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Symposium on Sodium Reduction in Foods Meeting Report

October 12 and 13, 2016
Sir Frederick G. Banting Research Centre
Ottawa, Ontario

Final Report December 2016

Bureau of Nutritional Sciences
Food Directorate
Health Products and Food Branch



Canada 

Health Canada is the federal department responsible for helping the people of Canada maintain and improve their health. We assess the safety of drugs and many consumer products, help improve the safety of food, and provide information to Canadians to help them make healthy decisions. We provide health services to First Nations people and to Inuit communities. We work with the provinces to ensure our health care system serves the needs of Canadians.

Également disponible en français sous le titre :
Rapport du Symposium sur la réduction du sodium dans les aliments

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Publication date: February 2017

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Cat.: H164-204/2017E-PDF
ISBN: 978-0-660-07730-7
Pub.: 160321

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Executive Summary

Excess sodium intake, which increases the risk of hypertension and associated chronic diseases, continues to be a significant public health issue in Canada and globally. Sodium reduction continues to be a priority for the Government of Canada, flagged as a key commitment in the Prime Minister's [2015 mandate letter](#) to the Minister of Health. On October 24, 2016, the Minister of Health announced a multi-year [Healthy Eating Strategy](#) as part of the Government's vision for a healthy Canada, which outlines how the department will take action on key public health nutrition issues, including sodium reduction. Health Canada provides federal leadership and works collaboratively with provinces and territories, other governments and stakeholders on sodium reduction efforts. On October 12 and 13, 2016, Health Canada hosted a *Symposium on Sodium Reduction in Foods* in Ottawa, Canada. The Symposium brought together representatives from a variety of sectors and governments to share experiences and discuss opportunities on continued sodium reduction.

Health Canada provided an update on federal action to encourage sodium reduction including voluntary sodium reduction targets for the food industry, increase awareness of the health risks of excess sodium and encouraging Canadians to choose lower sodium foods, and investments in sodium related research. Health Canada shared the results of targeted monitoring of sodium levels in prepackaged foods, which shows that progress to reduce sodium is being made in most food categories to varying degrees, however more work is needed to meet the established targets.

Representatives from local, national and international organizations, including Public Health England and the United States Food and Drug Administration, confirmed that sodium reduction remains a global challenge, and shared their experiences and perspectives on sodium reduction initiatives undertaken in their jurisdictions. Most initiatives included some form of target setting for sodium levels in foods, collaborations with stakeholders and outreach activities to shift consumer demand; many of these initiatives are showing positive results. Local initiatives in British Columbia and Ontario are also showing some promising results reducing sodium in health care settings. Data collection appears to be a common challenge.

Canadian food industry stakeholders representing a wide variety of food commodity groups reaffirmed their commitment to sodium reduction, and shared their successes and challenges on efforts to date, in both the grocery store and restaurant environments. Common challenges included consumer acceptance of lower sodium foods, the difficulty in replacing salt for flavour and functionality, and food safety issues that need to be considered when sodium is replaced. Sodium reduction in restaurant and foodservices presents additional challenges given the large number of menu items and ingredients used, the constant evolution of menu items, the impact on small and medium businesses, and consumer perception of eating out as a "treat" even though an increasingly large percentage of the population consume food away from home on a daily basis. There is limited data currently available regarding sodium levels in the restaurant and foodservices sector, particularly for non-chain establishments.

Symposium on Sodium Reduction in Foods

Discussion sessions held during the Symposium reflected the need to measure and acknowledge success to date on sodium reduction in foods, along with strong government leadership and oversight. Consumer awareness in driving demand for lower sodium foods was flagged as a key determinant for success. There was general support to continue with a strong voluntary approach including target-setting and monitoring of sodium levels in both the prepackaged foods and restaurants/foodservice sectors. Complementary initiatives that could strengthen this include: better labelling tools (e.g. front-of-package labelling; menu labelling); price incentives; restricting the marketing of high sodium foods to children; limiting portion sizes; and including sodium criteria in procurement policies. Participants reflected the need for a more holistic approach to sodium reduction, including sodium reduction across the entire food supply chain, considering sodium in the context of the overall diet and aligning sodium reduction initiatives in Canada and the United States.

As part of the Healthy Eating Strategy, Health Canada will be completing a full evaluation of sodium in the food supply in 2017, as well as reporting on Canadians' sodium intakes in 2018. The outcome of these evaluations on the food supply and population intakes, along with ideas generated during discussion sessions at the Symposium, will inform future directions to help Canadians mitigate the health impacts of excess sodium intakes.

Introduction

Background and Context

Sodium is an essential nutrient that is required in small amounts for the normal functioning of the body. However, excessive amounts of sodium have been shown to increase the risk of high blood pressure (hypertension), a major risk factor for stroke, heart disease and kidney disease. In 2009, the average daily intake of sodium by Canadians was estimated to be 3400 mg/day, which is well above the tolerable upper intake level of 2300 mg/day.

In 2007, the federal Minister of Health established a multi-stakeholder Sodium Working Group to develop a population health strategy for reducing sodium intake among Canadians. In its final report, [Sodium Reduction Strategy for Canada](#), the Sodium Working Group recommended action in four key areas: voluntary reduction of sodium levels in processed food products; education and awareness of consumers and stakeholders; research; and monitoring and evaluation of sodium reduction efforts. In 2010, federal, provincial and territorial governments endorsed the goal of decreasing the daily average sodium intake of Canadians from 3400 to 2300 mg/day by the end of 2016.

