary reduction efforts by industry as well as individual interventions have thus far been unsuccessful.

Since the IOM report, the Centres for Disease Control and Prevention has written a guide in 2011 entitled, "Improving the food environment through nutrition standards: a guide for government procurement" (11). This guide provides detail into how a public procurement policy should be developed, adopted, implemented, and evaluated to achieve effective nutrition standards.

There are several notable jurisdictions that have implemented sodium targets for the food served by publicly-funded institutions. In the United States, two such jurisdictions are the city of New York and the state of Massachusetts. Both of these jurisdictions have passed executive orders (i.e., regulations or directives), specifying the nutritional content of the food purchased in public settings (12,13). The New York City Agency Food Standards (14), which came into effect in March 2009, have nutritional requirements for individual food items procured by any city agency, providing maximum sodium amounts that can be contained in products of various types. It also has overall daily nutrient requirements (including sodium limits) that must be achieved, based on the number of meals that are served in different settings. There are also exceptions to the regulations based on specific population needs, such as for children and seniors. The Massachusetts State Agency Food Standards (15), developed in July 2010, are similar to the New York City Agency Food Standards, outlining overall daily nutrient requirements including sodium limits as well as detailing individual food procurement standards.

An environmental scan prepared in 2011 by L'Abbé et al (16) for the Public Health Agency of Canada, provides support for developing food procurement requirements in Ontario's publicly-procured food. A summary of the report's recommendations include the following:

1) Define the sodium criteria. Start with *Canada's Food Guide* and Health Canada's proposed sodium targets.
2) Apply the sodium criteria to food service operations in publicly-funded institutions such as schools, daycares, hospitals, care facilities, correctional institutions and the armed forces, where appropriate.
3) Consult with a procurement advisor to ensure that specifications and contracts include the revised sodium criteria.
4) Review pricing strategy to ensure that qualifying products are reasonably priced.

5) Compile a list of products available in Canada that meet the revised nutrition standards to help food buyers identify qualifying products.
6) Leverage technology to help automate and streamline processes.
7) Develop a model reference document that will aid in the implementation of the nutrition standards.
8) Develop effective training programs.
9) Set reasonable timelines for implementation.
10) Effectively monitor compliance to the nutrition standards and the impact of the food procurement program on sodium intake.

Building on these recommendations, this report aims to provide some further insights regarding Ontario's public food procurement in various provincially-funded settings.

An Overview of the Ontario Regulatory Environment

a) BROADER PUBLIC SECTOR ACCOUNTABILITY ACT

In Ontario, Bill 122, the Broader Public Sector Accountability Act, 2010 requires all of the broader public sector (BPS) organizations within Ontario to abide by any directives issued by the Management Board of Cabinet (17). This act explicitly applies to hospitals, school boards, universities, colleges, children's aid societies, community care access corporations, corporations controlled by BPS organizations for procurement purposes, and any publicly-funded organization that receives 10 million dollars or more. This act does not apply to long-term care, daycares, retirement homes or correctional institutions.

Under this Act, the Broader Public Sector Procurement Directive (18) stipulates how the BPS organizations must procure goods and services. The directive is quite broad, only giving direction around how goods and services are to be procured, not giving any direction around what is procured. To change the Procurement Directive to include nutritional guidelines would require that the directive be opened up, changed and sent to Cabinet for approval. In speaking with a government representative, the current directive was kept very "high-level" to ensure that each organization had sufficient autonomy to purchase whatever they felt they needed. The Act has significant potential to sway provincial procurement of food. If a directive requiring nutritional and in particular sodium standards were outlined within the BPS directive, all of the BPS organizations would be required to meet it. Group purchasing organizations (GPOs) are organizations that are created to leverage the purchasing power of a group of businesses to obtain discounts from vendors, by pooling the purchasing volumes of member organizations. Any BPS directive would also apply to GPOs controlled by BPS organizations, whose purpose is to source food. This would have substantial market power because many BPS organizations use GPOs to procure their food. Such a directive would not only catalyze sodium reduction within these sectors but also stimulate a market for food manufacturers to fill, with respect to lower sodium products.

An alternative to a new or amended procurement directive would be a new act in the Ontario legislature, stipulating nutritional standards for all publicly-procured food. A private member's bill, Bill 108, the Government of Ontario Buy Local Food Act, 2010 (19) provides an example of how a bill could be brought forward. This method of devising nutritional or in particular sodium regulations in publicly-procured food is not as efficient as the BPS directive approach outlined above because this would require new legislation which is more time-consuming to develop. This approach may also not be as effective, as it would not be tailored to each setting that procures food. Ideally, any sodium guideline that is developed should be tailored to the various settings it will affect (11,20).

b) SECTORS THAT FALL UNDER THE BPS ACCOUNTABILITY ACT:

i) Hospitals

As of 2010, Ontario has 211 hospital sites that have 30,810 beds. At 95% capacity, that means 87,810 meals per day are served to Ontarians in hospitals (21,22).

