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BOARD OF HEALTH MEETING

April 26, 2017

Sault Ste. Marie Community Rooms A and B

www.algomapublichealth.com

Meeting Book - April 26, 2017 - Board of Health Meeting

Algoma Public Health Board of Health Meeting Table of Contents

14. **Announcements**

    a. Next Board of Health Meeting - May 24, 2017

15. **Adjournment**

ALGOMA PUBLIC HEALTH
BOARD OF HEALTH MEETING
APRIL 26, 2017 @ 5:00PM
SAULT STE MARIE ROOM A&B, SSM
A*G*E*N*D*A

1.0 Meeting Called to Order — Mr. Lee Mason, Board Chair

a. Declaration of Conflict of Interest

2.0 Adoption of Agenda Items — Mr. Lee Mason, Board Chair

Resolution
THAT the agenda items dated April 26, 2017 be adopted as circulated.

3.0 Adoption of Minutes of Previous Meeting — Mr. Lee Mason, Board Chair

a. March 22, 2017

Resolution
THAT the Board of Health minutes for the meeting dated March 22, 2017 be adopted as circulated.

4.0 Delegations/Presentations.

a. Oral Health — Ms. Hannele Dionisi, Manager of Oral Health

5.0 Business Arising from Minutes

a. Letter to Minister Eric Hoskins RE Opioid

Resolution
Whereas opioid misuse is an issue of public health concern in all Northern communities the BOH for APH hereby supports and agrees with motion #12-17 passed by Sudbury district Health unit on February 16, 2017.

6.0 Reports to the Board

a. **Medical Officer of Health and Chief Executive Officer Report** — Dr. Marlene Spruyt, Medical Officer of Health

i. **Ontario Public Health Standards Modernization**

Resolution
THAT the report of the Medical Officer of Health and CEO for the month of April 2017 be adopted as presented.

b. Finance and Audit Committee Report

i. Committee Chair Report for April 2017 — Mr. Ian Frazier, Committee Chair

ii. Draft Financial Statements for the Period Ending February 28, 2017 — Mr. Ian Frazier, Committee Chair

Resolution
THAT the Finance and Audit Committee report for the month of April 2017 be adopted as presented; and

THAT the Financial Statements for the Period Ending February 28, 2017 be approved as presented.

iii. 2016 Draft Audited Financial Statements for the Year Ending December 31, 2016

iv. Approved minutes February 8, 2017

c. Governance Standing Committee Report — Deborah Graystone, Committee Chair

i. Committee Chair Report for April 12, 2017

Resolution
THAT the Governance Standing Committee report for the month of April 2017 be adopted as presented.

ii. Approved Minutes March 1, 2017 – ***for information only***

7.0 New Business/General Business

8.0 Correspondence — Mr. Lee Mason, Board Chair

a. Children's Marketing Restrictions, Federal Healthy Eating Strategy & Support for Bill S-228 & Bill C-313
   i. Letter to Minister Philpott from Perth District Health Unit dated March 15, 2017

b. Support for Stop Marketing to Kids Coalition's Ottawa and Further Action on Sugary Drinks
   i. Letter to Ontario Boards of Health from Middlesex-London Health Unit dated March 28, 2017

c. Tobacco Endgame
   i. Letter to Minister Philpott from Simcoe Muskoka District Health Unit dated March 15, 2017

d. Legalization and Regulation of Cannabis
   i. Letter to APH Board from the Office of the Prime Minister dated March 7, 2017

e. Low-Income Dental Program for Adults and Seniors
   i. Letter to Minster Hoskins from Porcupine Health Unit dated March 28, 2017

f. Expert Panel on Public Health and the Health Menu Choices Act
   i. Letter to Minister Hoskins from Leeds, Grenville & Lanark District Health Unit dated March 22, 2017

g. Anti-Contraband Tobacco
   i. Letter of Support from Municipality of Huron Shores for APH Resolution #2016-109 dated March 30, 2017

9.0 Items for Information

10.0 Addendum

11.0 That The Board Go Into Committee — Mr. Lee Mason, Board Chair

Resolution
THAT the Board of Health goes into committee.

Agenda Items:

a. Adoption of previous in-committee minutes dated March 22, 2017

b. Litigation or Potential Litigation
c. Labour Relations and Employee Negotiations

12.0 That The Board Go Into Open Meeting Mr. Lee Mason, Board Chair

Resolution
THAT the Board of Health goes into open meeting

13.0 Resolution(s) Resulting from In-Committee Session Mr. Lee Mason, Board Chair

14.0 Announcements: Mr. Lee Mason, Board Chair

Next Board Meeting - May 24, 2017
DATE at 5:00pm
Sault Ste. Marie, Room A&B, Sault Ste. Marie

15.0 That The Meeting Adjourn Mr. Lee Mason, Board Chair

Resolution
THAT the Board of Health meeting adjourns

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Healthy Smiles Ontario (HSO) Program

April 26, 2017

Hannele Dionisi RN, BScN
Program Manager, Family Health and Oral Health Services

Ontario Public Health Standards 2008

Standard Requirement: Child Health

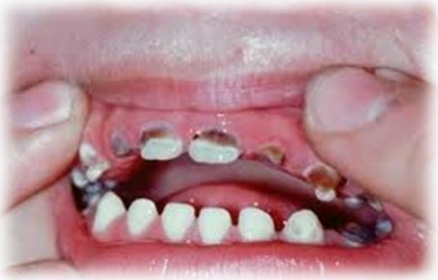
Requirement #12: The board of health shall provide the Healthy Smiles Ontario (HSO) Program in accordance with the Healthy Smiles Ontario (HSO) Program Protocol, 2016 (or as current).

This report addresses the following Strategic Directions:

- Improve Health Equity
- Collaborate Effectively

Facts about oral health in children

- Tooth decay is the single most common chronic childhood disease.
- Dental surgeries related to Early Childhood Caries is the most common procedure in preschool children at most Paediatric hospitals in Canada.
- Emergency room visits ranked 8th out of 201 categories for Algoma youth in 2015.
- Dental caries affect 60-90% of school children.
- Dental treatment and emergencies are not covered by OHIP.
- Not every Ontarian has access to appropriate dental care.
- Caries rates are increasing in children 2-4 years of age.
- 66% of JK/SK children screened in 2015-16 were caries free.



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Oral health program

- Oral Health Assessment and Surveillance
- Monitoring of Community Water Fluoride Levels
- Childcare Centre Screening
- Prenatal Preventive Services
- Child's Oral Health Initiative Program (COHI)
- Oral Health Education and Promotion
- Healthy Smiles Ontario (HSO) Program

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Healthy Smiles Ontario (HSO) Program

- A FREE dental program that provides preventive, routine, and emergency dental services for children and youth 17 years of age and under from low income households.
- Families with other forms of dental insurance are not automatically excluded.
- Children are directly enrolled if they receive assistance under
  - ❑ Temporary Care Assistance
  - ❑ Assistance for Children with Severe Disabilities
- Children are directly enrolled if they or their families receive:
  - ❑ Ontario Works
  - ❑ Ontario Disability Support

Healthy smiles Ontario

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What services are covered?

- Regular visits to a dental care provider
- Check-ups
- Cleanings
- Fillings
- Scaling
- X-rays
- Tooth extractions
- Emergency dental care
- First dental visit by first birthday

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Streams of the HSO program

	Eligibility	Coverage Period	Renewal
HSO-Core Stream	A household with an income equal to or less than the levels determined by the Ministry	One benefit year (August 1st to July 31st)	Eligibility will be automatically assessed each benefit year

Income eligibility requirements (HSO-Core)

Number of dependent children in your household	Family net income
1 child	$22,401 or lower
2 children	$24,096 or lower
3 children	$25,791 or lower
4 children	$27,486 or lower
5 children	$29,181 or lower
6 children	$30,876 or lower
7 children	$32,571 or lower
8 children	$34,266 or lower
9 children	$35,961 or lower
10 or more children	$37,656 or lower. Add $1,695 for each additional dependent child to determine the income level at which your family would qualify for Healthy Smiles Ontario.

www.ontario.ca/healthysmiles

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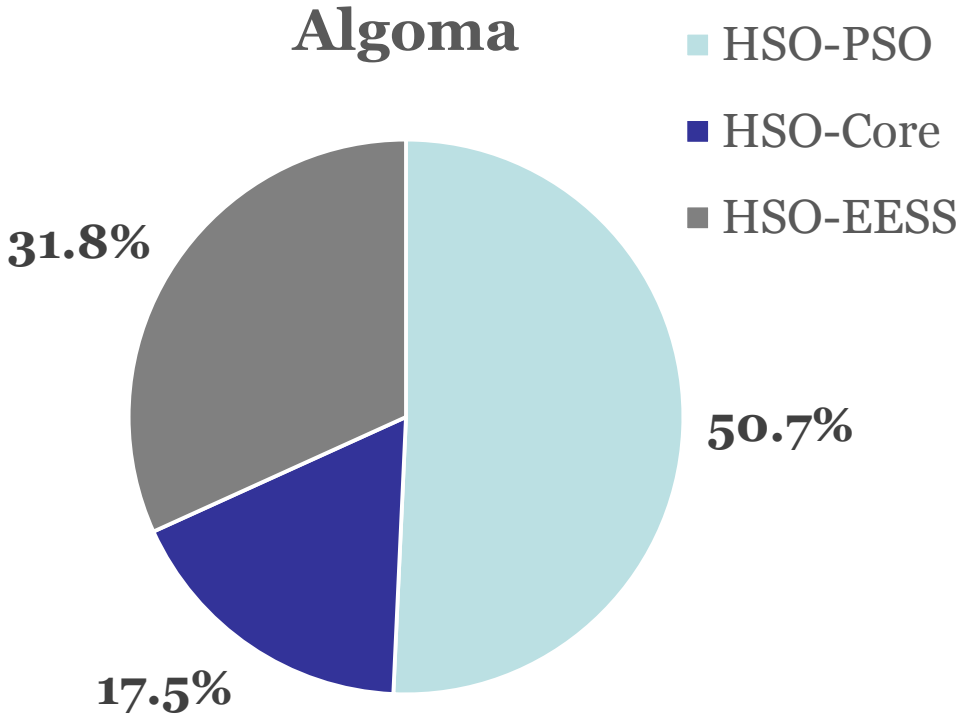
Streams of the HSO program

	Eligibility	Coverage Period	Renewal
HSO-Emergency & Essential Services (HSO-EESS)	Clinical need Financial hardship	12 months from date of enrollment	Re-apply at the end of 12 months to determine if they are still eligible.

Streams of the HSO program

	Eligibility	Coverage Period	Renewal
HSO-Preventive Services Only Stream (HSO-PSO)	Clinical need Financial hardship	Up to 12 months from enrolment date.	After 12 months re-screened & re-enrolled

APH client visits in 2016



Public health role with client navigation

- Assist clients to enroll
- Support families
- Follow-up to ensure treatment has been initiated and completed
- Program promotion
- Targeted outreach to priority populations/communities as needed
- Oral health education

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For more information…

Oral Health Program

Parent Child Information Line (PCIL)

www.ontario.ca/healthysmiles

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April 20, 2017

Minister Eric Hoskins
Ministry of Health and Long-Term Care
10th Floor, Hepburn Block
80 Grosvenor St.
Toronto, ON M7A 1R3

Dear Minister Hoskins,

There is certainly growing concern as the rate of deaths from opiates across the province has been rising to alarming rates. At their meeting on Feb 16, 2017, the Sudbury & District Board of Health carried resolution #12-17. Through this letter they addressed the current opioid-related harms in both Northern Ontario and across Canada. The resolution highlighted the need to ensure a prompt implementation of the provincial plan with close communication with its key stakeholders and boards of health. It also addressed the importance of a coordinated national and provincial approach to the worsening opioid problem.

As in Sudbury and District, work is underway in the Algoma district to address the opioid-use and opioid related-harms. However, we agree there needs to be a coordinated effort from a governmental level to ensure the health of all. We would like to echo the congratulations to the Minister of Health for working towards federal and provincial opioid action plans and encourage timely implementation of their developed strategies.

Therefore be it resolved that at the Algoma Public Health Board of Health meeting on April 26, 2017 we passed a motion to endorse the Sudbury & District Board of Health resolution regarding the provincial and federal opioid strategies.

Sincerely,

Mr. Lee Mason
Board Chair

cc: The Honourable Jane Philpott P.C., M.P. Minister of Health
The Honourable David Orazietti, MPP for Sault Ste. Marie

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Terry Sheehan, MP for Sault Ste. Marie
Michael Mantha, MPP for Algoma-Manitoulin
Carol Hughes, MP for Algoma-Manitoulin-Kapuskasing
The Honourable Premier Kathleen Wynne
The Honourable Jody Wilson-Raybould, Attorney General of Canada
The Honourable Yasir Naqvi, Attorney General of Ontario
Dr. David Williams, Ontario Chief Medical Officer of Health
Linda Stewart, The Association of Local Public Health Agencies
Ontario Medical Officers of Health
Ontario Boards of Health
Member Municipalities
Ontario Public Health Association
Centre for Addiction and Mental Health

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MEDICAL OFFICER OF HEALTH/CHIEF EXECUTIVE OFFICER
BOARD REPORT
APRIL 2017

Prepared by Dr. Marlene Spruyt, Medical Officer of Health/CEO

And the Management team

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APH AT-A-GLANCE

The annual provincial public health conference (TOPHC) takes place at the end of March and myself and 5 other employees were able to attend.

Justin and I have continued to visit municipalities in the district and travelled to Spanish on April 5. We are scheduled to present at the Algoma District Municipal Association meeting in Richard's Landing on April 22. APH was also invited to participate in a Local Urban Indigenous Community Collaboration Planning Session held in SSM on March 22 and myself and a Health Equity PHN attended.

On March 27 I attended the NE Consultation Meeting on Modernized Standards for Public Health Programs and Services which was held in Sudbury for all 5 NE public health units. I have attached the slide deck to this report and will speak in a bit more detail about the content of these slides during our meeting.

RISK MANAGEMENT

ENVIRONMENTAL HEALTH

Director: Sherri Cleaves
Manager: Jonathon Bouma

Topic: Safe Water Program- Small Drinking Water Systems

This report addresses the following Safe Water OPHS requirement:

- Requirement #1: The board of health shall report Safe Water Program data elements in accordance with the Beach Management Protocol, 2008 (or as current); the Drinking Water Protocol, 2008 (or as current); and the Recreational Water Protocol, 2008 (or as current).
- Requirement #2: The board of health shall conduct surveillance of drinking water systems and of drinking water illnesses of public health importance, their associated risk factors, and emerging trends in accordance with the Drinking Water Protocol, 2008 (or as current); the Infectious Diseases Protocol, 2008 (or as current); and the Population Health Assessment and Surveillance Protocol, 2008 (or as current).

This report addresses the following Strategic Directions: Be Accountable

Key Points	Small Drinking Water Systems (SDWS) regulation 319/08 and 318/08 outline the legal responsibilities of the owners and operators of these small systems and the requirements for ensuring compliance to protect public health. Examples of small drinking water systems include but are not limited to motels, bed & breakfasts, restaurants, gas stations, trailer parks, campgrounds, and churches. In Algoma there are: • 270 Small Drinking Water systems that require assessment every 2-4 years • 19 SDWS that are seasonal fly-in camps

	Large municipal drinking water systems are inspected by the Ministry of Environment and Climate Change and the report of their inspection is shared with the Medical Officer of Health. The MOHLTC accountability agreement states that 100% of all SDWS inspections due for inspection in that year are completed.
Activities	Public Health inspectors (PHIs) conduct routine inspections of SDWS each year based on a Ministry provided risk assessment framework that includes looking at past compliance and water sampling history. All SDWS are: • identified • assessed for risk using the MOHLTC Risk Categorization Tool (RCat) • assigned risk control measures • inspected for compliance with the regulations. All components of the system are inspected including source, sewage disposal system, treatment system(s), record keeping, and sampling history. Site mapping, GPS coordinates and photographs are collected and maintenance/sampling records are reviewed. Water is analyzed onsite for up to 5 parameters and a sample taken to the Public Health Laboratory for further bacteriological testing. • Required to be monitored and maintained by competent operators • sampled at a predetermined frequency to confirm water is safe to drink • Followed up after initial inspection with Risk categorization data input, documentation/photographs uploaded. Risk is calculated and assessed for accuracy and adjustment made if necessary. A compliance letter and written Directive of requirements and responsibilities created and delivered to the owner Where risk mitigation is required, a compliance re-inspection is conducted. Where non-compliance with the regulations is identified, enforcement options are reviewed and implemented. Records are monitored for sampling compliance. SDWS in fixed premises establishment is routinely audited and sampled during other routine inspections. (for example a premise may have a food inspection conducted and a water sample is taken at the same time) Owners/operators are provided information and education on rationale and objectives of legislation and public health protection.
Risk	If drinking water comes from a lake, stream, reservoir or surface water, it can easily become contaminated in a number of ways. Rain water, melting snow and other drainage carry impurities into surface water sources. Water can become contaminated with: • Biological organisms, such as bacteria, parasites and viruses; • Chemical agents, such as nitrates and lead; • Toxins created by algae in surface water. Surface water sources are unsafe for drinking, unless the water is filtered and treated to destroy harmful micro-organisms. Toxins require specialized treatment systems. If drinking water is drawn from a well, the source water is considered to be at lower risk

	for contamination than surface water. However contaminants may enter through cracks in the casing, poorly fitted lids or other structural faults. Private wells can become contaminated with bacteria, nitrates or other chemicals if they are close to sources of pollution.
Analysis and Compliance	PHIs conducted 49 of 51 required inspections of SDWS across the district last year. The PHIs conduct a thorough risk assessment (RCat) and issue directives as per the regulatory requirements.

PROGRAM HIGHLIGHTS

PRESCHOOL SPEECH AND LANGUAGE PROGRAM

Director: Laurie Zeppa
Manager: Leslie Wright

Topic: March Break School Readiness Camp

This report addresses the following requirements of the Ontario Public Health Standards:

- (2014) or Program Guidelines/Deliverables:

This report addresses the following Strategic Directions: Improve Health Equity and Collaborate Effectively

In the report: With Our Best Future in Mind: Implementing Early Learning in Ontario, (2009) Charles Pascal set goals for every child entering the primary grades in Ontario. These goals include: the child should be healthy and secure, emotionally and socially competent, eager, confident and successful learners and respectful of the diversity of their peers. Children's speech and language skills are critical to the goals Pascal identified, in addition speech and language skills improve a child's self-esteem and confidence, help a child get along with others and reduce behavior problems.

Keeping the Pascal report in mind, "school readiness" is an overarching goal for all children receiving intervention in the APH Preschool Speech and Language program (PSLS). To enhance this readiness, "school readiness group programs" are offered to children who would benefit from group setting intervention. The structure of the programs are set up to mimic a school setting and are delivered Monday – Thursday (parents can choose the morning or afternoon session) for a week,with emphasis on interventions that support "social communication skills" in addition to ensuring the children's individual intervention needs are met. These programs are offered in the spring and in the summer to children transitioning to school in September.