Since then, Health Canada has been leading sodium reduction efforts across Canada in collaboration with the provincial and territorial governments, the food industry, and health stakeholders. This includes: publishing sodium reduction targets and guidance to the food industry in 2012, consumer awareness and education campaigns focused on sodium; sodium related research; and interim monitoring of sodium levels in the Canadian food supply.

Sodium reduction continues to be a priority for the Government of Canada, flagged as a key commitment in the Prime Minister's [2015 mandate letter](#) to the Minister of Health. On October 24, 2016, the Minister of Health announced a multi-year [Healthy Eating Strategy](#) as part of the Government's vision for a healthy Canada, which outlines how the department will take action on key public health nutrition issues, including sodium reduction.

In order to gauge the current environment, hear success and challenges and discuss opportunities towards the development of future initiatives on sodium reduction, Health Canada brought together federal and provincial government representatives, the food industry, international government representatives, academics and health non-governmental organizations at the *Symposium on Sodium Reduction in Foods* in Ottawa, Canada on October 12-13, 2016.

Purpose of this Report

This report is intended as a summary of the proceedings and outcomes of the *Symposium on Sodium Reduction in Foods* that was held on October 12-13, 2016 in Ottawa. The views expressed herein are those raised by the participants at the Symposium and do not necessarily reflect those of Health Canada or the Government of Canada.

Symposium Objectives

The objectives of the symposium were to:

- Provide an overview of Health Canada's actions to date and commitment to monitor and report on the sodium levels in the Canadian food supply in 2017, and subsequently report on intakes of Canadians;
- Provide an overview of international sodium reduction initiatives;
- Discuss scientific and technical aspects, including successes and challenges, related to sodium reduction in the Canadian food supply since the publication of the *Guiding Benchmark Sodium Reduction Levels*;
- Discuss sodium reduction in the restaurant and foodservices sectors; and
- Discuss next steps on sodium reduction in Canada

Symposium Participants

Approximately 150 individuals representing a cross-section of stakeholder organizations with expertise in sodium policy participated in the *Symposium*, either in-person or via web conference, including:

- Canadian Food Inspection Agency
- Public Health Agency of Canada
- Agriculture and Agri-Food Canada
- British Columbia Ministry of Health
- Nova Scotia Ministry of Health
- University of Toronto
- University of Laval (Institute of Nutrition and Functional Foods)
- University of Ottawa Heart Institute
- Hypertension Canada
- Heart and Stroke Foundation
- Dietitians of Canada
- Association de sante publique du Québec
- Centre for Health Science and Law
- Canadian Nutrition Society
- Baking Association of Canada
- Canadian Beverage Association
- Canadian Health Food Association
- Canadian Meat Council
- Canadian Pork Council
- Dairy Processors Association
- Dairy Farmers of Canada
- Food Processors of Canada
- Maple Leaf Foods
- Food and Consumer Products of Canada
- Restaurants Canada
- Retail Council of Canada
- Cavendish Farms
- Aramark Canada
- International Life Sciences Institute North America
- NSF International
- Public Health England
- United States Food and Drug Administration
- New York City Department of Health and Mental Hygiene

Health Canada Update

The Assistant Deputy Minister of Health Canada's Health Products and Food Branch, Mr. Pierre Sabourin, reaffirmed in his opening remarks that the Government of Canada remains committed to sodium reduction to help improve public health in Canada. Sodium reduction in processed foods is a key commitment in the [Minister of Health mandate letter from the Prime Minister](#). As conveyed by Dr. William Yan (Director) and Ms. Charmaine Kuran (Section Head) of Health Canada's Bureau of Nutritional Sciences, Health Canada has been undertaking efforts on sodium reduction for several years, on four key fronts: the food supply; awareness and education; research; and monitoring and evaluation.

Food supply

In 2012, Health Canada published [Guidance for the Food Industry on Reducing Sodium in Processed Foods](#), which included voluntary sodium reduction targets for 94 categories of processed foods. The targets consisted of two components – Sales Weighted Average (SWA) and Maximum Levels – which were designed to reduce sodium levels in both the most consumed products and the saltiest products within each category, respectively. Health Canada challenged the food industry to meet these targets by December 31, 2016.

Health Canada also modernized and streamlined the food additive approval process and priority handling of lower sodium alternatives to aid sodium reduction efforts. Food additives are regulated in Canada under the *Food and Drug Regulations* and associated Marketing Authorizations (MAs). All permitted food additives and their conditions of use are listed in the [Lists of Permitted Food Additives](#).

Further, Health Canada is [updating¹ regulatory requirements for the Nutrition Fact table](#) that is mandatory on most prepackaged foods in Canada and provides information on 12 core nutrients, including sodium. The changes are intended to help consumers make more informed choices about the sodium content of their foods, including: regulated serving sizes to make them more consistent to help Canadians compare sodium levels in similar foods; updated Daily Value for sodium to reflect the tolerable upper intake level (2300 mg/day); and a new footnote explaining the percent Daily Value (%DV) to help consumers understand which foods contribute “a little” or “a lot” to their daily sodium intake.

¹ Changes to [nutrition labelling regulations were finalized](#) after the Symposium and published in [Canada Gazette, Part II](#) on December 14, 2016.