Currently, despite being one of the largest food purchasers in the provincial public sector, no standardized nutritional requirements exist for the food that they procure. According to a government representative, hospitals buy what they want without any direct influence from the Ministry of Health and Long-term Care. Although there are no explicit nutritional standards that exist, hospitals and other public institutions often have internal guidelines for the food they serve. As was heard several times from interviews, often the nutritional guidelines that are developed in various settings (including hospitals) are created in the interests of professional and organizational accountability. The individuals that create the nutritional standards are often registered dietitians, accountable to the College of Dietitians of Ontario. These individuals develop menus meeting specific reference values such as the National Kidney Foundation KDOQI guidelines for renal disease, that specify ranges for key nutrients (including sodium). Similar guidelines exist for other disease conditions such as hypertension, heart disease, and diabetes. For general diets that do not have clinical practice guidelines, they are matched as closely as possible to Eating Well with Canada's Food Guide (CFG) and suggested amounts of carbohydrate, protein and fat. In CFG, no specific micronutrients, sodium included, are calculated for any diet, although there are a number of directional statements in each food group recommending lower sodium options or ways to reduce sodium. In practice however, unless the patient's condition and diet order specifically warrant it, sodium is not monitored. Without any monitoring, it is unlikely that sodium levels of hospital food would fall within the recommended guidelines as hospitals predominantly procure processed food. Research examining the sodium content of hospital foods could not be found. There is however a study currently underway at the University of Toronto, that may shed some light on the sodium content of diets served in this sector (23).

ii) Schools

As of 2009/2010, there were 4020 elementary and 911 secondary schools in Ontario, with enrollment of 2,061,390 students (24).

As of September 1, 2011 all foods sold in public schools in the province of Ontario have had to meet the mandatory nutrition standards in the Ministry of Education Policy/Program Memorandum No. 150 (P/PM 150) (25). This policy uses an approach of categorizing foods according to their nutritional content of key nutrients, including sodium, and then mandating that 80% of the foods have to be selected from the healthiest category, 20% of the foods can be selected from the healthy category and other foods not meeting all nutrition criteria are not permitted for sale.

P/PM 150 provides a good example of how nutritional standards could be created for other publicly-funded food procurement settings. The school nutritional guidelines were developed jointly between the Ministries of: Health Promotion and Sport and Education to utilize both areas of expertise. The policy was adopted to encompass the whole jurisdiction, meaning all publicly funded schools in the province, as recommended in the CDC guide. The policy is also comprehensive, focusing not just on sodium but also fat, saturated fat, trans fat, fibre, and other nutrients. Nutrition criteria are recommended to be comprehensive in the CDC guide as well (11). There was also adequate support for the individual schools when adopting the policy. The local health units and programs such as EatRight Ontario provided training, consultation support and electronic resources, as suggested by L'Abbé et al (16). All of these steps help to ensure that any procurement policy that is adopted will be effective and the staff trained and have the resources to implement the standards.

iii) Post-Secondary Education

Ontario currently has 22 publicly-funded universities and 24 publicly-funded colleges. As of 2009, there were the equivalent of almost 200,000 full-time students enrolled in colleges and 400,000 full-time equivalent students enrolled in universities (26).

Colleges and universities have no external regulations or guidelines for the foods that they serve. Food is procured in a number of different ways by post-secondary institutions. There are usually franchised restaurants, cafeterias, vending contracts, residential dining rooms, and non-franchised restaurants. Post-secondary institutions are subject to the BPS Accountability Act so they are required to follow procurement procedures outlined in the directive for any food purchases that they make themselves; however franchises are not subject to the Act. This could limit implementation within this sector because of the variety of ways food is procured and served in this setting, although there are usually university food purchasing committees which would be instrumental to target regarding nutritional and in particular sodium standards. According to an interviewee, post-secondary students, more so than some other sectors with "captive audiences" would be more likely to go off campus if the food served isn't up to their standards for taste as well as their perceived nutritional requirements.

c) SECTORS THAT DO NOT FALL UNDER BPS ACCOUNTABILITY ACT

i) Long-Term Care (LTC)

The most recent statistics that could be found indicate that as of 2002, there were 498 long-term care homes in Ontario that house 57,000 residents. At 95% capacity, that means 162,450 meals are served per day in this setting (27).