The spring program or "the March Break Camp" in 2017 reached 32 children, with a total of 256 intervention hours provided. The children in attendance had a variety of speech and language delays including speech production difficulties, language delays, and social communication concerns. At the end of the program each child received a Child Profile that families may choose to share with school staff to assist the school with their child's future speech and language development.

One mother, who was reluctant to attend any programming for her child, came to the March Break Camp and now understands how important it is for her child to be ready for school. She is currently attending additional programming with her child.

All children are unique and develop speech and language skills at different times. Every child needs to enter school with confidence and school readiness group programs have contributed to building this confidence in the children and families. Staff from the PSLS, THRIVE and our Infant Child Development Program worked collaboratively to deliver these successful camps. PSLS has been coordinating the programs for 4 years.

Respectfully submitted,
Dr. Marlene Spruyt

Ontario Public Health Standards Modernization

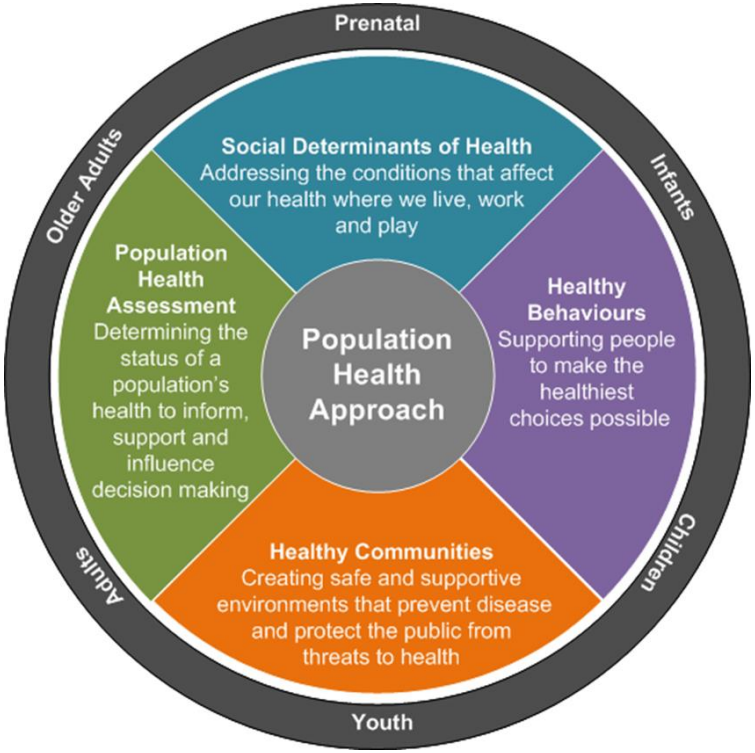
Regional Consultations
March and April, 2017

Ontario

What is Public Health?

Public health programs and services are focused primarily in four domains – Social Determinants of Health, Healthy Behaviours, Healthy Communities, and Population Health Assessment.

Public health work is grounded in a population health approach – focused on upstream efforts to promote health and prevent diseases to improve the health of populations and the differences in health among and between groups. Health risks and priorities change as people grow and age and public health works to address health across the life course.



Policy Framework for Public Health Programs & Services

The **Policy Framework for Public Health Programs and Services** articulates public health's goal and objectives as the sector transforms, and outlines the contribution of its work in reaching population health outcomes related to health and health equity.

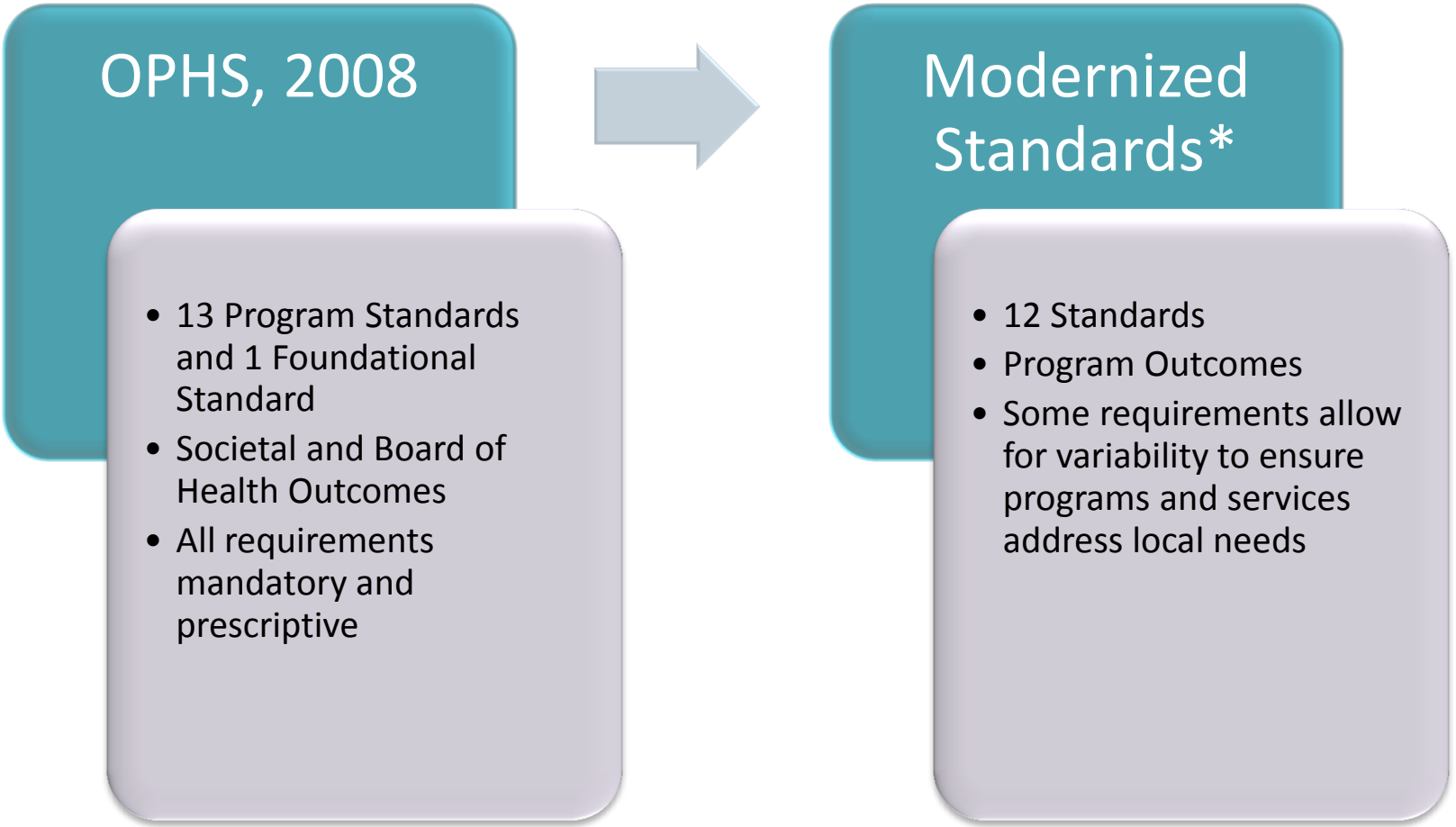
GOAL	To improve and protect the health and well-being of the population of Ontario and reduce health inequities				
POPULATION HEALTH OUTCOMES	• Improved health and quality of life • Reduced morbidity and mortality • Reduced health inequity among population groups				
DOMAINS	**Social Determinants of Health**	**Healthy Behaviours**	**Healthy Communities**	**Population Health Assessment**	
OBJECTIVES	To reduce the negative impact of social determinants that contribute to health inequities	To increase knowledge and opportunities that lead to healthy behaviours	To increase policies and practices that create safe, supportive and healthy environments	To increase the use of population health information to guide the planning and delivery of programs and services in an integrated health system	
ENABLERS	Legislation	Funding	Evidence	Agencies & Associations	Municipal & Federal Governments	Partner Organizations
PROGRAMS AND SERVICES	**GOALS** • To increase the use of public health knowledge and expertise in the planning and delivery of programs and services within an integrated health system • To reduce health inequities with equity focused public health practice • To increase the use of current and emerging evidence to support effective public health practice • To improve behaviours, communities and policies that promote health and well-being • To improve growth and development for infants, children and adolescents • To reduce disease and death related to infectious and communicable diseases of public health importance • To reduce disease and death related to vaccine preventable diseases • To reduce disease and death related to food, water and other environmental hazards • To reduce the impact of emergencies on health				
PARTNERS	Health Care (including Primary, Community, Acute and Long-Term Care), Education, Housing, Children and Youth Services, Community and Social Services, Labour, Environment, Agriculture and Food, Transportation, Municipalities, Non-Governmental Agencies, Public and Private Sectors, Academia, and Indigenous communities and organizations				

Modernized Standards

- An Executive Steering Committee (ESC) has been providing strategic leadership for the Standards Modernization process.
  - The Practice and Evidence Program Standards Advisory Committee (PEPSAC) provided expert advice and made recommendations on the specific requirements.

- The scope of the modernized Standards for Public Health Programs and Services was shaped by considering the:
  - Essential public health functions;
  - Health needs of the population from public health perspective and functions;
  - Impact and effectiveness of the current program standards;
  - Most appropriate role for public health sector within an integrated health system; and
  - An enhanced emphasis on responding to local needs and decreasing health inequities by addressing the needs of priority populations and planning programs to address identified local needs.

Modernized Standards (cont'd)



*An overview of the changes to the Standards is included in Appendix 1 (slides 23 – 26).

Note: Planning is underway for the review of the Protocols. Updates may include development of new Protocols and/or revision of existing Protocols to reflect the Modernized Standards.

Modernized Standards (cont'd)

- The Ontario Public Health Standards include societal and board of health outcomes.

- The Modernized Standards for Public Health Programs and Services now include population health outcomes, as articulated in the Policy Framework for Public Health Programs & Services, and program outcomes.

- Population health outcomes replace the previous societal outcomes.
  - Focus is on board of health's ***contribution*** to population health outcomes (and not attribution).

- Program outcomes replace the previous board of health outcomes.
  - Represent the anticipated ***results achieved*** through delivery of public health programs and services.

Modernized Standards (cont'd)

Principles	
Need	Boards of health shall continuously tailor their programs and services to address needs of the health unit population. Need is established by assessing the distribution of social determinants of health, health status, and incidence of disease and injury.
Impact	Boards of health shall assess, plan, deliver, and manage their programs and services by considering evidence, effectiveness of the intervention, barriers to achieving maximum health potential, relevant performance measures, and unintended consequences.
Capacity	Understanding local public health capacity required to achieve outcomes is essential to ensure the effective and efficient delivery of public health programs and services. Boards of health shall strive to make the best use of available resources to achieve the capacity required to meet the standards.
Partnership, Collaboration and Engagement	Boards of health shall engage and establish meaningful relationships with a variety of sectors, partners, communities, priority populations, and citizens, which are essential to the work of public health and support health system efficiency. Establishing meaningful relationships with priority populations includes building and further developing the relationship with Indigenous communities. These relationships may take many forms and need to be undertaken in a way that is meaningful to the community and/or organization.

Foundational Standards			
Population Health Assessment	Health Equity	Effective Public Health Practice	Emergency Preparedness, Response, and Recovery

Program Standards							
Chronic Diseases and Injury Prevention, Wellness and Substance Misuse	Food Safety	Healthy Environments	Healthy Growth and Development	Immunization	Infectious and Communicable Diseases Prevention and Control	Safe Water	School Health

Modernized Standards (cont'd)

Components of Each Standard		
Goal	**Program Outcomes**	**Requirements**
The goal is a statement that reflects the broadest level of results to be achieved in a specific standard. The work of boards of health, along with other parts of the health system, community partners, non-governmental organizations, governmental bodies, and community members, contribute to achieving the goal.	Program outcomes are the results of programs and services implemented by boards of health. Outcomes often focus on changes in awareness, knowledge, attitudes, skills, practices, environments, and policies. Each board of health shall establish internal processes for managing day-to-day operations of programs and services to achieve desired program outcomes.	Requirements are the specific statements of action. Requirements articulate the activities that boards of health are expected to undertake. Some requirements are core to public health practice and are expected to be adhered to consistently across the province while others are to be carried out in accordance with the local context through the use of detailed population based analysis and situational assessment. All programs and services are tailored to reflect the local context and are responsive to the needs of priority populations. Protocols are named in many requirements to provide further direction on how boards of health must operationalize specific requirement(s).

Standardization and Variability

- The modernized Standards for Public Health Programs and Services will balance the need for **standardization** across the Province with the need for **variability** to respond to local needs, priorities and contexts.

Standardization

- Specificity will remain for those programs and services where standardization is required to protect the health of the public.
- Where identified, protocols will be revised to reflect increased standardization.

E.g. Infectious and Communicable Diseases
"The board of health shall receive reports of complaints regarding infection prevention and control practices and respond to and/or refer to appropriate regulatory bodies, including regulatory colleges, in accordance with applicable provincial legislation and in accordance with the Infection Prevention and Control Practices Complaint Protocol, 2016 (or as current)."

Variability

- Greater variability will be accommodated in areas where there is an opportunity to plan programs to decrease health inequities and address needs of priority populations.

E.g. Chronic Diseases and Injury Prevention, Wellness and Substance Misuse
"The board of health shall implement a program of public health interventions that addresses chronic disease and substance misuse risk factors to reduce the burden of illness from chronic disease and substance misuse"…informed by:

- *Assessment;*
- *Evidence of effectiveness of interventions;*
- *Consultation and collaboration with stakeholders; and*
- *Topics based on need.*

Changes to Standards

OPHS, 2008	Modernized Standards
• Foundational	• Population Health Assessment¥
• Chronic Disease Prevention	• Health Equity*
• Prevention of Injury and Substance Misuse	• Effective Public Health Practice*
• Reproductive Health	• Emergency Preparedness, Response and Recovery**
• Child Health	• Chronic Diseases and Injury Prevention, Wellness and Substance Misuse¥
• Infectious Diseases Prevention and Control	• Food Safety‡
• Rabies Prevention and Control	• Healthy Environments¥
• Sexual Health, Sexually Transmitted Infections, and Blood-borne Infections (including HIV)	• Healthy Growth and Development¥
• Tuberculosis Prevention and Control	• Immunization***
• Vaccine Preventable Diseases	• Infectious and Communicable Diseases***
• Food Safety	• Safe Water‡
• Safe Water	• School Health*
• Health Hazard Prevention and Management	
• Public Health Emergency Preparedness**	

Foundational Standards

Additional detail in Appendix 1

¥Significant changes to scope and requirements

*New Standard incorporating new and existing requirements

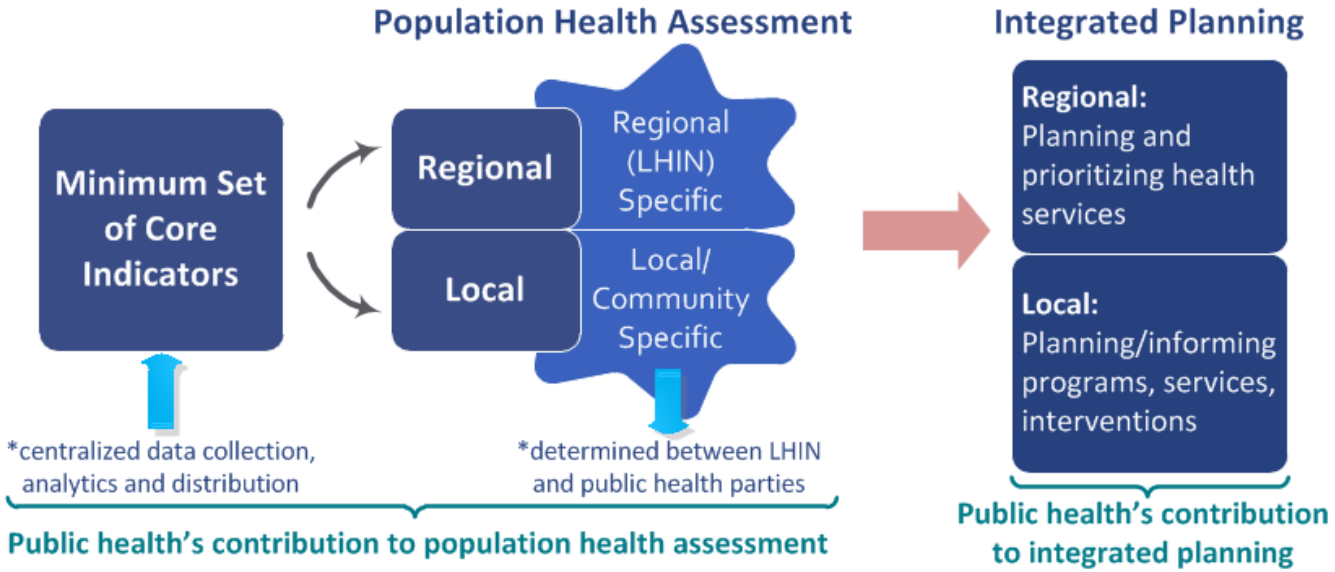
**While boards of health continue to have an important role in emergency preparedness, response and recovery, the Modernized Standards include one requirement. Additional detailed requirements will be specified in other ministry policy documents.

‡No significant changes

***Minor changes to scope and requirements

Population Health Assessment and Integrated Planning

Patients First Act Legislative Object: Formal relationship between Boards of Health and LHINs to ensure a consistent role for public health in integrated planning, informed by population health assessment and public health expertise/intelligence.