Awareness and Education

Health Canada conducted the Eat Well Campaign from 2012 to 2014 to improve awareness, understanding and knowledge of Canadian parents about healthy eating, including a year-long phase focused exclusively on sodium reduction. Tips on reducing sodium at home and choosing lower sodium foods at the grocery store and when eating out were also developed. In addition, Health Canada worked with provincial and territorial partners to develop an online repository of healthy eating resources to help those who teach groups of children and adults about healthy eating. Health Canada continues to partner with food industry associations on the Nutrition Facts Education Campaign to help consumers understand and use nutrition information on food labels to make healthier choices.

Research

The Canadian Institutes for Health Research (CIHR) hosted a workshop in 2010 on research priorities related to sodium reduction in food. CIHR/NSERC also funded research on sodium reduction, including research on overcoming technical hurdles to sodium reduction in food manufacturing and processing as well analyzing sodium levels in prepackaged foods.

Monitoring and Evaluation

In February 2016, nearly one year in advance of a scheduled comprehensive assessment of the food supply, Health Canada conducted interim monitoring of sodium in select food categories to provide an indicator of industry's progress towards meeting the sodium reduction targets that Health Canada published in 2012. Fifteen priority food categories were identified based on their importance relative to the sodium intake of Canadians:

- English muffins and raisin bread
- Pantry bread and rolls, bagels, croissants and flatbreads
- Hearth bread
- Ready-to-eat cereals
- Brie, Camembert, Cheddar, Swiss, Monterey Jack, Brick, Colby, Gouda and Mozzarella
- Processed cheese and other cheese products
- Pizza, pizza snacks and frozen sandwiches
- Frozen potatoes
- Packaged deli meats – fully cooked
- Packaged deli meats – dry cured, fermented, no thermal process
- Soups (bouillon and broth products; canned condensed wet soup; dry soup mixes; ready to serve soups)
- Vegetable juice and cocktail
- Toddler mixed dishes
- Infant and toddler cookies, biscuits and snack bars
- Infant toddler savoury snacks

Symposium on Sodium Reduction in Foods

Nutrition information from approximately 1000 collected food labels, combined with proprietary Nielsen retail volume sales data, were used to calculate the 2016 SWA sodium levels for each food category. The results were then compared to the 2016 targets for each of the categories.

Overall, the results show that the food industry has made efforts towards reducing the sodium content of prepackaged foods (Figure 1). However, the results vary across categories: the SWA for 13 of the 15 categories decreased by at least one-third. Among them, 8 out of 15 categories saw reductions of at least two-thirds of the expected SWA reduction for December 31, 2016. The results suggest that English muffins and raisin bread, hearth breads, ready-to-eat cereals and soups are two-thirds of the way towards the 2016 targets. For example, ready-to-eat breakfast cereals, which met two-thirds of the targeted reduction by Phase 3, have until the end of December 2016 to achieve a 35% reduction in the SWA for that product category as well as the maximum level target, which applies to all individual products (or brands) in that category.

All of the reductions are expected to have a meaningful impact at the population intake level because these are some of the most commonly consumed food categories. Of note, the results suggest that toddler mixed dishes meet the 2016 SWA and maximum level targets. Vegetable juice and cocktails meet the maximum level targets for 2016 and are also very close to meeting the 2016 SWA target.

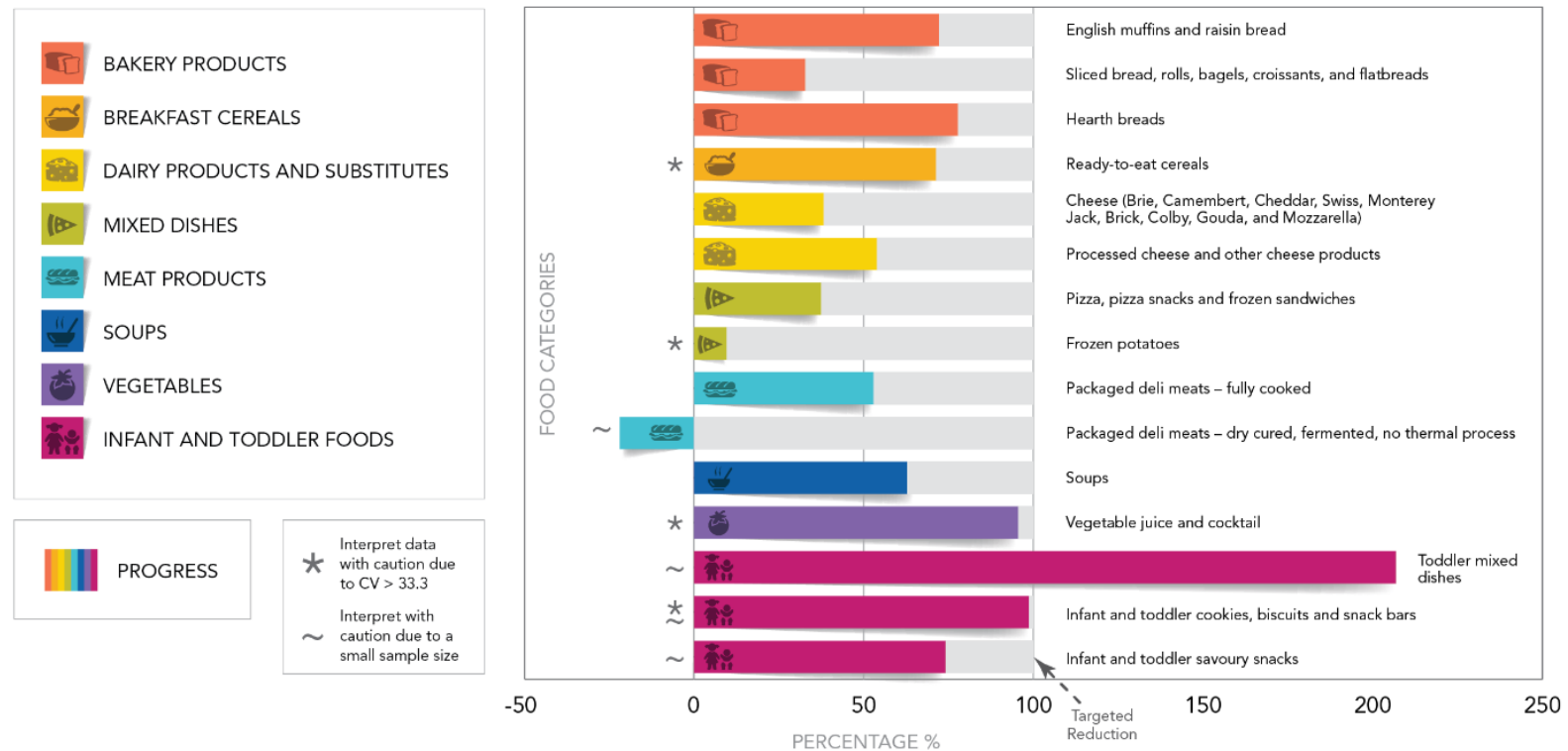
There are two categories in which little progress seems to have been made towards the 2016 targets: frozen potatoes (e.g. French fries, hash browns) and some packaged deli meats. These two categories may be experiencing technical difficulties and may require a concerted effort to meet the 2016 targets by the end of December.