Long-term care (LTC) homes within the province of Ontario are subject to the Long-Term Care Homes Act, 2007 (28). Because the Ministry of Health and Long-term Care provides funds directly for food purchase, procurement and menu standards were developed to ensure some accountability. Food safety is however the primary concern because they are working with a vulnerable population. For this

reason, the act is very loosely worded around the nutritional content of the food that is served to residents. It states:

> The licensee shall ensure that each menu, (a) provides for adequate nutrients, fibre and energy for the residents based on the current Dietary Reference Intakes (DRIs) established in the reports overseen by the United States National Academies and published by National Academy Press, as they may exist from time to time; and (b) provides for a variety of foods, including fresh seasonal foods, each day from all food groups in keeping with Canada's Food Guide as it exists from time to time (28).

Those procuring the food, build menus in much the same way that hospitals do. They try to meet Eating Well with Canada's Food Guide, energy requirements and fibre, without much consideration given to micronutrients such as sodium unless an individual diet order warrants it. A 2011 study by Wright-Thompson and Piché showed that the average daily amount of sodium served in a LTC home in southeastern Ontario provided 4342mg of sodium compared to the current recommendation of 1200 mg for this age group (29). This suggests that without sufficient oversight or regulation, LTC menus can provide sodium amounts well in excess of the recommended targets and the UL. If stronger nutritional standards did make their way into long-term care, there exists an extensive inspection system that could be used for monitoring the sodium content of foods. Participants were skeptical that this would ever be included in regular inspections but conceded it could be done if it were written into the inspection protocols.

Most long-term care homes procure their food from external GPOs or GPOs run by a collection of LTC homes within one corporation. According to a participant familiar with LTC, each home is required to sign a Local Health Integration Network service accountability agreement. This agreement makes the LTC home subject to the BPS Accountability Act and Procurement Directives, not by the letter of the law but in spirit, despite their exclusion from the act itself. It is unknown whether this informal agreement would significantly change LTC home buying habits if a nutritional standard was created within a procurement directive.

Multiple sources familiar with LTC felt that any further regulation of the foods that are served was unlikely. Furthermore, while they considered public procurement important, they explained that regulation of the food industry would be "more efficient." They each suggested that the onus to provide food that is in line with current sodium guidelines rested with the dietitians that build the menus and their regulatory college. They recommended changing practice standards of dietitians or raising their awareness of sodium, to influence the menus and the food that is procured.

ii) Correctional Services

Ontario currently funds 10 correctional facilities, seven detention centres, 14 jails, and four treatment centres, with a total capacity of 10,640 that can be housed (30). At 95% capacity, 30,324 meals would be served to Ontarians in correctional services daily.

Similar to hospitals in the province, Ontario correctional facilities do not have any standardized nutritional requirement for the food that they procure. Like hospitals, they do have internal guidelines developed by their resident dietitian to meet professional standards of practice, using CFG predominantly but not looking at specific nutrients. Corrections, along with several smaller government-run organizations, procure their food through contracts set up by the Ontario Shared Service (OSS) branch under the Ministry of Government Services. The OSS acts like a GPO and negotiates the food procurement contracts with vendors for its client organizations. The contracts, typically negotiated every three years, are left broad to allow for client organizations to meet their specific needs. According to a government source, facilities within the OSS contract have a variety of products, including sodium or fat reduced that they can choose from. Again, it is unknown what reduced sodium products are actually procured. Data on the nutritional content of menus served to this population within the province is lacking.

iii) Daycares

As of 2007, Ontario currently has 4480 regulated non-family child care agencies with 224,041 child care spaces (31).

Despite numerous attempts, no government representative could be interviewed from the Ministry of Education to speak about daycares. Daycares are regulated under the Day Nurseries Act, 1990 (32). The Act does not have any specific nutritional requirements except some general language around which food groups should be offered at meals and snacks, for any children present during these times. It states:

> Every operator shall ensure that each child one year of age or over that is in attendance in a day nursery operated by the operator or in a location where private-home day care is provided by the operator is provided with: (a) …a meal consisting of at least one serving from milk and milk products, one serving from meat and alternates, one serving from bread and cereals, and two servings from fruits and vegetables… (b) nutritious between-meal snacks consisting of foods that will promote good dental health at times that will not interfere with a child's appetite for meal time…(32)

Daycares are not included in the BPS group of organizations; however, they could be a sector with potential for accepting nutritional standards, based on the recent adoption of school-based nutritional requirements for students.

iv) Retirement Homes

It is estimated that Ontario currently has about 700 retirement homes, with approximately 40,000 residents (33).