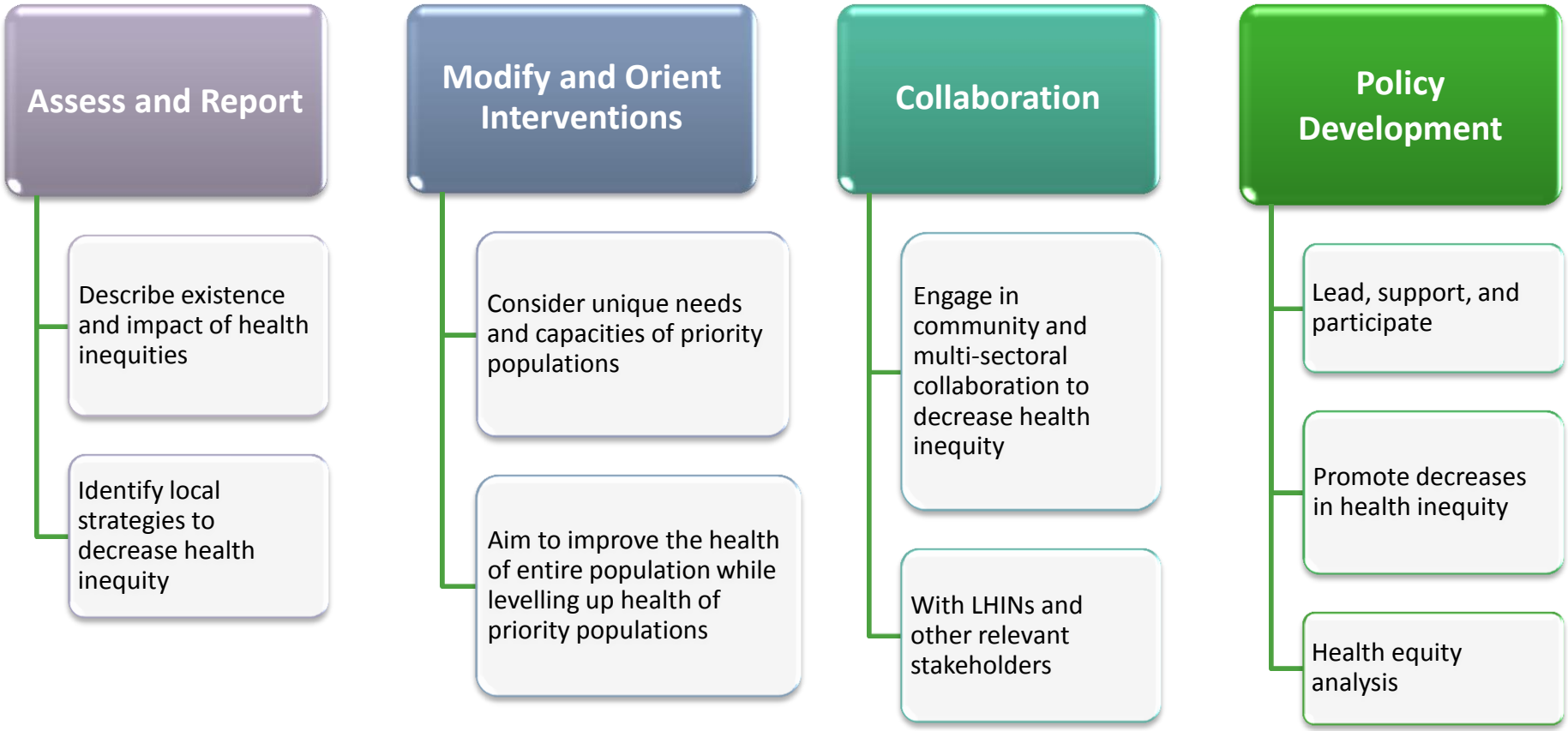


Public health brings:
- a **population health perspective**
- population health **assessment skills/expertise and data**
- **knowledge of local communities**
- Partnerships with local communities and sectors outside of health

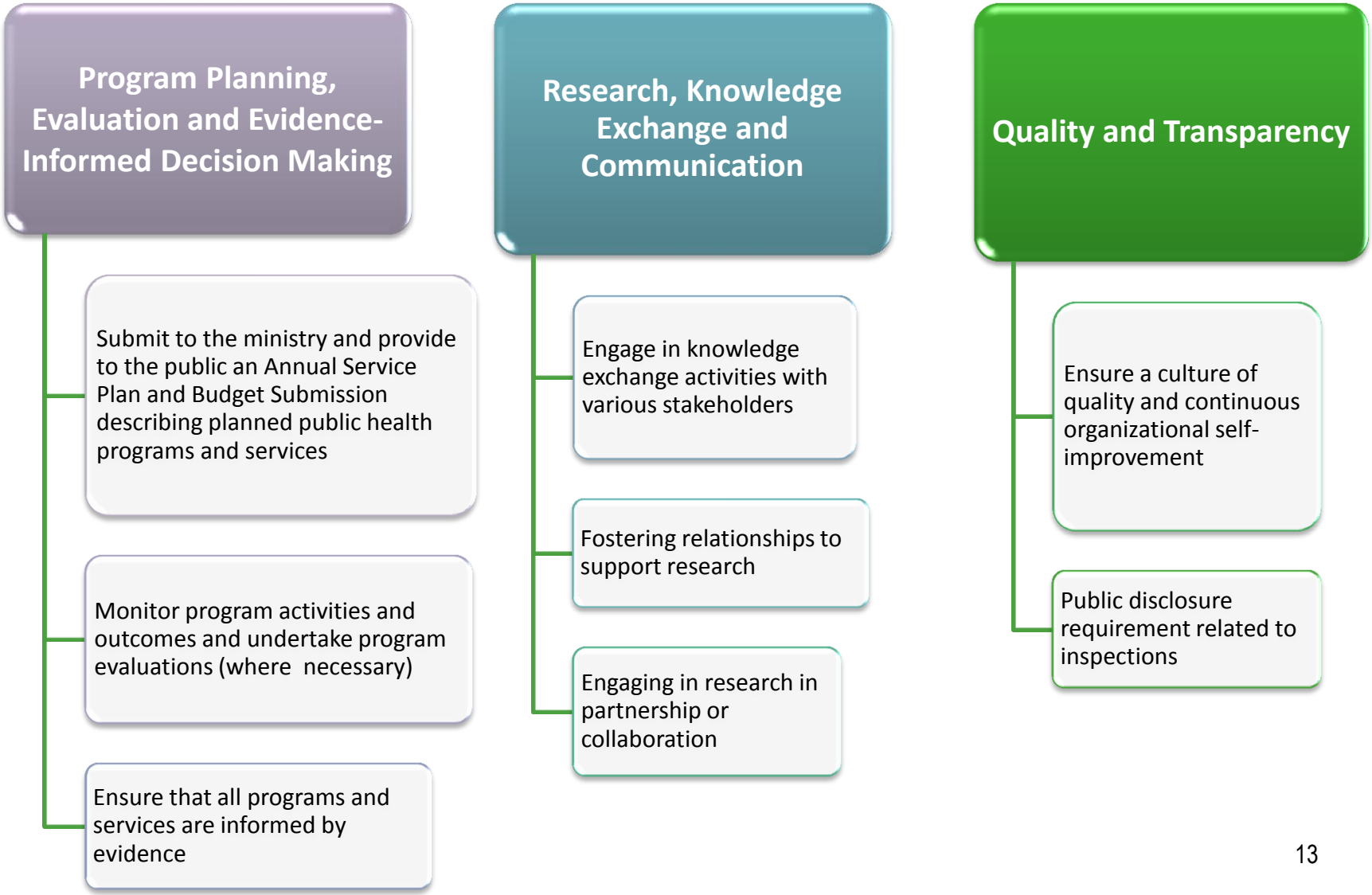
Public health's equity focus:
- articulates and highlights **trends and drivers** in health disparities
- brings **intelligence on the social factors** that underlie health, disease, and the use of health services

Public health's contribution will lead to:
- planning and service delivery that is **more responsive** to local need and includes a health equity lens
- **stronger linkages** between public health and health care where appropriate
- a **more comprehensive** picture of health and the health system and where there are gaps

New – Health Equity



New – Effective Public Health Practice



School Health

- The new School Health Standard consolidates setting-based requirements and is intended to further strengthen the relationship between boards of health and schools for a greater impact on the health of children and youth.

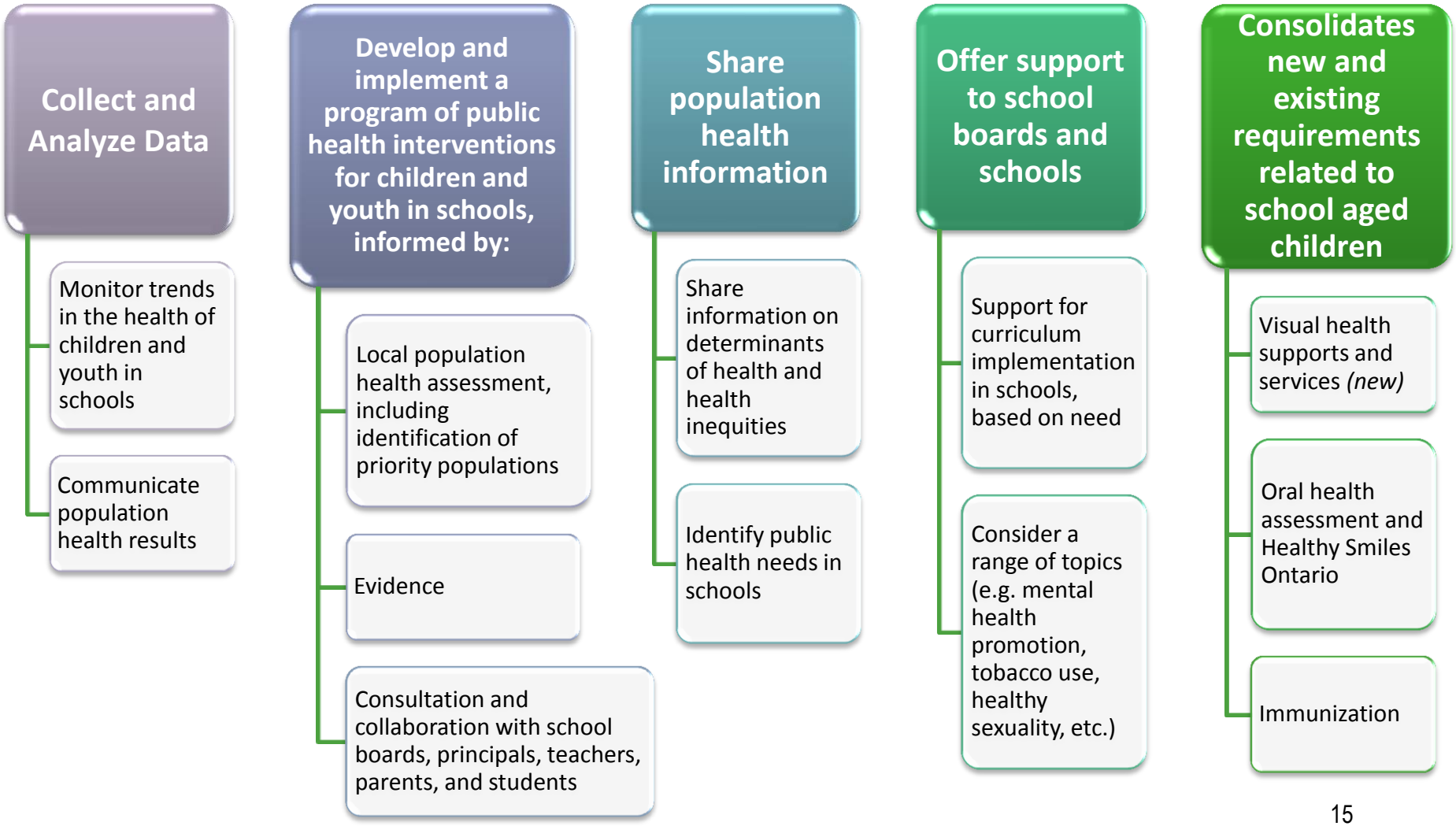
- It also reflects activities that have previously been delivered in and with schools.*

- The Standard was developed with input from the Ministry of Education and aligns with the Well-Being Strategy for Education.

- Establishment of a School Health Standard also aligns with recommendations from other health and education stakeholders.

**one new program requirement related to Vision Health*

New – School Health



What is Vision Screening?

- The vision screening program for public health is still in development and we will work with public health sector partners to further develop the program, and consult with other key stakeholders as appropriate.
- Key policy parameters of the vision screening program:
  - Is not intended for children in all grades, but will be focused on specific cohorts (e.g. kindergarten and pre-teens) to identifying possible visual defects using evidence-based screening tools;
  - Will not mandate children's participation in the program and will require parental consent;
  - Is not a substitute for a regular eye examination by an optometrist or ophthalmologist;
  - Does not provide a diagnosis and/or treatment; and
  - Does not require public health units to administer the provision of free eye glasses.

Protocols, Guidelines and Reference Documents

Standards for Public Health Programs and Services

Protocols	Guidelines
- Provide direction on how boards of health **must operationalize** requirement(s) outlined in the Standards for Public Health Programs and Services. - Anything referenced in statute will have a protocol. - Aim is consistent **implementation**.	- Provide direction on how boards of health **must approach/apply** requirement(s) outlined in the Standards for Public Health Programs and Services. - Aim is consistent **approach/application**.

Reference Documents

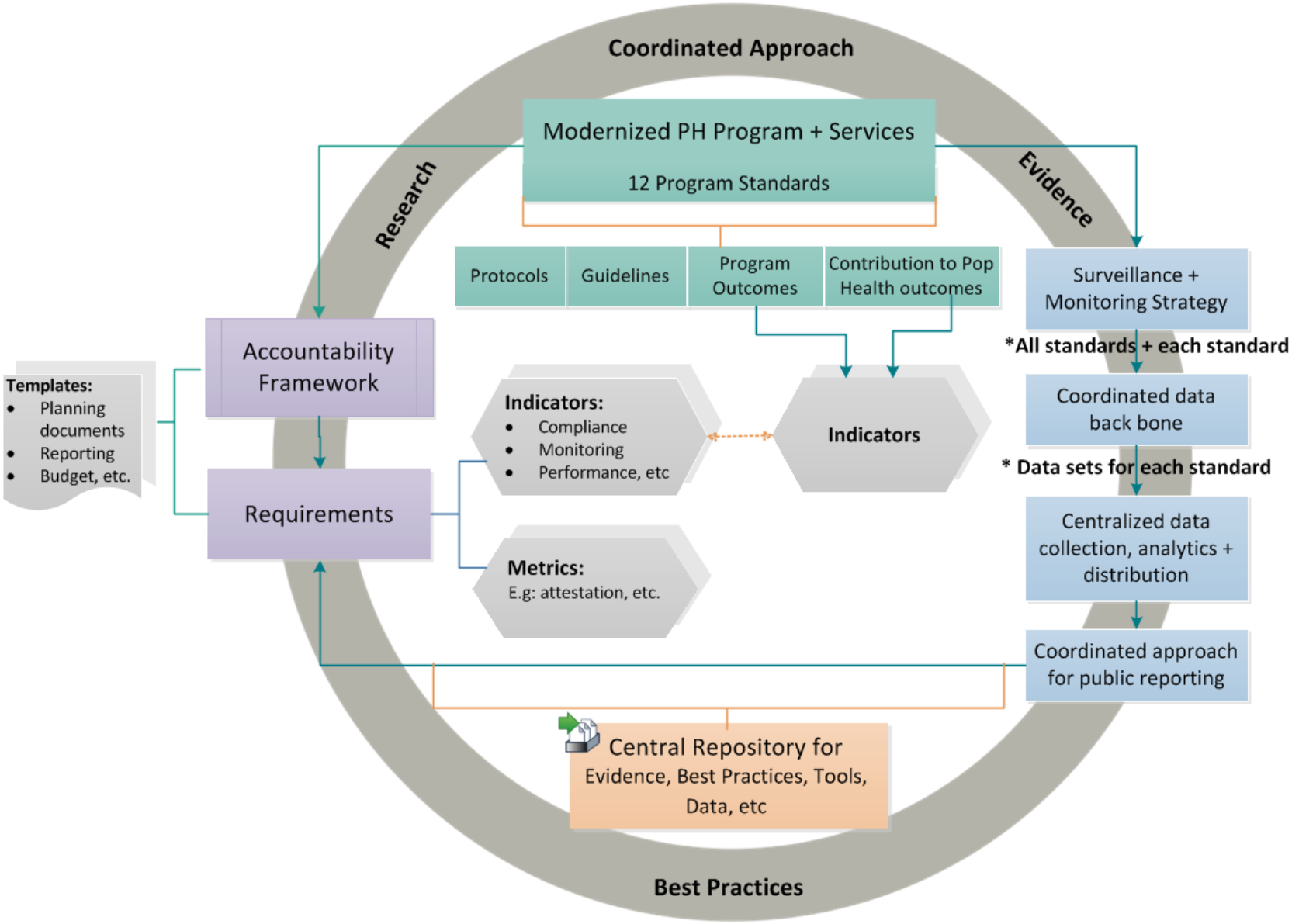
Protocols, Guidelines and Reference Documents: Examples

Standard	Protocol	Guidelines	Reference Documents
Health Equity		**Relationships with Indigenous communities (NEW)** To ensure a consistent approach to board of health engagement of Indigenous communities.	**Cultural Competencies Tools (NEW)** Tools to support boards of health in their engagement with Indigenous Communities.
Chronic Diseases and Injury Prevention, Wellness and Substance Misuse	**Tobacco Compliance Protocol** To ensure the consistent implementation and enforcement of the Smoke-Free Ontario Act (SFOA).	**Mental Health Promotion Guidelines (NEW)** Document would provide information on mental health promotion approaches to be used by boards of health in the implementation of a program of interventions that address chronic diseases and substance misuse, healthy growth and development, and school health curricula. **Concussion Prevention Guidelines (NEW)** Document would provide information on approaches to be used by boards of health as part of prevention of concussions in public health programs and services under the Chronic Diseases and Injury Prevention, Wellness and Substance Misuse as well as School Health Standards.	

Protocols, Guidelines and Reference Documents: Examples (Cont'd)

Standard	Protocol	Guidelines	Reference Documents
School Health	**Healthy Smiles Ontario (HSO) Protocol** Protocol could be an exception. To ensure boards consistently implement services to be offered through the Healthy Smiles Ontario Program to children meeting the clinical and financial eligibility requirements of the Program.	**Healthy Smiles Ontario Guidelines (NEW)** To provide additional information and clarification to support implementation of the Healthy Smiles Ontario Program, including, but not limited to sample letters to parents including Follow-Up Letter, Program Notification Letters; and ways that boards of health can assist patients/clients to find dental office. **Mental Health Promotion Guidelines (NEW)** See above. **Concussion Prevention Guidelines (NEW)** See above.	
Safe Water	**Recreational Water Protocol** To ensure the consistent delivery of local, comprehensive recreational water programs, including, but not limited to, surveillance and inspection activities; investigation and response to adverse events and complaints; public awareness and reporting activities.		**Beach Management Reference Document** Existing Beach Management Guidance Document (2014) to be revised to provide information on how boards can reduce the risk of water-borne illness and injury related to recreational water use at public beaches.

Modernization of the Public Health Standards: Overview



Questions for Discussion

- Are there areas that require further clarity or context?
- What are the operational considerations to support successful implementation of the modernized standards?
- What implementation supports are needed specific to:
  - Protocols
  - Guidelines
  - Training
  - Other
- What other tools or supports would assist you/your organization in this modernized approach to the delivery of public health programs and services (e.g., change management)?

APPENDIX 1

Overview of Changes to Standards

OPHS 2008	Changes
Foundational Standard	• All 2008 requirements have been re-organized in the modernized Population Health Assessment and Effective Public Health Practice Standards.