The results of the interim monitoring should be interpreted with caution due to the small sample size and wide variability of sodium levels in a number of categories. It is not intended as a representative or comprehensive indication of the overall food supply.

Health Canada is preparing for more comprehensive monitoring of sodium levels in prepackaged foods and evaluation of the food industry's progress in meeting the sodium reduction targets, as well as report on Canadians' current sodium intake. The comprehensive evaluation of sodium levels against Health Canada's sodium reduction targets will begin in early 2017. The food supply data will subsequently be combined with food consumption data from the 2015 Canadian Community Health Survey to estimate population sodium intake levels. Together, this will demonstrate the amount of progress towards reducing sodium in processed foods and lowering the average sodium intake of Canadians.

Symposium on Sodium Reduction in Foods

Figure 1: Progress (%) Towards the 2016 Sales Weighted Average Sodium Targets in Select Food Categories



Summary of Symposium Presentations

International Perspectives on Sodium Reduction

- **Sodium and its Relationship to Health: Science of Dietary Salt** (Dr. Norm Campbell, Libin Cardiovascular Institute of Alberta, University of Calgary)

Dr. Campbell's presentation demonstrated the relationship between reduced sodium intakes and predicted reductions in hypertension, cardiovascular disease and health economics. According to the 2013 Global Burden of Disease Study, hypertension and dietary sodium intake was the third leading risk factor for death and disability in Canada. National and international data support reductions in dietary sodium as one of the most cost effective means to improve population health. A Canadian study suggests that a reduction of sodium intake to recommended levels would result in an estimated 32% reduction in the prevalence of hypertension. The WHO indicates dietary sodium reduction is one of the most cost effective ways to improve population health. Dr. Campbell also highlighted individual country experiences (including the U.K., Finland, Korea and Ireland) which concluded that sodium reduction is associated with lower blood pressure and lower cardiovascular event rates.

- **Pan American Health Organization (PAHO) Initiatives: Cardiovascular Disease Prevention Through Population-Wide Dietary Salt/Sodium Reduction**, (Dr. Mary L'Abbé, Chair, PAHO/WHO Technical Advisory Group on Cardiovascular disease Prevention through dietary Salt/Sodium Reduction)

Dr. L'Abbé outlined PAHO efforts to support sodium reduction in the Americas, which is led by a Technical Advisory Group composed of researchers, civil society and public health authorities. There are 5 key areas of work: social marketing; surveillance; engagement of the private sector; synchronization of salt/sodium reduction and salt fortification programs; and scientific research and study quality/methodology. In 2015, key milestones included: 20 countries in the region were addressing dietary salt compared with 3 in 2009; 12 of the 20 countries had national-level strategies; and 8 of the 12 countries had targets and timelines for sodium reduction in specific food categories. In January 2015, PAHO released the *Guide for Setting Targets and Timelines to Reduce the Salt Content of Food* as well as a set of harmonized regional targets for 12 food categories. PAHO also initiated a collaborative project in 15 countries to collect baseline sodium content for the 12 food categories. Baseline data is now available for a total of 15,000 foods and enables monitoring of which food categories are making progress and can also be used as the basis for broader application to nutrients such as sugar.