Bill 21, the Retirement Homes Act, 2010 (34) was developed to address safety and standard of care issues in retirement homes. The Retirement Homes Project, working on this Bill and its implementation, resides under the Ministry of Tourism and Culture. According to a government source, retirement homes in Ontario are not publicly-funded organizations; however they present an opportunity to build upon other sectors because they serve a vulnerable population and are becoming increasingly regulated. There does not appear to be any nutritional standard for residents of retirement homes, although this could not be confirmed with government sources. Currently, regulatory powers do exist (Bill 21) that could potentially be utilized to create nutritional standards in this setting.

Recommendations

Building on the recommendations by L'Abbé et al (16) several additional recommendations were developed based on the key informant interviews with provincial stakeholders.

1. Utilize the Broader Public Sector Accountability Act to maximize reach, as it would influence thousands of Ontarians in hospitals, schools and post-secondary institutions. Amending the Procurement Directive to include nutritional standards or crafting a new nutritional directive is the most logical place to start because of the potential to affect multiple sectors simultaneously. This would have the added benefit of regulating the GPOs that are major suppliers for many of the BPS organizations. If the GPOs are required to change their purchasing habits, these changes might "trickle down" to other businesses that utilize the GPO but are not a BPS organization.

2. For those outside the BPS, two approaches are proposed:
    a. Open up each of the acts that regulate these areas to include nutritional standards and directives for sodium. Start with the most likely sector(s) that could win public support for regulation, those with the most vulnerable populations and those with little ability to choose their own food elsewhere. This could include daycares or LTC because they both serve vulnerable groups. As seen with the adoption of nutritional guidelines for public schools, the provincial government does regulate foods in a similar setting. As sectors are increasingly regulated, many of the barriers seen with procuring healthy foods (e.g., price, availability of product, etc.) will be reduced for subsequent sectors.
    b. If regulation is not feasible, work with each non-BPS sector to create voluntary guidelines. The proposed standards for food industry self-regulation, created by Sharma et al in 2010 (35) could be helpful to promote success. They recommend: 1) transparent self-regulatory standards, 2) no one party given disproportionate power or voting authority, 3) specific codes of acceptable behaviours based on scientifically justified criteria, 4) predefined benchmarks to ensure the success of self-regulation, 5) mandatory public report of adherence to codes, 6) built-in and transparent procedures for outside parties to register objections to standards or their enforcement, 7) objective evaluation of self-regulatory benchmarks by credible outside groups, and 8) periodic assessments/audits to determine compliance and outcomes (35).

    Regardless of whether a regulatory or voluntary approach is used, the nutrition standards that are developed for each sector should be unique and appropriate for the population served.

3. Seek the input and support of provincial associations to leverage the argument for sodium targets in provincially procured food. Associations such as the Ontario Society of Nutrition Managers, Ontario Long-Term Care Association, Association of Day Care Operators of Ontario, Dietitians of Canada (DC), Ontario Retirement Communities Association, and the Clinical Nutrition Leadership Action Group (a sub-group within DC) could all be very useful allies in helping to create nutrition standards. Speaking to members of these associations, it was learned

that they not only help to implement new laws affecting member organizations but they are also sometimes consulted by government for recommendations on draft legislation.

4. Develop effective training programs and raise awareness for professional gatekeepers, such as registered dietitians, foodservice and food procurement managers, responsible for procuring food. These individuals are usually the ones who create the menus in institutional settings and procure food according to those menus, so raising their awareness could translate into more active demand for sodium reduced foods.

5. Dietitians of Canada were referenced multiple times in interviews as an effective force for change in this area. This professional association and Ontario's regulatory body for dietitians, the College of Dietitians of Ontario, should be called upon to incorporate the numerous recommendations for sodium reduction that already exist in Eating Well with Canada's Food Guide, the Dietary Reference Intakes, and the Sodium Reduction Strategy for Canada, into registered dietitians' clinical practice guidelines.

6. The overall approach should be comprehensive, not simply focusing on the nutrition standard but on the complete supply chain. Pressure can be applied from various directions (food production, food processing, distribution, marketing, catering, retail, foodservice) and at multiple levels (organizational, municipal, provincial, and federal governments). Using a framework as seen in Sacks et al (2008) could help organize and coordinate efforts (36).

7. In this review it became apparent that with one exception, there is a paucity of data on actual sodium levels in foods served in publicly-funded settings. It would be helpful to have routine monitoring by third party researchers, to assess sodium periodically and over time. This approach is currently being used in Alberta (37), as described by L'Abbé et al (16).

8. Based on the implementation and evaluation of the above recommendations, Ontario could be seen as a role model for the rest of Canada. By sharing their lessons learned, Ontario could influence municipal levels of government, other provinces and finally the federal government to undertake similar initiatives. If executed, there is the potential to impact Ontario's complete supply chain. Further synergies could be achieved if other levels of government took a similar approach and analyzed, by sector, what areas of influence they have on setting regulations and directives for nutritional standards.

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