Chronic Disease Prevention	• Requirements reflected in the Chronic Diseases and Injury Prevention, Wellness and Substance Misuse Standard.
	• All health protection requirements remain (i.e. those related to enforcement of Smoke Free Ontario Act, Skin Cancer Prevention Act, and Electronic Cigarettes Act).
	• Removal of increasing public awareness of benefits of screening for early detection of cancers and other chronic diseases of public health importance (as a topic).
	• Removal of Nutritious Food Basket Protocol; collecting data on the cost of a nutritious food basket remains in the Population Health Assessment and Surveillance Protocol.
	• All other 2008 requirements are not explicitly stated but are reflected in modernized requirements:
	  • Requirement for BoHs to implement programs of public health interventions addressing chronic disease and substance misuse risk factors and risk factors for injuries based on a local assessment of needs.
	  • BoHs can consider a number of topics, related to chronic disease, substance misuse, and injuries, to focus on for public health interventions (variability component).

Prevention of Injury and Substance Misuse	• All 2008 requirements are not explicitly stated but are reflected in the Chronic Diseases and Injury Prevention, Wellness and Substance Misuse Standard:
	  • Requirement for BoHs to implement programs of public health interventions addressing chronic disease and substance misuse risk factors and risk factors for injuries based on a local assessment of needs.
	  • BoHs can consider a number of topics, related to chronic disease, substance misuse, and injuries, to focus on for public health interventions (variability component).

Overview of Changes to Standards (cont'd)

OPHS, 2008	Changes

Reproductive Health	• All 2008 requirements are not explicitly stated but are reflected in the Healthy Growth and Development Standard:
	  • Requirement for BoHs to implement a program of public health interventions to support healthy growth and development based on a local assessment of needs.
	  • BoHs can consider a number of topics, related to healthy growth and development, to focus on for public health interventions (variability component).

Child Health	• Requirements related to oral health moved to the School Health Standard.
	• Requirement to review drinking water quality reports moved to Safe Water Standard.
	• Healthy eating and physical activity topics included in the Chronic Diseases and Injury Prevention, Wellness and Substance Misuse Standard; broad topic of growth and development included in the Healthy Growth and Development Standard.
	• All other 2008 requirements are not explicitly stated but are reflected in the Healthy Growth and Development Standard:
	  • Requirement for BoHs to implement a program of public health interventions to support healthy growth and development based on a local assessment of needs.
	  • BoHs can consider a number of topics, related to healthy growth and development, to focus on for public health interventions (variability component).

Overview of Changes to Standards (cont'd)

OPHS, 2008	Changes
Infectious Diseases Prevention and Control	• All 2008 requirements reflected in the Infectious and Communicable Diseases Prevention and Control Standard; some requirements have been consolidated. • Requirement related to posting of infection prevention and control lapses reflected in the public disclosure requirement in the Effective Public Health Practice Standard; details to be included in the Protocol.

Rabies Prevention and Control	• Since the following are reflected in the Rabies Prevention and Control Protocol, removal of requirements to:
	  • Liaise with the Canadian Food Inspection Agency to identify local cases of rabies; and
	  • Annually remind individuals regarding their duty to report suspected rabies exposures.
	• All other 2008 requirements consolidated and reflected in the Infectious and Communicable Diseases Prevention and Control Standard.

Sexual Health, STI, and BBI (including HIV)	• All 2008 requirements reflected in the Infectious and Communicable Diseases Prevention and Control Standard; some requirements have been consolidated.
Tuberculosis Prevention and Control	• All 2008 requirements reflected in the Infectious and Communicable Diseases Prevention and Control Standard; some requirements have been consolidated.
Vaccine Preventable Diseases	• Removal of requirement to provide or ensure provision the availability of travel health clinics. • Requirements to assess the immunization status of children in accordance with ISPA and to provide school-based clinics moved to the School Health Standard. • All other 2008 requirements reflected in the Immunization Standard.

Overview of Changes to Standards (cont'd)

OPHS, 2008	Changes
Food Safety	• All 2008 requirements reflected in the modernized Food Safety Standard; some requirements have been consolidated.
Safe Water	• All 2008 requirements reflected in the modernized Safe Water Standard; some requirements have been consolidated.
Health Hazard Prevention and Management	• Removal of requirement to maintain systems to support timely communication with relevant partners about identified health hazard risks as it understood to be part of emergency preparedness and response activities as well as part of health hazard investigation and response. • Requirement to develop local vector-borne management strategy moved to the Infectious and Communicable Diseases Prevention and Control Standard. • All other 2008 requirements reflected in the Healthy Environments Standard.
Public Health Emergency Preparedness	• The modernized Emergency Preparedness, Response and Recovery Standard includes one requirement which refers BoHs to other ministry policy and guidance documents. • Other requirements will be reflected in other ministry policy and guidance documents currently being developed.

In summary…
- As a result of the changes, the number of requirements has decreased from 148 to 100.

Algoma Public Health
(Unaudited) Financial Statements February 28, 2017

Algoma Public Health
Statement of Operations
February 2017
(Unaudited)

	Actual YTD 2017	Budget YTD 2017	Variance Act. to Bgt. 2017	Annual Budget 2017	Variance % Act. to Bgt. 2017	YTD Actual/ YTD Budget 2017
Public Health Programs						
Revenue						
Municipal Levy - Public Health	$ 871,197	$ 871,197	$ -	$ 3,484,786	0%	100%
Provincial Grants - Public Health 75% Prov. Funded	1,218,200	1,218,200	-	7,309,200	0%	100%
Provincial Grants - Public Health 100% Prov. Funded	428,975	428,967	8	2,573,800	0%	100%
Fees, other grants and recovery of expenditures	79,350	103,363	(24,013)	670,476	-23%	77%
Provincial Grants - Funding for Prior Yr Expenses	0	0	-	-		
Total Public Health Revenue	$ 2,597,721	$ 2,621,726	$ (24,005)	$ 14,038,262	-1%	99%
Expenditures						
Public Health 75% Prov. Funded Programs	$ 1,734,811	$ 1,974,915	$ 240,104	$ 11,464,463	-12%	88%
Public Health 100% Prov. Funded Programs	378,885	428,969	50,085	2,573,800	-12%	88%
Total Public Health Programs Expenditures	$ 2,113,696	$ 2,403,885	$ 290,189	$ 14,038,262	-12%	88%
Excess of Rev. over Exp. 75% Prov. Funded	$ 433,935	$ 217,844	$ 216,091	$ (1)		
Excess of Rev. over Exp. 100% Prov. Funded	50,090	(3)	50,093	1		
Provincial Grants for Prior Yr Expenses	-	-	-	-		
Total Rev. over Exp. Public Health	$ 484,026	$ 217,841	$ 266,184	$ (0)		
Public Health Programs - Fiscal 16/17						
Provincial Grants and Recoveries	$ 131,538	106,130	(25,408)	143,500		
Expenditures	97,215	121,680	(24,465)	143,500		
Excess of Rev. over Fiscal Funded	34,323	(15,550)	49,873	-		
Community Health Programs						
Calendar Programs						
Revenue						
Provincial Grants - Community Health	$ 178,000	$ 178,002	$ (2)	$ 1,068,011	0%	100%
Municipal, Federal, and Other Funding	48,034	62,387	(14,353)	338,455	-23%	77%
Total Community Health Revenue	$ 226,034	$ 240,389	$ (14,355)	$ 1,406,466	-6%	94%
Expenditures						
Healthy Babies and Children	$ 179,697	$ 178,002	$ (1,695)	$ 1,068,011	1%	101%
Child Benefits Ontario Works	3,989	4,022	33	24,135	-1%	99%
Algoma CADAP programs	45,653	50,387	4,734	302,319	-9%	91%
One-Time Funding programs	937	6,000	5,063	12,000	-84%	16%
Total Calendar Community Health Programs	$ 230,276	$ 238,410	$ 8,134	$ 1,406,465	-3%	97%
Total Rev. over Exp. Calendar Community Health	$ (4,242)	$ 1,978	$ (6,220)	$ 1		
Fiscal Programs						
Revenue						
Provincial Grants - Community Health	$ 5,080,707	$ 5,147,307	$ (66,600)	$ 5,636,949	-1%	99%
Municipal, Federal, and Other Funding	733,615	728,316	5,299	807,364	1%	101%
Other Bill for Service Programs	39,915		39,915			
Total Community Health Revenue	$ 5,854,237	$ 5,875,623	$ (21,386)	$ 6,444,313	0%	100%
Expenditures						
Northern Ontario Fruit & Vegetable Program	74,029	107,066	$ 33,037	117,400	-31%	69%
Brighter Futures for Children	99,330	109,084	9,754	121,558	-9%	91%
Infant Development	577,003	579,274	2,271	631,935	0%	100%
Preschool Speech and Languages	560,635	563,068	2,432	627,356	0%	100%
Nurse Practitioner	109,316	116,290	6,974	127,753	-6%	94%
Genetics Counseling	348,659	347,239	(1,420)	378,806	0%	100%
Community Mental Health	3,039,645	3,132,890	93,245	3,426,098	-3%	97%
Community Alcohol and Drug Assessment	618,308	625,311	7,003	682,157	-1%	99%
Healthy Kids Community Challenge	184,978	204,147	19,169	225,000	-9%	91%
Stay on Your Feet	90,103	91,667	1,564	106,247	-2%	98%
Bill for Service Programs	45,425	-	(45,425)	-		
Misc Fiscal	0	-	-	-		
Total Fiscal Community Health Programs	$ 5,747,431	$ 5,876,035	$ 128,604	$ 6,444,311	-2%	98%
Total Rev. over Exp. Fiscal Community Health	$ 106,806	$ (412)	$ 107,218	$ 2		

Explanations will be provided for variances of 15% and $15,000 occurring in the first 6 months
and variances of 10% and $10,000 occurring in the final 6 months

Algoma Public Health
Revenue Statement
For the Two Months Ending February 28, 2017
(Unaudited)

	Actual YTD 2017	Budget YTD 2017	Variance Bgt. to Act. 2017	Annual Budget 2017	Variance % Act. to Bgt. 2017	YTD Actual/ YTD Budget 2017	Comparison Prior Year: YTD Actual 2016	YTD BGT 2016	Variance 2016
Levies Sault Ste Marie	605,743	605,743	0	2,422,972	0%	25%	601,261	393,808	207,453
Levies Vector Bourne Disease and Safe Water	14,858	14,858	0	59,433	0%	25%	339,491	162,919	176,572
Levies District	250,595	250,595	0	1,002,381	0%	25%	0	0	0
Total Levies	**871,197**	**871,197**	**0**	**3,484,786**	**0%**	**25%**	**940,752**	**556,726**	**384,026**
MOH Public Health Funding	1,188,484	1,188,483	1	7,130,900	0%	17%	1,240,949	1,249,633	(8,684)
MOH Funding Vector Bourne Disease	18,116	18,117	(1)	108,700	0%	17%	18,122	18,117	5
MOH One Time Funding Dental Health	0	0	0	0		0%	52,069	52,067	2
MOH Funding Safe Water	11,600	11,600	0	69,600	0%	17%	11,601	11,600	1
Total Public Health 75% Prov. Funded	**1,218,200**	**1,218,200**	**(0)**	**7,309,200**	**0%**	**17%**	**1,322,741**	**1,331,417**	**(8,676)**
MOH One Needle Exchange	8,452	8,450	2	50,700	0%	17%	8,448	8,450	(2)
MOH Funding Haines Food Safety	4,100	4,100	0	24,600	0%	17%	4,105	4,100	5
MOH Funding CINOT/Healthy Smiles	128,316	128,316	0	769,900	0%	17%	68,432	68,433	(1)
MOH Funding - Social Determinants of Health	30,084	30,083	1	180,500	0%	17%	30,085	30,083	2
MOH Funding Chief Nursing Officer	20,252	20,250	2	121,500	0%	17%	20,257	20,250	7
MOH Enhanced Funding Safe Water	2,584	2,584	0	15,500	0%	17%	2,580	2,583	(3)
MOH Funding Unorganized	85,852	85,850	2	515,100	0%	17%	83,384	83,383	1
MOH Funding Infection Control	52,068	52,067	1	312,400	0%	17%	601,261	393,808	207,453
MOH Funding Diabetes	25,000	25,000	0	150,000	0%	17%			
Funding Ontario Tobacco Strategy	72,267	72,267	0	433,600	0%	17%	0	0	0
One Time Funding	0	0	0	0					
Total Public Health 100% Prov. Funded	**428,975**	**428,967**	**8**	**2,573,800**	**0%**	**17%**	**818,552**	**611,091**	**207,461**
Funding for Prior Yr Expenses	**0**	**0**	**0**	**0**		**0%**			
Recoveries from Programs	1,677	1,677	0	10,061	0%	17%	33,144	41,191	(8,047)
Program Fees	38,592	41,624	(3,032)	249,743	-7%	15%	2,250	26,667	(24,417)
Land Control Fees	4,275	26,667	(22,392)	160,000	-84%	3%	42,106	26,667	15,439
Program Fees Immunization	32,412	29,917	2,495	179,500	8%	18%	0	1,667	(1,667)
HPV Vaccine Program	0	300	(300)	12,500	0%	0%	0	10,000	(10,000)
Influenza Program	0	1,100	(1,100)	40,000	-100%	0%	0	1,667	(1,667)
Meningococcal C Program	0	300	(300)	8,000	0%	0%	2,114	333	1,780
Interest Revenue	2,394	1,779	615	10,672	35%	22%	0	27,500	(27,500)
Other Revenues	0	0	0	0	0%	0%	0	0	0
Total Fees, Other Grants and Recoveries	**79,350**	**103,363**	**(24,013)**	**670,476**	**-23%**	**12%**	**79,614**	**135,691**	**(56,077)**
Total Public Health Revenue Annual	**$ 2,597,721**	**$ 2,621,726**	**$ (24,005)**	**$ 14,038,262**	**-1%**	**19%**	**$ 3,161,659**	**$ 2,634,925**	**$ 526,734**
Public Health Fiscal									
Panorama	68,376	59,680	8,696	74,600		92%	0	0	0
Rabies Software	26,488	14,450	12,038	28,900		92%			
Smoke Free Ontario NRT	27,500	24,000	3,500	30,000		92%			
Practicum	9,174	8,000	1,174	10,000		92%			
First Nations Inititative -One Time	0	0	0	0		0%	2,659,156	2,331,883	327,273
Total Provincial Grants Fiscal	**$ 131,538**	**$ 106,130**	**$ 25,408**	**$ 143,500**		**92%**	**$ 2,659,156**	**$ 2,331,883**	**$ 327,273**

Explanations will be provided for variances of 15% and $15,000 occurring in the first 6 months and variances of 10% and $10,000 occurring in the final 6 months

Algoma Public Health

Expense Statement- Public Health

For the Two Months Ending February 28, 2017

(Unaudited)

	Actual YTD 2017	Budget YTD 2017	Variance Act. to Bgt. 2017	Annual Budget 2017	Variance % Act. to Bgt. 2017	YTD Actual/ YTD Budget 2017	*Comparison Prior Year:* YTD Actual 2016	YTD BGT 2016	Variance 2016
Salaries & Wages	$ 1,253,344	$ 1,402,829	$ 149,485	$ 8,416,973	-11%	15%	$ 1,284,060	$ 1,384,441	$ 100,382
Benefits	333,540	329,462	(4,078)	1,987,528	1%	17%	318,871	346,110	27,239
Travel - Mileage	11,363	21,310	9,948	127,861	-47%	9%	14,730	24,277	9,546
Travel - Other	10,931	12,990	2,060	77,942	-16%	14%	6,111	15,634	9,523
Program	62,542	110,494	47,952	662,961	-43%	9%	95,866	94,968	(899)
Office	10,827	22,292	11,465	133,750	-51%	8%	4,489	15,333	10,844
Computer Services	84,913	116,586	31,673	699,518	-27%	12%	100,366	149,318	48,952
Telecommunications	43,918	41,132	(2,786)	325,994	7%	13%	12,286	37,747	25,461
Program Promotion	14,113	28,466	14,353	170,797	-50%	8%	16,741	35,681	18,940
Facilities Expenses	128,845	133,392	4,546	800,350	-3%	16%	97,445	135,654	38,209
Fees & Insurance	100,067	119,516	19,449	242,096	-16%	41%	129,245	40,201	(89,044)
Debt Management	76,816	76,817	0	460,900	0%	17%	77,878	76,000	(1,878)
Recoveries	(17,522)	(11,401)	6,121	(68,408)	54%	26%	(16,417)	(23,481)	(7,064)
	$ 2,113,696	$ 2,403,885	$ 290,189	$ 14,038,262	-12%	15%	$ 2,141,672	$ 2,331,883	$ 190,211

Explanations will be provided for variances of 15% and $15,000 occurring in the first 6 months and variances of 10% and $10,000 occurring in the final 6 months

Notes to Financial Statements – February 2017

Reporting Period

The February 2017 financial reports include two months of financial results for Public Health and the following calendar programs; Healthy Babies & Children, Child Benefits Ontario Works, and Algoma CADAP programs. All other programs are reporting eleven month results from operations year ended March 2017.

Statement of Operations (see page 1)

Summary – Public Health and Non Public Health Programs

As of February 28th, 2017, Public Health programs are reporting a $266 positive variance.

Total Public Health Revenues are indicating a negative $24k variance. This is a result a result of Fees, Other Grants & Recoveries being less than budgeted. Land Control Fees are driving this negative variance. APH typically captures the bulk of its fees between the spring and fall months.

There is a positive variance of $290k related to Total Public Health Expenses being less than budgeted. The $149k positive variance associated with Salary & Wages expense is contributing to this positive variance. The 2017 Public Health Operating Budget included the new positions of Associate Medical Officer of Health (AMOH) and Human Resource (HR) Manager. As of February 28th, these positions have not yet been staffed. Program expenses and Computer Services expenses are also contributing to the positive variance. As APH is early in its budget year, many expenditures related to Programs and Computer services have yet to be incurred.

Community Health Calendar programs are reporting a $6k negative variance.

On the revenue side, $14k negative variance is associated with Municipal, Federal, and Other Funding. This is due to timing of receipt of funding.

On the expense side, a $8k positive variance is associated with the timing of expenses incurred related to One-Time Funding programs.

Community Health Fiscal programs are operating within budget.

On the Expense side, the Northern Ontario Fruit & Vegetable Program is indicating a positive variance of $33k. APH incurs expenses in this program by providing financial assistance to the respective school boards through Ministry of Health and Long-Term Care (MOHLTC) dollars. The funding is used to help schools serve safe fruit and vegetables and provide quality healthy eating education. Funding from the MOHLTC to APH and other health units in the province has been postponed as a result of forthcoming changes with regards to the designated funding agency within the Ministry.

It is anticipated that all Community Health Fiscal programs will be within budget by March 31st, 2017.

Notes Continued...

Public Health Revenue (see page 2 for details)

Public Health funding revenues are showing a negative $24k variance.

The municipal levies are within budget.

Provincial Funding Grants are within budget.