- **International Life Sciences Institute (ILSI) North America Recap of “The Safety of Sodium reduction in the Food Supply: A Cross Discipline Balancing Act”** (Alison Kretser, Director, Science Programs, ILSI North America)

ILSI North America is a public non-profit scientific foundation that brings together scientists from government, academia and industry to work cooperatively to provide scientific evidence that informs progress on public health initiatives. Ms. Kretser reported on a 2015 ILSI North America workshop that convened a multidisciplinary discussion to examine strategies to reduce sodium in the US food supply. Discussion focused on the challenges faced when reducing or replacing sodium in foods, including technical challenges such as flavor profiles, unwanted chemical reactions and changes in texture; microbiological challenges such as decreasing water activity and reducing growth of pathogens and food spoilage organisms; and regulatory challenges and implications associated with replacing sodium chloride. Ms. Kretser presented 3 case studies to demonstrate some of the challenges to reduce sodium that were identified by the workshop: 1) Reducing sodium levels directly impacts the leavening of refrigerated dough, causing improper sealing of the package; 2) Consumer interest in “clean labels” has led to the use of natural ingredients (vinegar solids and lemon juice) in maintaining food safety in lower sodium ham products and the development of a new high pressure process to lower sodium in ham and deli ham products; and 3) Safety factors for controlling bacteria in shelf-stable processed cheeses. The workshop identified a need for public-private partnership funding opportunities to accelerate technological breakthroughs and Ms. Kretser noted such efforts would help to meet the US FDA 10-year voluntary sodium reduction targets. The UK is putting funding toward some of their challenges, but this has not yet been done in North America. Ms. Kretser concluded by saying that given the complexity of the task, even small steps are incredibly important and are the most realistic way to make progress.

- **Sodium Reduction Achievements and Ongoing Activities Targeted at Sodium Reduction in the United Kingdom** (Dr. Alison Tedstone, Deputy Director, Diet and Obesity/Chief Nutritionist, Public Health England)

In 2004, the UK developed a systematic, sodium reduction monitoring program across the food chain that included 80 food categories. Dr. Tedstone advised that the UK has changed their reporting approach from “shaming” companies that do not meeting targets to “celebrating” the companies that do. Targets set for 2017 have not been achieved by all of the food industry but they are continuing to push the approach and targets are not being refreshed at this time. The UK is redesigning the sodium reduction program for broader application to be integrated with a wider dietary improvement program which includes calories and sugars. They are also looking at the “out of home” sector to achieve dietary improvement in all foods sold.

- **Sodium Reduction Targets for Restaurants and Foodservices and How Public Health England has Approached the Catering Sector** (Victoria Targett, Team Leader, Diet and Obesity Division, Public Health England)

Ms. Targett advised that in the UK, eating out contributes 20% of daily intake of calories for women and 25% for men and one quarter of families eat fast food every week. A significant proportion of eating out in the UK is done through small one-off establishments and small local chains. It is recognized that the restaurant and foodservices sector in England is different from the manufacturing sector. However, some parts of the sector have standard recipes and they buy ready-made products, so there are opportunities for sodium reduction. Sodium reduction targets for the catering sector were established in 2011. While the UK salt targets already applied to the catering sector, some specific work was done to establish separate ways of working on sodium reduction for the sector. Within 2 years, however, only a few businesses were working toward the goals; some businesses faced challenges in gathering sodium data for their products. In 2014, targets were published for 10 key product categories most consumed out of home. Different targets were set within each category (e.g., small burgers, burgers with cured meat, burgers over 6 ounces in weight) which allowed taking into account different ingredients in the same products and different portions. A series of tip sheets for different kinds of eating establishments were also developed (e.g., to reduce saturated fat, calories and salt in foods; increase fruits and veggies; and decrease portion size). Again, only a handful of businesses signed up to achieve the targets, which indicates some significant challenges in engaging this sector.

- **US Food and Drug Administration: Overview of Proposed Voluntary Sodium reduction Targets and Long Term Sodium Reduction Goals** (Kasey Heintz, Interdisciplinary Scientist, Office of Food Additive Safety, Center for Food Safety and Applied Nutrition, US FDA)

Americans are currently consuming 50% more sodium than recommended by most experts. Reducing sodium intake could prevent hundreds of thousands of premature deaths in the US over a decade. Overall, the current sodium content of the food supply remains high despite industry efforts. However, variability in sodium across similar foods in the marketplace shows that reductions are possible. Ms. Heintz shared that the US Food and Drug Administration (FDA) recently announced draft, voluntary sodium reduction goals (target mean and upper bound concentrations) for sodium in commercially processed, packaged, and prepared foods as guidance for industry. The draft, voluntary guidance includes 16 overarching categories with individual targets for about 150 subcategories of food in recognition that a one-size approach does not fit all. These draft targets serve as the basis for continued dialogue with industry and any new data that is generated may be used to refine the approach and the targets.

- **US Food and Drug Administration: Overview of Proposed Voluntary Sodium Reduction Targets for Restaurants and Foodservices** (Kasey Heintz, Interdisciplinary Scientist, Office of Food Additive Safety, Center for Food Safety and Applied Nutrition, US FDA)

Adding to her previous presentation, Ms. Heintz reported that Americans spend half of their food dollars and consume approximately 1/3 of calories outside the home, and that sodium density is also often higher in restaurant foods. Ms. Heintz advised that the US FDA draft voluntary guidance on sodium reduction, released in June 2016, also included draft targets for restaurant and food service foods. US FDA's approach encourages a level playing field by setting voluntary targets for both processed and restaurant foods.