There is a negative variance of $24k associated with Fees, Other Grants & Recoveries. This is a result of Land Control Fees being less than budgeted. APH typically captures the bulk of its fees between the spring and fall months.

Public Health Expenses (see page 3)

Salary & Wages
Salary & Wages is indicating a positive variance of $149k. The 2017 Public Health Operating Budget included the position of the AMOH and the HR Manager. As of February 28th, these positions have not yet been staffed.

Program
Program expense is indicating a positive variance of $48k variance. As APH is early in the 2017 Operating year, many expenditures related to Programs have yet to be incurred, which is contributing to the noted variance.

Computer Services
Computer Services is showing a positive variance of $32k. As APH is early in the 2017 Operating year, many expenditures related to Computer Services have yet to be incurred, which is contributing to the noted variance.

Fees & Insurance
Fees& Insurance is showing a positive variance of $19k. A portion of the annual Audit Fees have yet to be incurred which is contributing to the noted variance.

Notes Continued...

Non Public Health Programs Revenue and Expenses (see page 1)

All Non Public Health Programs are operating without budget issues.

Financial Position - Balance Sheet (see page 7)

Our cash flow position continues to be stable and the bank has been reconciled as of February 28th, 2017. Cash includes $325k in short-term investments plus $2.1M in APH operating account.

Long-term debt of $5.79 million is held by TD Bank @ 1.95% for a 60 month term (amortization period of 180 months) and matures on September 1, 2021. $338k of the loan relates to the financing of the Elliot Lake office renovations with the balance related to the financing of the 294 Willow Avenue facility located in Sault Ste. Marie.

There are no collection concerns for accounts receivable.

NOTE: February 2017 Balance Sheet (page 8) not included. The December 31st, 2016 Balance Sheet has been included in the draft 2016 Annual Audited financial statements and is provided in this month's board package.

Financial Statements of

ALGOMA PUBLIC HEALTH

Year ended December 31, 2016

ALGOMA PUBLIC HEALTH

Financial Statements

Year ended December 31, 2016

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INDEPENDENT AUDITORS' REPORT

To the Board of the Health for the District of Algoma Health Unit

We have audited the accompanying financial statements of Algoma Public Health, which comprise the statement of financial position as December 31, 2016, the statements of operations and accumulated surplus, change in net debt and cash flows for the year then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Algoma Public Health as at December 31, 2016, and its results of operations, its change in net debt and its cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Chartered Professional Accountants, Licensed Public Accountants

April 26, 2017

Sault Ste. Marie, Ontario

ALGOMA PUBLIC HEALTH

Statement of Financial Position

December 31, 2016, with comparative information for 2015

	2016	2015
Financial assets:		
Cash	$ 2,146,361	$ 2,368,709
Accounts receivable	477,198	658,510
Receivable from participating municipalities	9,159	5,134
	2,632,718	3,032,353
Financial liabilities:		
Accounts payable and accrued liabilities	1,587,880	1,490,108
Payable to the Province of Ontario	288,602	641,766
Deferred revenue (note 3)	494,864	664,639
Employee future benefit obligations (note 4)	2,550,458	2,453,960
Capital lease obligation	-	107,264
Term loans (note 8)	5,903,861	6,173,490
	10,825,665	11,531,227
Net debt	(8,192,947)	(8,498,874)
Non-financial assets:		
Tangible capital assets (note 5)	21,813,456	22,004,981
Contingencies (note 9)		
Commitments (note 10)		
Accumulated surplus (note 6)	$ 13,620,509	$ 13,506,107

See accompanying notes to financial statements.

ALGOMA PUBLIC HEALTH

Statement of Operations and Accumulated Surplus

Year ended December 31, 2016, with comparative information for 2015

	2016	2015
Revenue:		
Municipal levy - public health	$ 3,399,791	$ 3,263,351
Provincial grants:		
Public health	10,092,316	9,839,479
Community health	6,920,562	6,454,610
Fees, other grants and recovery of expenditures	2,175,775	2,601,409
	22,588,444	22,158,849
Expenses:		
Public Health Programs (Schedule 1)	13,266,405	13,246,362
Community Health Programs (Schedule 2)		
Healthy Babies and Children	1,063,993	1,089,620
Healthy Babies and Children - CAS	11,426	43,638
Child Benefits Ontario Works	24,223	20,000
Dental Benefits Ontario Works	296,837	308,448
Nurse Practitioner	125,918	120,613
Pre-Natal and Post-Natal Nurse Practitioner	-	1,000
Northern Ontario School of Medicine	-	359
Special Needs	-	40,707
CMH Transformational Supportive Housing	96,831	-
CMH/ASH Supportive Housing	11,739	-
Healthy Kids Community Challenge	303,284	22,090
Genetics Counseling	345,037	348,185
Diabetes Prevention	53,341	139,304
Stay on Your Feet	100,520	104,966
Northern Ontario Fruits and Vegetables	123,803	120,567
Health Communities Partnership	-	33,468
Community Alcohol and Drug Assessment	694,947	671,136
Remedial Measures	25,386	23,472
Community Alcohol and Drug Assessment - Ontario Works	85,887	78,597
OW-CADAP District	25,000	20,927
Community Mental Health Housing	82,191	54,791
Community Mental Health	3,127,185	2,941,458
Garden River CADAP Program	114,213	8,855
Infant Development	641,288	623,902
CHPI (District)	13,114	2,401
Brighter Futures for Children	102,508	124,072
Preschool Speech and Languages Initiative	408,219	355,433
PSL Communication Development	268,527	278,142
Employee future benefits	96,498	35,961
Interest on long-term debt	156,036	171,550
Amortization on tangible capital assets	809,686	791,893
	22,474,042	21,821,917
Annual surplus	114,402	336,932
Accumulated surplus, beginning of year	13,506,107	13,169,175
Accumulated surplus, end of year	$ 13,620,509	$ 13,506,107

See accompanying notes to financial statements.

ALGOMA PUBLIC HEALTH

Statement of Change in Net Debt

Year ended December 31, 2016, with comparative information for 2015

	2016	2015
Annual surplus	$ 114,402	$ 336,932
Additions to tangible capital assets	(618,161)	(317,316)
Amortization of tangible capital assets	809,686	791,893
	305,927	811,509
Net debt, beginning of year	(8,498,874)	(9,310,383)
Net debt, end of year	$ (8,192,947)	$ (8,498,874)

See accompanying notes to financial statements.

ALGOMA PUBLIC HEALTH

Statement of Cash Flows

Year ended December 31, 2016, with comparative information for 2015

	2016	2015
Cash provided by (used in):		
Operating activities:		
Annual surplus	$ 114,402	$ 336,932
Items not involving cash:		
Amortization of tangible capital assets	809,686	791,893
Gain on sale of tangible capital assets	-	(10,836)
Increase in employee future benefit obligations	96,498	35,961
	1,020,586	1,153,950
Change in non-cash working capital:		
Decrease (increase) in accounts receivable	181,312	(244,886)
Decrease (increase) in receivable from participating municipalities	(4,025)	7,706
Increase (decrease) in accounts payable and accrued liabilities	97,772	(207,978)
Decrease in payable to the Province of Ontario	(353,164)	(60,198)
Increase (decrease) in deferred revenue	(169,775)	109,280
	772,706	757,874
Financing activities:		
Repayment of term loan	(269,629)	(290,750)
Term loan funds received	-	350,000
Principal payments on obligation under capital lease	(107,264)	(431,763)
	(376,893)	(372,513)
Capital activities:		
Additions to tangible capital assets	(618,161)	(317,316)
Proceeds from sale of tangible capital assets	-	10,836
	(618,161)	(306,480)
Increase (decrease) in cash	(222,348)	78,881
Cash, beginning of year	2,368,709	2,289,828
Cash, end of year	$ 2,146,361	$ 2,368,709

See accompanying notes to financial statements.

The Board of Health for the District of Algoma operating as Algoma Public Health (the "Board") is governed by a public health board as mandated by the Health Protection and Promotion Act for the purpose of promoting and protecting public health.

1. Significant accounting policies:

The financial statements are prepared in accordance with the Canadian generally accepted accounting principles for government organizations as recommended by the Public Sector Accounting Board ("PSAB") of the Chartered Professional Accountants of Canada. Significant aspects of the accounting policies adopted by the Board are as follows:

(a) Basis of accounting:

Revenue and expenses are reported on the accrual basis of accounting.

The accrual basis of accounting recognizes revenue as they are earned and measurable. Expenses are recognized as they are incurred and measureable as a result of receipt of goods or services and the creation of a legal obligation to pay.

(b) Revenue recognition:

The operations of the Board are funded by the Province of Ontario, levies to participating municipalities and user fees. Funding amounts not received at year end are recorded as receivable. Funding amounts in excess of actual expenditures incurred during the year are repayable and are reflected as liabilities.

Certain programs of the Board operate on a March 31 fiscal year. Revenues received in excess of expenditures incurred at December 31 are deferred on the statement of financial position until related expenditures are incurred or upon final settlement.

(c) Prior years' funding adjustments:

The Ministry of Health and Long-Term Care undertakes financial reviews of the Board's operations from time to time, based on the Board's submissions of annual settlement forms. Adjustments to the financial statements, if any, a result of these reviews are accounted for in the period when notification is received from the Ministry.

1. Significant accounting policies (continued):

(d) Non-financial assets:

Non-financial assets are not available to discharge existing liabilities and are held for use in the provision of services. They have useful lives extending beyond the current year and are not intended for sale in the ordinary course of operations.

(e) Tangible capital assets:

Tangible capital assets are recorded at cost which includes amounts that are directly attributable to acquisition, construction, development or betterment of the asset. The cost, less residual value, of the tangible capital assets are amortized on a straight-line basis over the following number of years:

Asset	Years
Building	40
Leasehold improvements	10
Furniture and equipment	10
Vehicle	4
Computer equipment	3

Annual amortization is charged in the year of acquisition and in the year of disposal. Assets under construction are not amortized until the asset is available for productive use.

(f) Employee future benefit obligations:

The Board sponsors a defined benefit life and health care plan for all employees who retire from active service with an unreduced OMERS pension. The Board accrues its obligations under the defined benefit plan as the employees render the services necessary to earn these retirement benefits. The cost of future benefits earned by employees is actuarially determined using the projected benefit method prorated on service and incorporates management's best estimates with respect to mortality and termination rates, retirement age and expected inflation rate with respect to employee benefit costs.

Actuarial gains (losses) on the accrued benefit obligation arise from the differences between actual and expected experience and from changes in the actuarial assumptions used to determine the accrued benefit obligation.

1. Significant accounting policies (continued):

(g) Use of estimates:

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Significant items subject to estimates and assumptions include the carrying amount of tangible capital assets, valuation allowances for accounts receivables and obligations related to employee future benefits. Actual results could differ from those estimates. These estimates are reviewed periodically, and, as adjustments become necessary, they are reported in earnings in the year in which they become known.

2. Participating municipalities:

The participating municipalities are as follows:

City of Sault Ste. Marie
City of Elliot Lake
Town of Blind River
Town of Bruce Mines
Town of Thessalon
Township of Spanish
Municipality of Wawa
Municipality of Huron Shores
Village of Hilton Beach
Township of Dubreuilville
Township of Hilton
Township of Jocelyn
Township of Johnson
Township of Laird
Township of MacDonald, Meredith & Aberdeen Additional
Township of North Shore
Township of Plummer and Plummer Additional
Township of Prince
Township of St. Joseph
Township of Tarbutt & Tarbutt Additional
Township of White River
Township of Hornepayne
Certain unincorporated areas in the District of Algoma

3. Deferred revenue:

The Board operates several additional programs funded by the Ministry of Health and Long-Term Care. Excess funding received for these programs or programs funded for a program year which differs from the Health Unit's fiscal year is deferred in the accounts until the related costs and final settlements are determined.

A summary of the year's activity relating to those programs is as follows:

	2016	2015
Deferred revenue, beginning of year	$ 664,639	$ 555,359
Funds received during the year	101,663	114,798
Expenses incurred in the year	(271,438)	(5,518)
Deferred revenue, end of year	$ 494,864	$ 664,639

4. Employee future benefits:

(a) Pension agreements:

The Board makes contributions to the Ontario Municipal Employees Retirement Fund ("OMERS"), which is a multi-employer plan, on behalf of 186 (2015 - 182) members of its staff. The plan is a multi-employer, defined-benefit plan which specifies the amount of the retirement benefit to be received by the employees based on the length of service and rates of pay. The multi-employer plan is valued on a current market basis for all plan assets.

The Board's contributions to OMERS equal those made by the employees. The amount contributed was $1,160,876 (2015 - $1,165,825) for current service and is included as an expenses on the Statement of Operations and Accumulated Surplus. No pension liability for this type of plan is included in the Board's financial statements.

(b) Employee future benefit obligations:

Employee future benefit obligations are future liabilities of the Board to its employees and retirees for benefits earned but not taken as at December 31, 2016. The liabilities will be recovered from future revenues and consist of the following:

	2016	2015
Post-retirement benefits (i)	$ 1,118,112	$ 1,094,044
Non-vested sick leave (ii)	277,018	250,530
Accrued vacation pay (iii)	1,155,328	1,109,386
	$ 2,550,458	$ 2,453,960

4. Employee future benefits (continued):

(i) Post-retirement benefits:

The post-retirement benefit liability is based on an actuarial valuation performed by the Board's actuaries. The date of the most recent actuarial valuation of the post-retirement benefit plan is December 31, 2016. The significant actuarial assumptions adopted in estimating the Board's liability are as follows:

- Discount Rate 3.75%
- Health Care Trend Rate 4.5% to 8%

Information about the Board's future obligations with respect to these costs is as follows:

	2016	2015
Accrued benefit obligations, beginning of year	$ 1,094,044	$ 1,060,321
Current service cost	53,890	56,867
Interest cost	36,554	31,289
Benefits paid	(54,221)	(30,006)
Amortization of actuarial gains	(12,155)	(24,427)
Accrued benefit obligations, end of year	$ 1,118,112	$ 1,094,044

(ii) Non-vested sick leave:

Accumulated sick leave credits refers to the balance of unused sick leave credits which accrue to employees each month. Unused sick days are banked and may be used in the future if sick leave is beyond their yearly entitlement. No cash payments are made for unused sick time upon leaving the Board's employment.

(iii) Accrued vacation pay:

Accrued vacation pay represents the liability for vacation entitlements earned by employees but not taken as at December 31.

5. Tangible capital assets:

Cost		Balance at December 31, 2015	Additions	Transfers & (Disposals)	Balance at December 31, 2016
Building	$	22,732,421	-	-	22,732,421
Leasehold improvements		892,431	403,171	277,203	1,572,805
Furniture and equipment		1,914,772	-	-	1,914,772
Vehicle		40,113	-	-	40,113
Computer equipment		3,029,040	214,990	-	3,244,030
Construction in progress		277,203	-	(277,203)	-
Total	$	28,885,980	618,161	-	29,504,141

Accumulated Amortization		Balance at December 31, 2015	Disposals	Amortization expense	Balance at December 31, 2016
Building	$	2,376,792	-	536,499	2,913,291
Leasehold improvements		405,877	-	66,249	472,126
Furniture and equipment		1,069,290	-	196,910	1,266,200
Vehicle		-	-	10,028	10,028
Computer equipment		3,029,040	-	-	3,029,040
Total	$	6,880,999	-	809,686	7,690,685

		Net book value, December 31, 2015	Net book value, December 31, 2016
Building	$	20,355,629	19,819,130
Leasehold improvements		486,554	1,100,679
Furniture and equipment		845,482	648,572
Vehicle		40,113	30,085
Computer equipment		-	214,990
Construction in progress		277,203	-
Total	$	22,004,981	21,813,456

5. Tangible capital assets (continued):

Cost		Balance at December 31, 2014	Additions	Transfers & (Disposals)	Balance at December 31, 2015
Building	$	22,732,421	-	-	22,732,421
Leasehold improvements		892,431	-	-	892,431
Furniture and equipment		1,914,772	-	-	1,914,772
Vehicle		29,740	40,113	(29,740)	40,113
Computer equipment		3,029,040	-	-	3,029,040
Construction in progress		-	277,203	-	277,203
Total	$	28,598,404	317,316	(29,740)	28,885,980

Accumulated Amortization		Balance at December 31, 2014	Disposals	Amortization expense	Balance at December 31, 2015
Building	$	1,840,293	-	536,499	2,376,792
Leasehold improvements		367,976	-	37,901	405,877
Furniture and equipment		869,243	-	200,047	1,069,290
Vehicle		29,740	29,740	-	-
Computer equipment		3,011,594	-	17,446	3,029,040
Total	$	6,118,846	29,740	791,893	6,880,999

		Net book value, December 31, 2014	Net book value, December 31, 2015
Building	$	20,892,128	20,355,629
Leasehold improvements		524,455	486,554
Furniture and equipment		1,045,529	845,482
Vehicle		-	40,113
Computer equipment		17,446	-
Construction in progress		-	277,203
Total	$	22,479,558	22,004,981

6. Accumulated surplus:

Accumulated surplus is comprised of:

	2016	2015
Invested in tangible capital assets	$ 21,813,456	$ 22,004,981
Reserves (note 7)	324,702	706,335
Operating	(63,330)	(577,759)
Unfunded:		
Employee future benefits	(2,550,458)	(2,453,960)
Term loans	(5,903,861)	(6,173,490)
Balance, end of year	$ 13,620,509	$ 13,506,107

7. Reserves:

The Board has a reserve fund set aside for specific capital purposes by the Board.

	2016	2015
Balance, beginning of year	$ 706,335	$ 322,233
Additions to capital reserves	–	374,940
Amounts expended for capital purposes	(384,062)	–
Investment Income	2,429	9,162
Balance, end of year	$ 324,702	$ 706,335

8. Term loans:

	2016	2015
Term loan #1	$ 5,558,882	$ 5,823,490
Term loan #2	344,979	350,000
	$ 5,903,861	$ 6,173,490

Principal payment due on the term loans is as follows:

Year	Annual payments
2017	$ 349,453
2018	356,327
2019	363,339
2020	370,488
2021	4,464,254

Term loan #1 is a non-revolving loan bearing interest of 1.95%. The loan is repayable in blended monthly interest and principal payments of $36,164 and matures on September 1, 2021.

Term loan #2 bears interest of 1.95%. The loan is repayable in monthly interest and principal payments of $2,244. The loan is due on September 1, 2021.

Interest paid in the year is $156,036 (2015 - $171,550).

9. Contingencies:

The Board is periodically subject to claims or grievances. In the opinion of management, the ultimate resolution of any current claims or grievances would not have a material effect on the financial position (or results of operations) of the Board and any claims would not exceed the current insurance coverage. Accordingly, no provisions for losses has been reflected in the accounts of the Board for these amounts.

10. Commitments:

The Board is committed to minimum annual lease payments under various operating leases as follows:

Year	Annual payments
2017	$ 147,758
2018	152,680
2019	152,680
2020	152,680
2021	127,480

The annual lease payments are exclusive of maintenance and other operating costs.

11. Expenses by object:

	2016	2015
Salaries and benefits	$ 16,095,765	$ 15,645,123
Materials and supplies	5,568,591	5,384,901
Capital	809,686	791,893
	$ 22,474,042	$ 21,821,917

12. Comparative information:

Certain 2015 comparative information has been reclassified to conform with the financial statement presentation adopted for 2016. The changes made do not have an impact on the statement of operations and changes.

ALGOMA PUBLIC HEALTH

Statement of Revenue and Expenses – Public Health Programs — Schedule 1

Year ended December 31, 2016, with comparative information for 2015

	2016 Budget	2016 Total	2015 Total
Revenue:			
Provincial grant	$ 10,077,790	$ 10,092,316	$ 9,839,502
Levies	3,399,791	3,399,791	3,263,350
Recoveries	824,204	877,015	849,456
Total revenue	14,301,785	14,369,122	13,952,308
Expenses:			
Salaries and wages	8,407,479	7,917,247	7,836,268
Benefits	2,093,629	1,866,887	1,862,219
Accounting and audit	25,000	25,951	105,022
Equipment	322,955	328,440	247,592
Insurance	85,000	99,122	85,310
Occupancy and renovations	843,924	850,712	780,025
Office supplies	40,150	109,149	89,713
Other	58,000	35,039	44,748
Professional development	149,330	91,700	106,803
Program promotion	105,960	38,230	47,063
Program supplies	481,593	530,834	558,495
Program administration (recovery)	(140,883)	(94,227)	(89,833)
Purchase professional services	909,580	968,951	1,103,560
Telephone and telecommunications	220,983	306,184	230,390
Travel	243,085	192,186	238,987
	13,845,785	13,266,405	13,246,362
Excess of revenue over expenses before the undernoted	456,000	1,102,717	705,946
Interest on long-term debt	-	156,036	171,550
Amortization	-	809,686	791,893
Excess (deficiency) of revenue over expenses	$ 456,000	$ 136,995	$ (257,497)

ALGOMA PUBLIC HEALTH

Schedule 2

Expenditures - Community Health Programs

Year ended December 31, 2016, with comparative information for 2015

	Healthy Babies and Children	Healthy Babies and Children CAS	Child Benefits Ontario Works	Dental Benefits Ontario Works	Nurse Practitioner	Pre-Natal and Post-Natal Nurse Practitioner	CMH/ASH Supportive Housing	CMH Transformational Supportive Housing	Healthy Kids Community Challenge	Genetics Counselling	Diabetes	Stay on Your Feet	N. Ont Fruits/Veg.
	$	$	$	$	$	$	$	$	$	$	$	$	$
Salaries and employee benefits:													
Salaries	805,062	8,418	17,283	-	93,635	-	-	60,960	73,155	199,756	8,373	60,917	33,291
Employee benefits	214,879	2,103	2,717	-	21,650	-	-	-	8,956	46,451	4,167	14,709	9,044
	1,019,941	10,521	20,000	-	115,285	-	-	60,960	82,111	246,207	12,540	75,626	42,335
Supplies and services:													
Equipment	6,563	-	-	-	-	-	-	-	-	-	-	-	-
Occupancy and renovations	1,461	-	-	-	3,750	-	11,739	(12,766)	-	14,600	-	-	-
Office supplies	707	905	-	-	491	-	-	-	-	6,204	-	-	-
Insurance	-	-	-	-	875	-	-	-	-	-	-	-	-
Audit fees	-	-	-	-	349	-	-	-	-	-	-	-	3,262
Professional development	3,865	-	-	-	1,462	-	-	2,733	-	3,493	-	3,350	-
Program administration	-	-	-	-	-	-	-	5,500	-	-	1,875	-	-
Program promotion	-	-	-	-	-	-	-	-	7,259	-	10,493	-	-
Program supplies	3,419	-	4,223	-	-	-	-	40,404	188,578	4,718	24,164	21,455	78,206
Purchased professional services	1,675	-	-	296,837	-	-	-	-	22,038	57,989	3,500	-	-
Purchased services	-	-	-	-	496	-	-	-	-	-	-	-	-
Telephone and telecommunications	9,000	-	-	-	600	-	-	-	-	2,000	2	-	-
Travel	17,362	-	-	-	2,610	-	-	-	3,298	9,826	767	89	-
	44,052	905	4,223	296,837	10,633	-	11,739	35,871	221,173	98,830	40,801	24,894	81,468
Total expenditures	1,063,993	11,426	24,223	296,837	125,918	-	11,739	96,831	303,284	345,037	53,341	100,520	123,803

ALGOMA PUBLIC HEALTH

Schedule 2

Expenditures - Community Health Programs, continued

Year ended December 31, 2016, with comparative information for 2015

	Healthy Communities Partnership	Community Alcohol and Drug Assessment	Remedial Measures	Community Alcohol and Drug Assessment Ontario Works	OW-CADAP District	Community Mental Health Housing	Community Mental Health	Garden River CADAP Program	Infant Development	CHPI (District)	Brighter Futures for Children	Preschool Speech and Languages Initiative	PSL Communication Development	2016 Total	2015 Total
	$	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Salaries and employee benefits:															
Salaries	-	505,964	21,329	67,481	19,706	63,231	2,009,901	90,387	414,362	-	51,392	362,903	187,533	5,155,039	4,810,856
Employee benefits	-	99,086	2,087	8,965	3,294	13,749	483,358	20,043	105,683	-	13,615	31,459	50,577	1,156,592	1,135,782
	-	605,050	23,416	76,446	23,000	76,980	2,493,259	110,430	520,045	-	65,007	394,362	238,110	6,311,631	5,946,638
Supplies and services:															
Equipment	-	-	-	-	-	-	12,904	-	4,000	-	-	-	3,747	27,214	11,560
Occupancy and renovations	-	44,642	-	-	-	-	336,241	-	51,126	-	2,212	563	444	454,012	439,486
Office supplies	-	1,557	-	-	-	-	6,170	-	1,090	-	-	750	2,426	20,300	20,272
Insurance	-	-	-	-	-	-	-	-	-	-	-	-	-	875	250
Audit fees	-	-	-	-	-	-	18,667	-	-	-	-	750	-	23,028	22,013
Professional development		2,206	514	-	1,000	-	17,647	594	2,992	-	-	309	3,967	44,132	54,220
Program administration	-	10,000	-	-	-	3,075	56,333	-	16,000	-	-	-	-	92,783	89,833
Program promotion	-	-	-	-	-	-	2,000	-	-	-	-	-	-	19,752	26,486
Program supplies	-	5,008	1,456	9,421	-	-	33,663	1,447	8,432	13,114	34,435	2,978	5,192	480,313	305,914
Purchased professional services	-	8,240	-	-	-	54	5,015	-	326	-	-	-	5,981	401,655	421,739
Purchased services	-	-	-	-	-	-	-	-	11	-	-	-	-	507	1,704
Telephone and telecommunications	-	6,219	-	-	-	-	63,471	960	5,991	-	108	1,633	4,800	94,784	53,106
Travel	-	12,025	-	20	1,000	2,082	81,815	782	31,275	-	746	6,874	3,860	174,431	182,930
	-	89,897	1,970	9,441	2,000	5,211	633,926	3,783	121,243	13,114	37,501	13,857	30,417	1,833,786	1,629,513
Total expenditures	-	694,947	25,386	85,887	25,000	82,191	3,127,185	114,213	641,288	13,114	102,508	408,219	268,527	8,145,417	7,576,151

ALGOMA PUBLIC HEALTH

Summary of Public Health Programs — Schedule 3

Year ended December 31, 2016, with comparative information for 2015

	2016 Total	2015 Total
Revenue:		
MOH Public Health Funding	$ 7,130,900	$ 7,497,800
Medical Officer of Health Compensation	-	4,579
Needle Exchange Program Initiative	50,507	49,200
MOH Funding Haines Food Safety	24,600	18,740
Social Determinants of Health	180,500	180,500
MOH Funding Vector Bourne Disease	108,700	98,261
Funding - Chief Nursing Officer	121,500	121,500
MOH Funding Smoke Free Ontario	309,210	313,258
MOH Funding SFO Youth Engagement	80,000	79,968
MOH Funding SFO E - Cigarettes	7,667	16,000
MOH Funding Safe Water	48,034	43,992
MOH One Time Funding Safe Water Enhanced Safe Water	15,500	15,500
MOH Funding Unorganized	515,100	500,300
Diabetes Strategy	60,000	-
Panorama	108,844	52,900
MOH Funding Infection Control	216,635	186,139
MOH Funding Infection Control Nurse	90,100	90,100
MOH Funding CINOT Enhanced	-	29,494
MOH Funding Healthy Smiles	758,084	382,254
One Time Funding Prior Year	55,800	-
One Time Funding Imm of Sch Pup Act	13,800	-
One Time Funding Pharmacist	4,800	-
One Time Funding Legal Fees	140,497	-
MOH Funding PHI Practicum Student	7,506	10,000
Rabies Software	21,672	-
One time funding smoking cessation program	22,500	7,500
MOH Funding HR System upgrade	-	11,300
Levies	3,399,791	3,263,351
Recoveries from Programs	634,430	691,971
Interest	18,404	16,614
Other	224,181	140,893
Interim Chief Executive Officer Position	-	120,900
New Purpose Built Vaccine Refrigerators	-	18,100
	14,369,262	13,961,114
Expenditures:		
Public Health	10,443,582	11,027,581
Healthy Smiles	758,084	382,254
Unorganized	515,100	500,300
Smoke Free Ontario	309,210	316,205
Infection Control	216,635	186,139
Social Determinants of Health	180,500	181,942
Vector Bourne Disease	144,933	131,015
Legal fees	140,497	-
Chief Nursing Officer	121,500	121,500
Infection Control Nurse	90,100	90,100
SFO Youth Engagement	80,000	80,668
Safe Water	64,045	58,656
Diabetes strategy	60,000	-
One time funding Prior year	55,800	-
Needle Exchange Program Initiative	50,507	49,200
Rabies Software	27,755	-
Haines Food Safety	24,600	18,740
Safe Water Enhanced	15,500	15,500
One time funding Imm of Sch Pup Act	13,800	-
Smoking Cessation Program	12,502	11,556
PHI Practicum Student	10,000	10,000
HR System upgrade	9,343	5,724
MOH Funding SFO E - Cigarettes	7,667	39
Panorama	5,668	119,834
Pharmacist Integration	4,800	-
Medical Officer of Health Compensation	-	4,579
First Nations Initiative	-	76,511
CINOT Enhanced	-	45,333
Interim Chief Executive Officer Position	-	161,200
New Purpose Built Vaccine Refrigerators	-	18,100
	13,362,128	13,612,676
Excess of revenue over expenses	$ 1,007,134	$ 348,438

ALGOMA PUBLIC HEALTH
FINANCE AND AUDIT COMMITTEE MEETING
FEBRUARY 8, 2017
PRINCE MEETINGROOM, 3RD FLOOR, SSM
MINUTES

COMMITTEE MEMBERS PRESENT:	Ian Frazier	Dennis Thompson
REGRETS:	Lee Mason	
APH STAFF PRESENT:	Marlene Spruyt	Medical Officer of Health
	Justin Pino	Chief Financial Officer
	Joel Merrylees	Manager of Accounting and Budgeting
	Christina Luukkonen	Recording Secretary
GUESTS:	Chris Pomeroy, KPMG	
	Pat Policicchio, BrokerLink	

1) CALL TO ORDER:
Mr. Frazier called the meeting to order at 4:02pm

2) DECLARATION OF CONFLICT OF INTEREST
Mr. Frazier called for any conflict of interests; none were reported.

3) ADOPTION OF AGENDA ITEMS
Agenda items to be adjusted to accommodate presentations to the committee.

FC2017-01 Moved: D. Thompson
Seconded:

THAT the agenda items for the Finance and Audit Committee dated February 8, 2016 be adopted as circulated.
CARRIED.

4) ADOPTION OF MINUTES

FC2017-02 Moved: D. Thompson
Seconded:

THAT the minutes for the Finance and Audit Committee dated November 9, 2016 be adopted as circulated.
CARRIED.

5) IN-COMMITTEE

FC2017-03 Moved: D. Thompson
Seconded:

THAT the Finance and Audit Committee goes in-committee at 4:05pm
Agenda items:

a. Adoption of in-committee minutes: November 9, 2016
b. Security of Property of the Municipality or Local Board

CARRIED.

6) OPEN MEETING

FC2017-05 Moved: D. Thompson
Seconded:

THAT the Finance and Audit Committee goes into open meeting at 4:28pm.
CARRIED.

7) FINANCIAL STATEMENTS

a. Financial Statements for the Period ending
J. Pino spoke to the draft financial statements provided in the committee package. Once the settlement with the Ministry is completed surplus funds can be reallocated to reserve funds. Settlement should be completed by September 2017.

The new servers were purchased within the 2016 budget and are awaiting instillation. IT is looking at options for the old servers.

FC2017-06 Moved: D. Thompson
Seconded:

THAT the Finance and Audit Committee recommends and puts forward to the Board of Health the draft Financial Statements for the Period ending December 31, 2016 for approval.
CARRIED.

b. Supportive Housing Budgets
   i. Mental Health and Addictions Housing
   ii. Transformation Supportive Housing

FC2017-06 Moved: D. Thompson
Seconded:

THAT the Finance and Audit Committee recommends and puts forward to the Board of Health the 2017/2018 budget submissions for the Mental Health and Addictions Housing Program and the Transformation Supportive Housing as presented.
CARRIED.

8) Presentation/Delegation

a) Agency Insurance Policy
Mr. Pat Policicchio from BrokerLink provided a summary of the agency's insurance policy. Questions were answered to the satisfaction of the committee.

9) BUSINESS ARISING FROM MINUTES

a. Building Assessment Update
J. Pino provided an updated on the building assessment that was to be completed on the SSM facility. The assessment has been delayed until June 2017.

10) NEW BUSINESS/GENERAL BUSINESS - None

11) Addendum

12) Items Identified to be brought forth to the Board

a) Financial Statement for the period ending December 31, 2017
b) Supportive Housing Budgets

13) NEXT MEETING: Wednesday, April 19, 2017 @ 4:00pm

14) THAT THE MEETING ADJOURN:

FC2017-08 Moved: D. Thompson
Seconded:

THAT the meeting of the Finance and Audit Committee adjourns at 5:22pm.
CARRIED.

Governance Committee Report

Meeting of April 12, 2017

Review of By-Laws

A comprehensive review of all by-laws took place during this meeting. Discussions resulted in recommendations for wordsmithing, clarification of positions named in the by-laws etc. The section in By-Law 06-01 referring to Sewage System Permit Application Fees and Lot assessment Inspection Fees will require update after board approval once recommendations made at our annual report. Once finalized, the By-laws will be brought to the board for approval.

Discussion and Suggestions Regarding MOH Reports

Sample board reports were provided from Sudbury and North Bay. The chair shared an overview of the MOHLTC Public Health Standards considering Foundational Standards and Program Standards required by the Ministry along with Performance Improvement Indicators, Monitoring Indicators and Developmental Indicators.

The review of this information provided background to the development of a template for a new MOH report. Trying to maintain ministry requirements while ensuring relevant and timely data sharing was discussed. Quantitative vs. qualitative data reporting along with potential targets, provincial comparisons and trends were some of the items discussed. Marlene Spruyt will come to back to the Governance Committee with a draft template for our next meeting.

Election and Selection Process for Officer and Committees

Lee Mason provided a draft document for consideration as a policy to clarify the processes of nominations, elections and committee appointments. Discussion regarding timing and processes provided more clarification. Mr. Mason will provide a revised version at our next Governance Committee meeting.

Board of Health Composition

A table was developed by Christina including all current board members, their length of term including start and end dates. Also included in this table is each member's area of representation. This document will be posted on the BoardEffect Platform for all members to have as a resource.

Monthly and Annual Board Self Evaluations

Current evaluations were discussed and revisions made to improve efficiency and the collection of relevant data.

By-Law and Policy Requirements from the Ontario Public Health Organization Standards

A document was provided by the chair itemizing ministry requirements while comparing to our current policy and by-law documents. This was deferred for discussion at our next meeting.

Deborah Graystone
Chair, Governance Standing Committee

ALGOMA PUBLIC HEALTH
GOVERNANCE STANDING COMMITTEE MEETING
MARCH 1, 2017 @ 5:30 PM
PRINCE MEETINGROOM, 3RD FLOOR, SSM
MINUTES

COMMITTEE MEMBERS PRESENT:	Ian Frazier	Deborah Graystone
	Lee Mason	
APH STAFF PRESENT:	Marlene Spruyt	MOH/CEO
	Christina Luukkonen	Recording Secretary
REGRETS:	Heather O'Brien	

1) CALL TO ORDER:
Ms. Graystone called the meeting to order at 5:31pm

2) DECLARATION OF CONFLICT OF INTEREST
Ms. Graystone called for any conflict of interests; none were reported.

3) ADOPTION OF AGENDA ITEMS

GC2017-01 Moved: L. Mason
Seconded: I. Frazier

THAT the agenda items for the Governance Standing Committee March 1, 2017 be adopted as circulated.
CARRIED.

4) ADOPTION OF MINUTES

GC2017-02 Moved: I. Frazier
Seconded: L. Mason

THAT the minutes for the Governance Standing Committee dated November 9, 2016 be adopted as circulated.
CARRIED.

5) BUSINESS ARISING FROM MINUTES

6) NEW BUSINESS/GENERAL BUSINESS

a. Bylaw and Policy Review Schedule
The committee discussed the review schedule for all Board bylaws and policies. Policies 02-05-005 Reports to the Board and 02-05-055 Board of Health Self-Evaluation were discussed for updating.

Policy 02-005 – Reports to the Board was deferred until after a review of the current MOH/CEO reporting format is completed.

Bylaws will be reviewed every two years. Committee members were directed to review all the current bylaws and at the next meeting the committee will set a schedule for reviewing and revising.

b. Board of Health Evaluations
   i. Annual Self-Evaluation Template
   ii. Monthly Board Meeting Evaluation Template

   Policy 02-05-055 Board of Health Self-Evaluation was discussed and suggestions made. Will continue with a monthly Board meeting evaluation and an annual self-evaluation. Ms. Luukkonen will make the requested changes to the monthly board meeting evaluation template and bring back to the next meeting on April 12, 2017. Results of the monthly meetings will be presented to the committee at the next committee meeting with a correlated report for the year to the Board. Committee members are to review the annual self-evaluation template and bring feedback to the next meeting on April 12, 2017 for finalizing.

c. MOH Report Template
   The committee discussed enhancements they would like to see made to the current MOH/CEO report. They would like to see a combination of statistical and in-depth reports from managers resulting in more programs reporting each month.