Local Sodium Reduction Initiatives

- **New York City Sodium Reduction Activities** (Dr. Sonia Angell, Deputy Commissioner of Prevention and Primary Care, New York City Department of Health and Mental Hygiene)

Dr. Angell provided a brief history of the National Salt Reduction Initiative (NSRI) framework, which contributed to an almost 7% reduction in sodium levels in the packaged food supply over a five year period (2009-2014) and informed the 2016 USFDA draft sodium reduction targets. New York City (NYC) has also pursued a variety of complementary initiatives to support sodium reduction. NYC is updating MenuStat, a free online database containing nutrition data from top restaurant chains across food categories, in restaurants and over time (menustat.org). Food standards have been introduced for meals and snacks purchased and served by NYC agencies, which includes sodium criteria and affects the healthfulness of approximately 245 million meals and snacks. A system called "Good Choice" was developed where NYC labels products that meet the NYC Food Standards on food distributor product inventories. That way, food service establishments serving large number of consumers can choose from a healthier inventory of products. An amendment to the NYC Health Code has been adopted which requires chain restaurants to identify high sodium items with a warning icon on menus at the point of purchase. This amendment was the subject of a court challenge and, while the status was upheld, it is pending appeal. While local authorities support and value federal government action on sodium, their work in NYC demonstrates that local health departments are well-positioned to rapidly develop, implement, evaluate and scale related initiatives that can affect large populations.

- **Sodium Reduction in Health Care Settings** (Lorrie Cramb, Provincial Dietitian, British Columbia Ministry of Health)

The British Columbia (BC) Ministry of Health has pursued sodium reduction in health care settings based on the recommendations in the Sodium Reduction Strategy on sodium guidelines for publicly funded institutions. According to 2012 public opinion research, 99% of the BC population, 91% of health care workers and 88% of health care patients agreed that health care facilities should lower the sodium content of patient food. BC undertook this work in 3 phases: developing sodium guidelines and procurement policies; stakeholder engagement; and proposed

policy modifications based on assessing some of their initiative's results. Ms. Cramb reported some key learnings, including: collaboration with health authorities, partners and industry is key; a coordinated, phased approach worked well; national action is critical to close the gap between what patients experience in health care settings and home settings; and the need for regular monitoring and implementation reports. BC will continue to support the goal of sodium reduction while respecting the needs of patients and will work with health authorities on standardized patient satisfaction surveys.

- **Healthy Foods in Hospitals – How to Make it Work** (Laurie Dojeiji, Champlain Cardiovascular Disease Prevention Network, University of Ottawa Heart Institute)

Ms. Dojeiji spoke about the importance of environments in enabling the ability to adopt healthy behaviours, the need to support healthy environments and to make healthy food choices the default choices. As part of their *Strategy and Action Plan 2013-16 (Taking Action to Prevent Cardiovascular Disease)*, the Champlain Cardiovascular Disease Prevention Network identified healthy foods in hospitals as an area of priority. A set of evidence-based nutrition standards, devised by hospital and public health dietitians, ground the program. Hospitals are implementing these standards in a phased approach across their retail food settings. Within this program, the Gold level is the ideal end state. The Bronze level is the first stepping stone, which includes actions such as the removal of deep fryers, less sodium in soups, reduced availability of chips, chocolate, and candy, and increased fruits, vegetables and whole grains. Ms. Dojeiji reported that, to date, 21 of 23 hospitals in the region have achieved the Bronze level. Enablers of success include: leadership; shared vision and commitment; infrastructure to facilitate cross-sharing of information; centralized implementation tools and supports; regular monitoring and reporting; and recognizing and celebrating milestones. Next steps of the initiative include supporting hospitals to achieve the Silver level of recognition.

Canadian Industry Initiatives and Updates on Sodium Reduction

- **Retail Council of Canada** (David Wilkes, Senior Vice President, Government Relations and Grocery Division)

Mr. Wilkes reported on an industry project undertaken by the University of Toronto to assess progress on sodium reduction in nine key categories of foods that were on the market between 2010 and 2015 (bread, cheese, salad dressing, deli meat, frozen meats, pizza, fish, soup and canned vegetables), including new products and compared those with products they replaced. Results showed sodium reductions in 6 of 9 categories; new products contained 10-30% less sodium than the products they replaced; 77% of foods assessed were below the maximum levels established by Health Canada; and 25% of foods assessed met at least one of Health Canada's benchmarks. The study also looked at levels of *trans* fat and determined that sodium reductions are occurring at a much faster rate. Since there is no one-size-fits-all solution for sodium reduction, a variety of programs are in place to provide the information consumers need to make healthier decisions.

Symposium on Sodium Reduction in Foods

- **Canadian Meat Council** (Suzanne Sabourin, Director, Legal and Regulatory Affairs)

The Canadian Meat Council struck an internal sodium working group to facilitate industry's sodium reduction efforts. Ms. Sabourin reported that processed meats have contributed 9% of dietary sodium in Canada. Prior to the Sodium Reduction Strategy, meat processors were already offering a wide selection of sodium-reduced options. Preliminary results from a member survey indicate that almost 70% of deli meats met the 2016 target. There was 100% success in the bacon bits category, but canned meat, chicken and turkey have not been the focus of resource and development efforts to date. Ms. Sabourin highlighted some regulatory challenges, including that [CFIAs Meat Hygiene Manual of Procedures](#) does not permit use of other alternatives to sodium chloride and that serving sizes in the NfT need to be more consistent to facilitate the comparison of sodium levels in similar foods.

- **Baking Association of Canada** (Paul Hetherington, President and Chief Executive Officer)

Mr. Hetherington spoke about the role of sodium in baking, including strengthening and tightening the effect on the gluten in dough, fermentation control, consistent crust browning, and as a natural antioxidant that brings out flavours and aromas naturally present in the ingredients. Reflecting the Baking Association of Canada's *Sodium in Bread: 2015 Report*, data on 203 pantry breads showed that, between 2009 and 2015, bakers voluntarily reduced sodium in white breads by 13%, wheat breads by 16% and whole grain breads by 1% (pantry breads represent 75% of all breads and bread-like products on the market). There has been an 83-99% success rate in reducing sodium levels to under the proposed maximum limit for pantry breads. Although sodium reduction is one of the top three priorities of bakers, challenges associated with sodium reduction include poor control of mold growth; change in product texture and quality and shelf life. Mr. Hetherington highlighted the need for government to report on health outcomes linked to sodium reduction.