   Committee members requested copies of other health units reports to compare. Ms. Luukkonen will provide a copy form North Bay, Timiskaming and Sudbury.

   Committee members also suggested special initiatives that the Board could support.

   Committee members were directed to provide feedback at the next meeting on April 12, 2017.

d. Development of a Dashboard related to KPI's and Strategic Plan
   The development of a dashboard is an idea that can be incorporated in the MOH/CEO report and can be used for more than just reporting on program. It can also be used to report on corporate goals for the agency.

e. Elections and Selection Process for Board Appointments and Committee/Executive Elections
   Mr. Mason has a drafted a policy on the process for elections and board appointments that he will share with the committee. Committee will review the draft policy at the next meeting on April 12, 2017.

f. Development of Schedule (Table) of Board Members
   Ms. Graystone requested a one-page document listing all board members and their appointment term.

g. Board Manual
   The new BoardEffect platform is the board manual. All items previously found in the paper manual is now stored electronically.

h. Archiving BoardEffect Meeting Books

The committee recommends a two-year retention of board packages to be kept on the BoardEffect platform. Board members wishing to retain their annotations will need to download a pdf copy to their laptop and save to their personal folder. Ms. Luukkonen will provide the necessary training and information for downloading books.

7) ADDENDUM

8) IN COMMITTEE

GC2017-03 Moved: I. Frazier
Seconded: L. Mason

THAT the Governance Standing Committee goes in-committee at 7:05pm.
Agenda items:

a. Adoption of Minutes dated September 14, 2016

CARRIED.

9) OPEN MEETING

GC2017-05 Moved: I. Frazier
Seconded: L. Mason

THAT the Governance Standing Committee goes into open meeting at 7:15pm.
CARRIED.

10) NEXT MEETING: Wednesday, April 12, 2017 at 5:00 pm

11) THAT THE MEETING ADJOURN:

GC2017-06 Moved: L. Mason
Seconded: I. Frazier

THAT the Governance Standing Committee meeting adjourns at 7:23pm.
CARRIED.

Perth District Health Unit
653 West Gore Street
Stratford, Ontario N5A 1L4
519-271-7600 Fax 519-271-2195
www.pdhu.on.ca

March 15, 2017

The Honourable Dr. Jane Philpott
Health Canada
70 Colombine Driveway
Tunney's Pasture
Ottawa, ON I1A 0K9

Jane .Philpott@parl.gc.ca

Dear Minister Philpott:

Re: Children's Marketing Restrictions, Federal Healthy Eating Strategy & Support for Bill S-228 & Bill C-313

The Perth District Health Unit Board of Health received correspondence from Huron County regarding children's marketing restrictions, the federal Healthy Eating Strategy and support for Bill S-228 and Bill C-313 (attached). Our Board of Health passed a resolution endorsing Huron County's position and is writing this letter to indicate support for the federal government's Healthy Eating Strategy and, in particular, the strategy initiatives that would protect children through restricting the commercial marketing of foods and beverages. In addition, the Board of Health also supports two current private members bills seeking to address this issue: Senator's Green-Raine's Private Member's Bill S-228, which if passed, would prohibit advertisement of food and beverages to children under the age of 13 years; and Peter Julian's Private Members Bill C-313 which focuses on developing a national strategy on advertising to children and amending the *Broadcasting Act*.

The time for action on this issue is now. Food and beverage advertising influences food choices. The majority of food and beverages marketed to children and youth are high in sugar, fat, and sodium. Children are exposed to this marketing repeatedly each day through television, websites, video games, apps and social media. In Canada, the average child watches about two hours of television each day and sees 4-5 food and beverage ads per hour. In Perth County, NutriSTEP surveillance data shows that 40% of children 3-5 years old watch TV while eating and about 65% of children have two or more hours of screen time each day.

Given the screen time of children and youth, their exposure to food and beverage advertising is higher than it has ever been. They are especially vulnerable to advertising because they lack an understanding of the persuasive intent of marketing. The research is clear that the marketing of food and beverages high in sugar, fat and salt to children contributes to the unhealthy eating habits of Canadian youth and the rising risk of nutrition related diseases presenting in this generation. Legislation that restricts food and beverage marketing to this susceptible population is a crucial and proven strategy for improving the eating habits and overall health of children and youth.

The Perth District Health Unit is committed to protecting the health and well-being of our residents. We strongly believe that the implementation of federal marketing restrictions along with the other initiatives outlined in the recently announced Healthy Eating Strategy will help to do this.

Sincerely,

T J Barresi

Teresa Barresi
Board Chair

c. alPha
John Nater, MP
Randy Pettapiece, MPP
Huron County Health Unit

Tuesday March 28, 2017

RE: Support for Stop Marketing to Kids Coalition's Ottawa Principles and Further Action on Sugary Drinks

Dear Ontario Boards of Health,

Sugar consumption has progressively become a major public health concern. Excessive intake of sugar has been linked to obesity, type 2 diabetes, cardiovascular disease, dental caries, metabolic syndrome and a lower intake of nutrient-dense beverages. Two priority areas for reducing sugar consumption and supporting healthy eating behaviours among children, youth and families, include restricting food and beverage marketing to children and improving the food environment in municipal and family-focused centres.

At its February 16th, 2017 meeting, the Middlesex-London Board of Health received Report No. 006-17, "***City of London Beverage Vending Review and Opportunity for Further Action on Sugary Drinks"***, where it was recommended that the Board of Health:

- Direct staff to complete the online endorsement of the Stop Marketing to Kids Coalition's (Stop M2K) Ottawa Principles to communicate its support to restrict food and beverage marketing to children and youth 16 years of age and younger; and,
- Communicate support for STOP M2K's Ottawa Principles by sending Report No. 006-17 re: City of London Beverage Vending Review and Opportunity for Further Action on Sugary Drinks, and its appendices to other Boards of Health in Ontario.

There is greater understanding today about how commercial food and beverage marketing negatively impacts the development of healthy habits, particularly for children and youth. According to the World Health Organization 2016 report, ***Report of the Commission to End Childhood Obesity*****,** "the evidence base shows that unhealthy food marketing is an important and independent causal factor in the childhood obesity epidemic". Children and youth are targeted by companies and highly exposed to the marketing of less healthy food and beverage through many channels including online, on television and through social media. Stop M2K's Ottawa Principles outline definitions, scope and principles to guide policy-making in Canada to help protect children and youth from the influence of commercial food and beverage marketing.

Restricting marketing to children and youth is one part of a comprehensive strategy to improve children's nutrition and long-term health outcomes. Changes to the food environment are also needed. Public health units are in a unique position to work with their local municipalities to implement healthy changes within the local food environment, as well as to communicate support for restricting food and beverage marketing to children at a federal level by endorsing Stop M2K's Ottawa Principles.

Sincerely,

Jesse Helmer, Chair
Middlesex-London Board of Health

London Office
50 King St., London, ON N6A 5L7
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MIDDLESEX-LONDON HEALTH UNIT

REPORT NO. 006-17

TO: Chair and Members of the Board of Health

FROM: Dr. Gayane Hovhannisyan, Acting Medical Officer of Health
Laura Di Cesare, Acting Chief Executive Officer

DATE: 2017 February 16

CITY OF LONDON BEVERAGE VENDING REVIEW AND OPPORTUNITY FOR FURTHER ACTION ON SUGARY DRINKS

Recommendation

It is recommended that the Board of Health:

1. ***Receive Report No. 006-17 re: City of London Beverage Vending Review and Opportunity for Further Action on Sugary Drinks;***
2. ***Support the receipt of $15,000 from the Healthy Kids Community Challenge fund from the City of London's Child and Youth Network to implement a community education campaign on the health risks associated with sugary drinks and the benefits of water;***
3. ***Direct staff to complete the online endorsement of the Stop Marketing to Kids Coalition's (Stop M2K) Ottawa Principles to communicate its support to restrict food and beverage marketing to children and youth 16 years of age and younger; and***
4. ***Communicate support for STOP M2K's Ottawa Principles by sending Report No. 006-17 re: City of London Beverage Vending Review and Opportunity for Further Action on Sugary Drinks, and its appendices to other Boards of Health in Ontario.***

Key Points

- Sugary drinks are the single-largest source of sugar in our diets.
- Public education about the health risks associated with sugary drinks is required, as are policies at the municipal, provincial and federal levels that help to restrict access to unhealthy choices.
- A comprehensive strategy that includes federal legislation to restrict commercial food and beverage marketing to children and youth 16 years and under is necessary.

Update on the City of London Beverage Vending Review

In September 2016, staff from both the City of London and the Health Unit began working together to: assess current beverage vending machine offerings; conduct a survey to seek input from facility users and City of London residents on what changes could be made to the beverage vending machine environment in city-run facilities; review the literature and conduct an environmental scan to inform proposed changes; and propose five policy options for consideration. The survey methodology, research findings and policy options can be found in the Health Unit's report (Appendix A).

The Health Unit's recommendation to remove beverage vending machines was not adopted by the City of London; however, the Health Unit remains committed to working with city staff to determine how best to improve vending machine offerings. The Health Unit's survey results and the community dialogue around sugary drinks have highlighted the need for greater public awareness regarding the public health concerns associated with consumption and marketing of sugary drinks. The Health Unit has the opportunity to receive $15,000 from the Healthy Kids Community Challenge fund, from the City of London's Child and Youth Network, to implement a public education campaign to reinforce the fact that sugary drinks should only be consumed sparingly and that water is the best choice for hydration and health. The Health Unit will also

continue to work closely with Middlesex County's Healthy Kids Community Challenge partners to improve the food and beverage environments in community centres, schools and childcare settings.

Reducing the Availability of Sugary Drinks

Municipal and family-focused centres are priority settings for supporting healthy eating behaviours among children, youth and families. The removal of beverage vending machines makes the healthy choice (plain tap water) the easy choice, and reduces consumer confusion around sugary drinks, which are marketed by the beverage industry as "healthier" ("health-washed"), because such drinks would no longer be available for sale. From a health perspective, sports drinks, vitamin waters and juices also contribute to the negative health effects of too much sugar in the diet. Appendix B provides considerations for consumers when selecting drinks often found for sale in vending machines.

Rationale for a Ban on Marketing and Advertising

Brand logos and product advertisements are positively associated with consumers' purchasing decisions, specifically of unhealthy foods (e.g., salty snacks, candy and sugar-sweetened beverages). Vending machines not only act as mini-billboards, but provide quick, easy access to energy-dense, nutrient-poor sugary drinks. The Heart and Stroke Foundation of Canada's 2017 Report on the Health of Canadians takes aim at the food and beverage industry for marketing directly to children and youth, and shows how industry marketing reaches them in the home, at school, on the street and in recreational centres. The most accessible and heavily marketed choices are often energy-dense, nutrient-poor processed foods and sugary drinks, like those found in vending machines. According to the report, "parents are doing the best job they can but our environment makes it hard." The report recommends legislation restricting food and beverage marketing aimed at children and youth, and calls for a comprehensive strategy that includes public awareness and policies that support reduced sugar consumption and access, especially in "liquid form." Policies at the municipal, provincial and federal levels, which increase access to healthy food and beverage choices and restrict access to unhealthy choices, are required.

Opportunity to Take Action on Food and Beverage Marketing

There is greater understanding today about how commercial food and beverage marketing prevents children and youth from developing healthy habits that would extend into adulthood. The Stop Marketing to Kids Coalition (Stop M2K), founded by the Heart and Stroke Foundation in collaboration with the Childhood Obesity Foundation, is working to restrict all food and beverage marketing to children and youth 16 years and under. The Coalition has developed the Ottawa Principles, which provide definitions, scope and requirements that should be used to guide development of federal legislation to restrict commercial marketing to children and youth. There is an opportunity for all Ontario Boards of Health to continue to work with local municipal governments to implement healthy changes within the food environment at the local level, while at the same time communicating Board of Health support for the Stop M2K Coalition's recommendations, by signing the online endorsement. It is recommended that the Middlesex-London Board of Health direct Health Unit staff to complete the online endorsement and communicate its support by sending this report and its appendices to the other Boards of Health.

This report was prepared by Ellen Lakusiak, Kim Loupos and Heather Thomas, Health Unit Registered Dietitians, and Linda Stobo, Program Manager, Chronic Disease Prevention and Tobacco Control.

Dr. Gayane Hovhannisyan, MD, MHSc, CCFP, FRCPC
Acting Medical Officer of Health

Laura Di Cesare, CHRE
Acting Chief Executive Office

This report addresses the following requirements of the Ontario Public Health Standards (revised May 2016): Foundational Standard 1, 3, 4, 5, 8; Chronic Disease Prevention 1, 3, 4, 5, 6, 11; Child Health 1, 4.

Appendix A

City of London
Beverage Vending Review

MIDDLESEX-LONDON HEALTH UNIT

January 6th, 2017

For information, please contact:

Linda Stobo
Middlesex-London Health Unit
50 King St.
London, Ontario
N6A 5L7
phone: 519-663-5317, ext. 2388
e-mail: health@mlhu.on.ca

Middlesex-London Health Unit
50 King Street
London, Ontario
N6A 5L7

Cite reference as: Middlesex-London Health Unit (2017).
City of London Beverage Vending Review.
London, Ontario: Iman Algheriany, Todd Coleman, Ellen Lakusiak, Kim Loupos, Linda Stobo, Heather Thomas

Authors: Iman Algheriany, Todd Coleman, Ellen Lakusiak, Kim Loupos, Linda Stobo, Heather Thomas

Table of Contents

Acknowledgements

The authors would like to thank the following colleagues who assisted in the development of this research project and report:

Carolynne Gabriel, Librarian, Program Planning and Evaluation, Middlesex-London Health Unit

Yvonne Tyml, Librarian, Program Planning and Evaluation, Middlesex-London Health Unit

Bernie Lueske, Data Analyst, Program Planning and Evaluation, Middlesex-London Health Unit

Khoaja Khaled, Data Analyst, Program Planning and Evaluation, Middlesex-London Health Unit

Dr. Christopher Mackie, Medical Officer of Health and CEO, Middlesex London Health Unit

Suzanne Vandervoort, Director, Healthy Living Division, Middlesex-London Health Unit

Theresa Kirk, Administrative Assistant, Healthy Living Division, Middlesex-London Health Unit

Darlene Foster, Administrative Assistant, Healthy Start Division, Middlesex-London Health Unit

Amy Castillo, Program Assistant, Chronic Disease Prevention and Tobacco Control Team, Middlesex-London Health Unit

Alex Tyml, Online Communications Coordinator, Middlesex-London Health Unit

Sarah Neil, Public Health Nurse, Chronic Disease Prevention and Tobacco Control Team, Middlesex-London Health Unit

Youth Leaders from *One Life One You,* Middlesex-London Health Unit

Catherine Andru, Jennifer Beverley, Johanna Selga and Samantha Breau, Student Volunteers, Brescia University College

Scott Oldham, Manager of Business Solutions and Customer Service, City of London

Cassie Vivyurka and Noreen Spruyt, Staff, City of London

Heart and Stroke Foundation of Ontario

Executive Summary

On the recommendation of the Managing Director of Parks and Recreation, the Community and Protective Services Committee of London City Council approved an extension not to exceed six months to the current beverage vending contract with PepsiCo Beverages Canada to allow Civic Administration additional time to review beverage vending options. In September 2016, staff from both the City and the Middlesex-London Health Unit (Health Unit) began working together on the City of London Beverage Vending Review Project. A research team comprised of representatives from the Health Unit and the City of London was created to:

- assess current beverage vending machine offerings;
- conduct a survey to seek input from facility users and City of London residents on what changes could be made to the beverage vending machine environment in city-run facilities;
- review the literature and conduct an environmental scan to inform proposed changes; and
- propose policy options for consideration based on the survey results, recommendations documented in the literature on how to improve the food environment and lessons learned from other municipalities.

A cross-sectional questionnaire of patrons of city-run facilities, including arenas, aquatic centres, community centres, Storybook Gardens and the cafeteria in City Hall, was used to seek public input. In-person and online surveys were collected over a three-week period, from October 6 to 26, 2016. The survey results indicate that the majority (82.5%) of facility users are bringing beverages from home into city-run facilities: water in a refillable bottle (75%); coffee and/or tea (58%); water in a single-use bottle (23%); and sports drinks (21%). The survey results highlight that facility users are ready for some changes to be made to drink options available within beverage vending machines, including the removal of pop and soft drinks (48.3% agreed/strongly agreed) and the removal of energy drinks (63.5% agreed/strongly agreed). The results in support of the continuation of the sale of certain sugar-sweetened beverages (SSBs), including sports drinks, vitamin waters and juices indicate a misconception that some SSBs are needed for hydration during physical activity, or that these are “healthier” choices. Further, the results highlight that the majority of facility users (60.8%) support the sale of single-use bottled water in beverage vending machines, because water is a healthy drink and should be made available as a choice (67%) and in the event that facility users forget their own water or are unaware of the water stations (75%) within city-run facilities.

While the scope of the review was limited to beverage vending, public support for changes to snack and bulk candy vending machines in city facilities was also gauged. The majority of facility users (58.1%) support the removal of bulk candy vending machines from city-run facilities; however, there was clear disagreement (66.3% disagreed/strongly disagreed) regarding the removal of snack vending machines. The Health Unit recommends that the bulk candy vending machines be removed. The removal of these machines will reduce the distribution of bulk candy—candy which is nutrient-poor and very high in sugar (e.g., gumballs, hard candies, chocolate snacks, etc.). The Health Unit recommends that the City conduct a review of the snack food environment, specifically addressing snack food options within vending machines and concession stands, to see what improvements could be made.

After careful consideration of five different policy options for beverage vending, the Middlesex-London Health Unit recommends that the City of London implement policy option #1, the removal of all beverage vending machines in city-run facilities.

Rationale for Policy Option #1 – Remove All Beverage Vending Machines

Arenas, aquatic centres and community centres are priority settings for supporting healthy eating behaviours among children, youth and families (Naylor, Olstad & Themen, 2015). The complete removal of vending machines containing SSBs and the installation and promotion of water fountains, versus the addition of "healthier" beverages, is recommended because children are more likely to purchase SSBs regardless of the availability of healthier drink choices (Chen & Wang, 2016; Jones, Gonzalez & Frongillo, 2009).