- **Dairy Processors Association of Canada** (Jackie Crichton, Chair, Dairy Regulatory/Technical Committee)

Ms. Crichton indicated that the products of most Dairy Processors Association of Canada members meet the Health Canada's maximum targets. The SWA targets, however, are much more difficult to achieve. Sodium has a number of functional roles in cheese that feed into consumer acceptance including: food safety; stable shelf life that results in minimum spoilage and waste; taste and texture; as well as functionality during processing, food service and consumer use. Research on sodium reduction in dairy products, particularly cheese, continues to take place both domestically and globally. The Dairy Processors members remain committed to a gradual reduction of sodium, where feasible, in their products. Ms. Crichton said that the ultimate goal is to help consumers lower their sodium intakes while continuing to provide safe, desirable dairy products that meet their individual needs, expectations, and preferences, and also meet regulatory standards of identity.

Symposium on Sodium Reduction in Foods

- **Food and Consumer Products of Canada** (Michi Furuya Chang, Vice President, Scientific Affairs and Nutrition)

Ms. Furuya Chang informed participants that, for many years, Food and Consumer Products of Canada members have been developing products with reduced sodium and will continue to do so, but reaching the targets established by Health Canada will take time. Based on a survey of their members in September 2016, more than half of their members have introduced low sodium products (with a low sodium claim) since 2010; 80% have introduced sodium reduced products without a claim; and 90% of companies have products that currently meet Health Canada's targets. Specific examples include: the percentage of a national brand pizza at or below Health Canada's maximum level targets increased from 50% to 97%; a popular macaroni and cheese product reduced sodium by 5% to meet the maximum level target; and there was a 21% sodium reduction in salad dressings, with 92% of pourable dressings at or below the Health Canada's maximum level targets. Since 2010, a major national brand has launched 3 new sodium reduced broths. Data shows that approximately 80% of consumers are more likely to pick up sodium reduced chicken broth and sodium reduced beef broth, which indicates that consumers are adapting to changes in the marketplace. Ms. Furuya Chang concluded by looking at future needs: investments in research and development into sodium alternatives; research to understand consumer acceptance; and proactive and effective consumer education.

- **Restaurants Canada** (Joyce Reynolds, Executive Vice President, Government Affairs)

As part of their sodium reduction efforts, a Guide entitled *How to Reduce Sodium in Menu Items* was developed and distributed to Restaurants Canada members. In 2015, 94% of chains reported having reformulated or introduced new sodium-reduced menu items in the last 5 years.

Thousands of new and reformulated ingredients and menu items with reduced sodium have been introduced by working with suppliers to identify lower sodium ingredients and products, moving to more made-in-house products and introducing new menu items. Between 2009 and 2016, chain restaurants decreased sodium in the top 10 menu items by 17.3%. Challenges to sodium reduction include: a disconnect between what customers say they want and the uptake and acceptance of sodium reduced items; issues related to quality, flavour, functionality and supply; and the large volume of products requiring reformulation. Eighty-five percent of chain respondents make nutrition information available; 92% of Canadians feel it is important to know the nutritional breakdown of the food they eat and many (43%) want the information displayed on a restaurant's website. Ms. Reynolds concluded by saying the situation is complex; consumers must get on board; progress is being made but more work is needed; and Restaurants Canada is calling on the Federal Government to assume a leadership role in providing a consistent approach to the provision of nutrition information across Canada.

- **Retail Council of Canada** (Erica Malik, Director, Health & Wellness and Industry Relations)

Focusing on the home meal replacement section of grocery stores, Ms. Malik reported on its complex and unique operating situation. First, she explained that the home meal replacement section includes private label brands, where members have significantly reduced sodium and continue to do so, and products from external vendors, over which grocers have little control. Second, she explained that as of January 2017, the home meal replacement section and other items that are available for immediate consumption may be designated as restaurant-type foods pursuant to the regulations under the *Healthy Menu Choices Act, 2015*. This designation will require that information on calories be provided, which will result in the additional assessment of the sodium content of these products. Currently, guidelines by Health Canada do not provide sufficient direction for sodium in the home meal replacement section. For example, sandwiches and sushi prepared in-store do not fall within any of the available food categories in the guidelines. Ms. Malik informed the audience that efforts are being made to collect data and that Retail Council of Canada looks forward to working with Health Canada and other stakeholders to reduce sodium in the food supply.

- **Aramark Canada** (Karen Williams, Senior Director, Health, Wellness & Environmental Sustainability)

In 2009, Aramark launched minimum/maximum nutrition criteria for food categories. With respect to sodium, the initial target was a 30% reduction with a focus on breads, processed meats, soups, canned tomatoes and legumes, and sauces. Recipe reformulation included moving to more scratch cooking, portion size reduction and ingredient and flavour innovation. Since 2010, there has been approximately a 10% sodium reduction from the recipe collection. Ms. Williams reported that some of the challenges in meeting the 30% target included difficulty in replacing salt for flavour and functionality, consumer demand and high levels of sodium in many processed ingredients.

Outcome of Discussion Sessions

The Symposium included small, facilitated group discussions with a cross-section of stakeholder organizations on various aspects of sodium reduction efforts to date and looking forward. Specifically, the groups were asked to respond to the questions below. The following is a thematic summary of those discussions:

Question #1: What has worked well and not so well to date with respect to reducing levels of sodium in the food supply?

Monitor and report on sodium reduction activities on a regular basis

- The participants agreed that more work around monitoring and reporting is required. A robust and comprehensive monitoring plan worked for *trans* fat reductions in the food supply. Some participants felt that if companies knew that they are being actively monitored there might be more accountability to reduce sodium in their products.

Increase consumer education and awareness activities

- There was consensus among participants that further engagement is needed with consumers since they drive product demand and their acceptance is essential. Reductions done by stealth have met with some success, however, consumer palates have been slow to adapt to lower sodium products.

Work more closely with the U.S. towards a North American Approach

- There was agreement that the recently proposed targets released by the US FDA underscore the importance of reducing sodium intakes in a North American context to improve population health. Many felt that Canada and the US should work together on a common approach.

Measure and Celebrate Successes

- It was generally recognized that there have been some successes in certain food categories, however, measuring success can be difficult and some felt that we may not have enough evidence at this point. At the same time, participants mentioned the importance of celebrating successes that have been achieved.

Question #2: Looking ahead and drawing from these lessons learned, what additional or new efforts can be taken to reduce sodium in packaged foods?

Implement a regulated approach versus a structured voluntary system to reduce sodium

- Some participants felt that a regulated approach was needed to ensure all of the players work towards a common goal. Others advocated that a voluntary system would work provided it was structured, balanced and supported by complementary initiatives such as education, research, monitoring and/or regulations (e.g., food labelling).

Assess options such as the implementation of a front-of-package labelling system

- Some participants advocated for a federally regulated front-of-package labelling system to help consumers choose foods that are lower in sodium. Other options proposed included a warning label, a logo and expanding nutrient content claims.

Focus on the entire food supply chain and look at sodium in the context of the total diet

- There was general agreement that sodium reduction efforts are needed across the entire food supply chain (including looking at procurement of ingredients) and not simply in end products. Additionally, many participants believed that it was important to look at sodium in the context of a total diet.

Provide stronger government leadership and commitment

- There was consensus among participants that stronger federal government leadership and further commitment on the sodium file is needed. This would drive change from the top down. Some participants advocated for the establishment of nutrition criteria, including sodium content, in federal government procurement policies to spur demand for lower sodium foods and encourage provincial governments and private organizations to follow suit.

Question #3: What challenges, unique to the restaurants and the foodservices sector must be taken into account to reduce sodium?

This sector is unique and complex

- There was widespread recognition that restaurants and foodservices are a unique and complex sector. Customization of meals, the lack of mandatory labelling, certain patchwork regulations, evolving trends (such as the growth in popularity of home meal replacements) and the number of players in the sector make it multifaceted and difficult to monitor and establish targets.

Many small establishments have limited access to research and development or technology

- Many agreed that there are many small establishments within this sector and they often have distinctive products and challenges that are specific to their operations. In addition, they do not have the same access to the research, development and technology as the larger establishments.

There is a consumer perception that eating out is a “treat”

- Some participants felt that consumers perceive eating out as an indulgence, but in Canada, for example, 45% of Canadians eat out on a daily basis. Thus, we need to address the perception that eating out is a treat where one can eat “unhealthy” foods. Moving forward, more public discourse with Canadians is needed.

Question #4: What strategies and approaches can be leveraged to collectively move forward and make further progress in reducing sodium?

Menu labelling to provide consumers with consistent information when eating out

- Some of the participants felt that a regulated menu labelling system is needed to provide consumers with consistent nutrition information when eating out. While there is certain patchwork of regulations and initiatives currently in place and underway, it was suggested that a national system would benefit all Canadians. Proposals included mandating the amount of calories and sodium on menus.

Training and awareness of salt alternatives among food preparation professionals

- There was some discussion around the “chef culture” and the attitudes towards salt in food preparation. More training and awareness, specifically for young chefs, would help them find alternatives while still coming up with unique dishes that are acceptable to consumers. Potential collaboration between culinary schools and provinces for education was suggested.

Consider price incentives, smaller portions and children-focused initiatives

- Some participants suggested that complementary measures could support voluntary sodium reduction for this sector. Price incentives, restricting marketing of high sodium foods to children and increasing consumer awareness of sodium could help increase consumer demand which would support sodium reduction in restaurant foods. Other suggestions included limiting the portion size of menu items, to not only address sodium but to focus on other nutrients, and targeting menu items for children to allow more access to healthy foods when eating out.

Conclusions and Future Directions

Sodium continues to be an important public health issue in Canada and all stakeholders and partners represented at Health Canada's *Symposium on Sodium Reduction in Foods* remain committed to helping Canadians lower their sodium intakes to recommended levels.

There has been some meaningful progress on sodium reduction in the Canadian food supply, though more work is needed and some key challenges remain. Moving forward, Health Canada is planning to continue its efforts towards sodium reduction, which will include:

- 1) Conducting ongoing, active monitoring of the food supply;
- 2) Revisiting the sodium reduction targets for prepackaged foods; and
- 3) Developing a strategy for sodium reduction in the restaurant and foodservices sector.

Health Canada thanks all participants for their sharing valuable information and perspectives on sodium reduction, which will inform how Health Canada will move forward on these fronts and other complementary measures. Health Canada will continue to engage Canadians and stakeholders to explore potential solutions around sodium reduction in both the prepackaged foods and the restaurants and foodservices sector.