- SSBs are the single largest source of sugar in the diet. A single 355 mL can of sugar-sweetened soda contains approximately 40 grams (about 10 teaspoons) of sugar with no health benefits (World Health Organization (WHO), 2015).
- The elimination of the sale of all sugary beverages from vending machines, including sports drinks, vitamin water and juices sends a consistent health message that all sugary drinks contribute to the negative health effects of too much sugar in the diet. This approach avoids "health washing," which labels some SSBs as "healthier" compared to others.
- Water is the best choice to satisfy thirst, to stay hydrated and to feel energetic and alert (Centers for Disease Control and Prevention (CDC), 2010).
- Plain tap water is safe and easily accessible to children and adults both at home and in city-run facilities from water fountains and bottle-filling stations.
- When children are encouraged to drink water at a young age, they are more likely to drink water later in life (Birch, Savage & Ventura, 2007).
- Children with high intakes of SSBs are more likely to be overweight or obese. Each additional SSB consumed per day increases a child's risk of becoming obese by 60% (Ludwig, Peterson & Gortmaker, 2001).
- The sugar in SSBs promotes bacterial growth and the acid in carbonated drinks weakens teeth, which can lead to cavities.
- The majority of London facility users (82.5%) bring beverages, of their choice, from home.
- The removal of beverage vending machines will reduce the number of plastic bottles that find their way into recycling and waste systems. This approach supports the City's current ban on the sale of bottled water.
- Decreased distribution of SSBs by the City of London demonstrates leadership in promoting health and creating healthy environments for those families who access programs and services.

This change in support of healthy environments for children has already started in the City of London with the removal of beverage vending machines from most, if not all, local elementary schools. All single-use bottles require fossil fuels for their production and transport, and contribute to plastic bottle

waste regardless of the type of beverage they contain; therefore, the removal of beverage vending machines would have a positive impact from both a health and an environmental perspective. Municipally run facilities serve as community hubs and have the ability to reach and impact a broad cross-section of the population, including higher-need individuals and families. These facilities have the opportunity to help set a foundation for lifelong healthy lifestyles, and are ideal settings for the promotion of a healthy food environment.

Changes to the distribution of SSBs in vending machines at city-run facilities will have a positive health impact on our community. Given the survey results, the promotion of water consumption through the Healthy Kids Community Challenge community initiatives, and this beverage vending machine review, this is an opportune time for the Health Unit and the City of London to engage in public education activities: to promote municipal water as the beverage of choice; to address the "health washing" of various SSBs; and to increase public awareness regarding the health risks associated with the consumption of all SSBs.

The City of London is a leader in public service collaboration and innovation, and has identified health promotion and protection as a strategic priority. This report clearly outlines potential long-term health benefits that could be achieved by making improvements to the food environment within city facilities. This report and its recommendations highlight the unique role that municipal governments and health units can play in working together to improve our food environment and to make the healthy choice the easy choice.

Introduction

Sugar consumption has progressively become a major public health concern. Data reveals that one in every five calories consumed by Canadians originates from sugar (Langlois & Garriguet, 2011). Excessive intake of "free" sugar (both added sugar and sugar naturally found in food) has been linked to obesity, type 2 diabetes, cardiovascular disease, dental caries, metabolic syndrome and a lower intake of nutrient-dense beverages such as milk (Standing Senate Committee, 2016; WHO, 2015).

Sugar-sweetened beverages (SSBs) are any beverage to which sugar has been added, including soft drinks, fruit drinks, sports drinks, sweetened tea and coffee drinks, energy drinks and sweetened milk or milk alternatives (CDC, 2010). In recent guidelines, the WHO (2015) included sugar naturally present in fruit juices as "free" sugars, which increase individual risk of chronic diseases. In 2004, Statistics Canada reported that beverages including soft drinks, fruit drinks, juice and milk contributed to 44% of the average daily sugar intake of children and adolescents and 35% of adults' average daily sugar intake (Langlois & Garriguet, 2011).

The Institute of Medicine (2012) has concluded that the intake of SSBs is one of the dietary factors leading to the increase in obesity and overweight rates in the United States. In children, studies reveal that a higher intake of SSBs increases risk of overweight or obesity by 55% (Te Morenga, Mallard & Mann, 2013).

According to the most recent Ontario statistics, close to 60% of adults self-report being overweight or obese, and in Middlesex-London this rate is somewhat higher, at almost 64% (Canadian Community Health Survey (CCHS), 2014). In Ontario, 25.5% of youth aged 12–17 self-report being overweight or obese (CCHS, 2014).

In addition to physical health, dietary choices impact mental health, cognitive function, the ability to focus and sleep patterns. The evidence shows that healthy children perform better academically, have better attendance and behaviour at school, and have improved concentration, memory and mood (CDC, 2014). Properly nourished children are more likely to grow and develop into healthy, active adults (Ontario Ministry of Child and Youth Services, n.d.).

Foods and drinks sold in recreation centers, schools, variety stores and workplaces have been recognized for having a significant influence on diet and health (National Collaborating Centre for Environmental Health (NCCEH), 2014). As such, considering improvements to the food environment is a priority for the Middlesex-London Health Unit (Health Unit). When choosing a beverage, water is the best choice for health and hydration, containing no sugar, calories, additives, preservatives or caffeine. When children and youth drink water instead of choosing an SSB, they are likely to consume fewer total calories per day (Han-Markey, Wang, Scholtterbeck, Jackson, Gurm, Leidal & Eagle, 2012).

On the recommendation of the Managing Director of Parks and Recreation, the Community and Protective Services Committee of London City Council approved an extension not to exceed six months to the current beverage vending contract with PepsiCo Beverages Canada to allow Civic Administration additional time to review beverage vending options in arenas, community centres, aquatic centres, Storybook Gardens and the cafeteria in City Hall. In September 2016, City staff, in partnership with the Health Unit, initiated the City of London Beverage Vending Review Project. The alignment of this

vending review project with the City of London and Middlesex-London Health Unit strategic priorities and community initiatives is summarized in Table 1.

Table 1
Alignment of the Beverage Vending Review Project with City of London and Middlesex-London Health Unit Strategic Priorities and Community Initiatives

London City Council Strategic Priorities
1. **Strengthening Our Community**: Work with the Middlesex London Health Unit to promote and protect the health of the community. 2. **Leading in Public Service**: Foster collaboration and innovation through a variety of mechanisms.
Middlesex-London Health Unit Strategic Priorities
1. **Program Excellence**: Foster strategic integration and collaboration; optimize evidence-informed planning and evaluation. 2. **Client and Community Confidence**: Seek and respond to community input.
Community Initiatives
1. **London's Child and Youth Network Healthy Eating Healthy Physical Activity Priority**: A community network composed of over 170 agencies and individuals. This priority is focused on improving healthy eating and physical activity through engagement and influencing habits. 2. **Healthy Kids Community Challenge**: A province-wide initiative coordinated at the municipal level funded by the Ministry of Health and Long-Term Care. The focus of the 2016/2017 theme is on drinking more water and fewer sugary drinks. The 2017/2018 theme is on promoting the consumption of vegetables and fruit.

A research team comprised of representatives from the Health Unit and the City of London was created to:

- assess current beverage vending machine offerings;
- conduct a survey to seek input from facility users and City of London residents on what changes could be made to the beverage vending machine environment in city-run facilities;
- review the literature and conduct an environmental scan to inform proposed changes; and
- propose policy options for consideration based on the survey results, recommendations documented in the literature on how to improve the food environment and lessons learned from other municipalities.

This report documents the results of the survey, recommendations from the literature and the environmental scan, and policy options for consideration. The report makes a recommendation to the City of London on which policy option would have the greatest positive health and environmental impact and outlines some proposed steps if a policy change were to be implemented.

The recommendations contained within this report highlight the unique and significant role that municipal governments and health units can play in working together to influence our food environment to make the healthy choice the easy choice.

Survey Methods

A cross-sectional questionnaire of patrons and employees of city-run facilities, including arenas, aquatic centres, community centres, Storybook Gardens and the cafeteria in City Hall, was used to seek input from facility users and London residents. The self-administered, sixteen-item questionnaire (see Appendix A) was available to complete both in paper-and-pencil and online formats. Two different modes (paper-and-pencil and online) of the questionnaire were developed to ensure broad representation of respondents from across the City of London. The questionnaire was developed by Health Unit staff and piloted by Health Unit administrative assistants not directly involved in this project.

For the paper-and-pencil versions, sample size estimations calculated a minimum required sample of 384 individuals, rounded up to 400. To determine an appropriate sample size of survey respondents from each facility, City staff provided the number of annual visits by patrons at each facility. Using representative proportions of attendees at city-run facilities, including the cafeteria at City Hall, quotas were established for peer research assistants (RAs) to collect data in paper-and-pencil format at every facility (see Appendix B). The RAs were casual staff from the City of London, Youth Leaders from the Health Unit's *One Life One You* youth advocacy team, student volunteers, a Dietetic Intern from Brescia University College and two members of the research team. All RAs received in-person training and procedural instructions for survey administration. They worked in pairs and visited each facility where in-person data collection occurred. RAs attended facilities at peak times during week and weekend days and evenings to facilitate obtaining the quotas set for the in-person survey completion. Due to survey collection timing, in-person data collection did not occur at Storybook Gardens.

The research team used a supplementary method to collect surveys by distributing the link to the survey online via the Health Unit website. The online survey link was promoted to City of London employees on the City of London Intranet, and the online survey link was sent directly to 3,000 residents that subscribe to the City of London e-newsletter, to ensure broad representation. The online version of the questionnaire was delivered using SurveyMonkey® software. Paper-and-pencil surveys were entered into the SurveyMonkey® software to merge data.

The survey took approximately five minutes to complete, and was conducted from October 6 to 26, 2016. Overall, 491 patrons at city facilities completed the paper-and-pencil survey. An additional 465 participants completed the online survey. The total number of surveys completed, both in-person and online, was 956.

Data from both paper-and pencil and online surveys were analyzed using Stata (version 14.1), available in SurveyMonkey®. The distinction between paper-and-pencil surveys and online surveys was captured in the survey's introductory question, to facilitate separate analysis of specific sites, if warranted. Counts and frequencies were assessed and summarized, reviewed based on the combined sample, the survey completion type (online vs. physical venue) and the combined total of all respondents who had ever attended a city-run facility.

Survey Results

A total of 956 surveys were completed, with 51.4% completing paper copies of the survey and 48.6% completing the survey online. The majority of all patrons surveyed were between the ages of 25 and 44 years (45.5%). Patrons indicated they typically used arenas most frequently (30.0%) of all city facilities, and they did so a few or more times per week. As depicted in Figure 1, the majority of all respondents to both the online and in-person survey that accessed city facilities (82.5%) indicated they bring beverages from home for consumption when in city facilities.

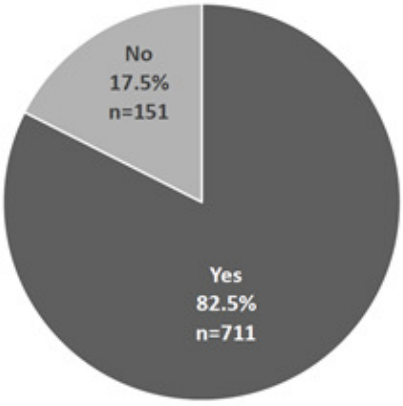

Figure 1. Proportion of city facility users that bring beverages from home into city facilities.

Most patrons brought water in a refillable bottle (83.1%) and coffee and/or tea (64.7%). Figure 2 provides a summary of the types of drinks that facility users reported bringing from home.

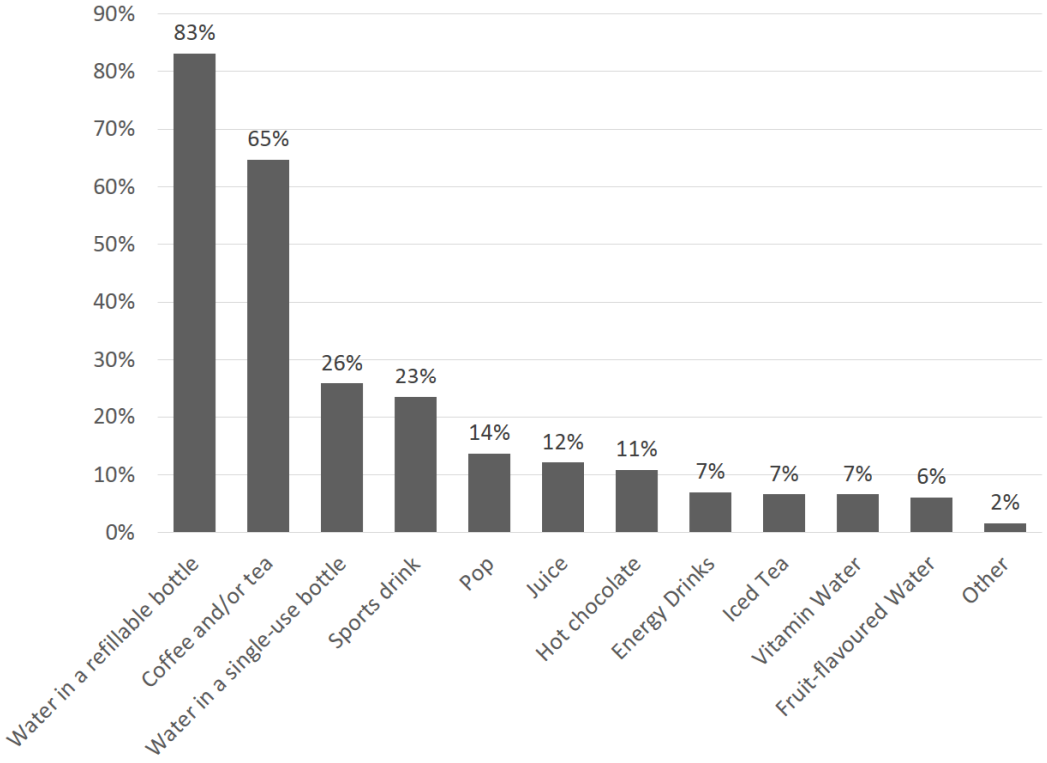

Figure 2. Proportion of types of drinks brought from home by city facility users.

A majority of all respondents who access city facilities (65.5%) have purchased drinks from vending machines in city facilities. Most frequently, they purchase one drink (81.2%) for either themselves (61.5%) or their children (50.6%).

Sugar-Sweetened Beverages

When asked about their opinions related to restricting the sale of specific beverages from beverage vending machines, depending on the method of answering the survey (online versus in-person) and the type of beverage to be restricted, the results vary. In general, all respondents indicated agreement on *keeping* the following beverages in the beverage vending machines: sports drinks, flavoured water, juice, iced tea, vitamin water and coffee beverages. All respondents shared stronger agreement in *removing* energy drinks with caffeine from the beverage vending machine. Of all respondents who completed the online survey and in-person survey who use city facilities, 48% indicated they agreed/strongly agreed to have pop and soft drinks removed. In comparison, 42% indicated they disagreed/strongly disagreed with the removal of pop and soft drinks from beverage vending machines. Figure 3 provides a summary of the responses for this question.

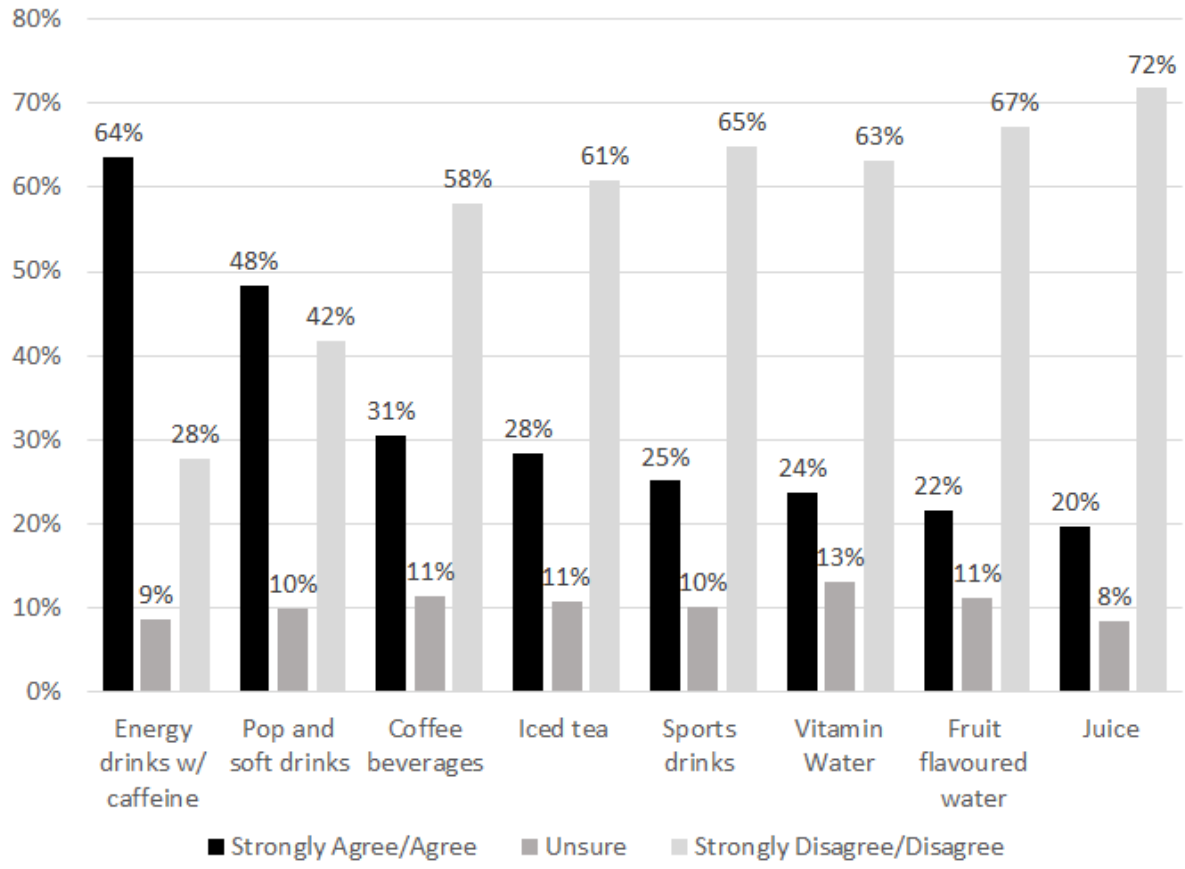

Figure 3. Facility users' opinions related to restricting the sale of specific beverages from beverage vending machines.

Bottled Water

In 2008, London City Council discontinued the sale of single-use bottled water in the City Hall cafeteria, from city-owned or city administered concessions and in vending machines in public facilities where easy

access to municipal tap water exists. Civic Administration consulted with many community stakeholders, including the Health Unit, to inform the development and implementation of the bottled-water ban. The Health Unit provided public health considerations both for and against bottled water. Namely, the Health Unit expressed concerns about discontinuing the sale of bottled water in city-run facilities where bottled SSBs remain to be offered for sale. If bottled water is not available, and access to or use of municipal drinking water fountains is limited, then the public may opt for drinks with high levels of sugar, limited nutrition value and a high acid content. The Health Unit highlighted that both the sugar content and the acidity of SSBs can have negative impacts on overall health.

Therefore, public opinion was sought through this survey to determine whether or not the City should reconsider the single-use bottled water ban. Figures 4 and 5 outline facility users' opinions related to single-use bottled water being made available for sale in city-run facilities within beverage vending machines and the reasons why respondents think single-use bottled water should be made available.

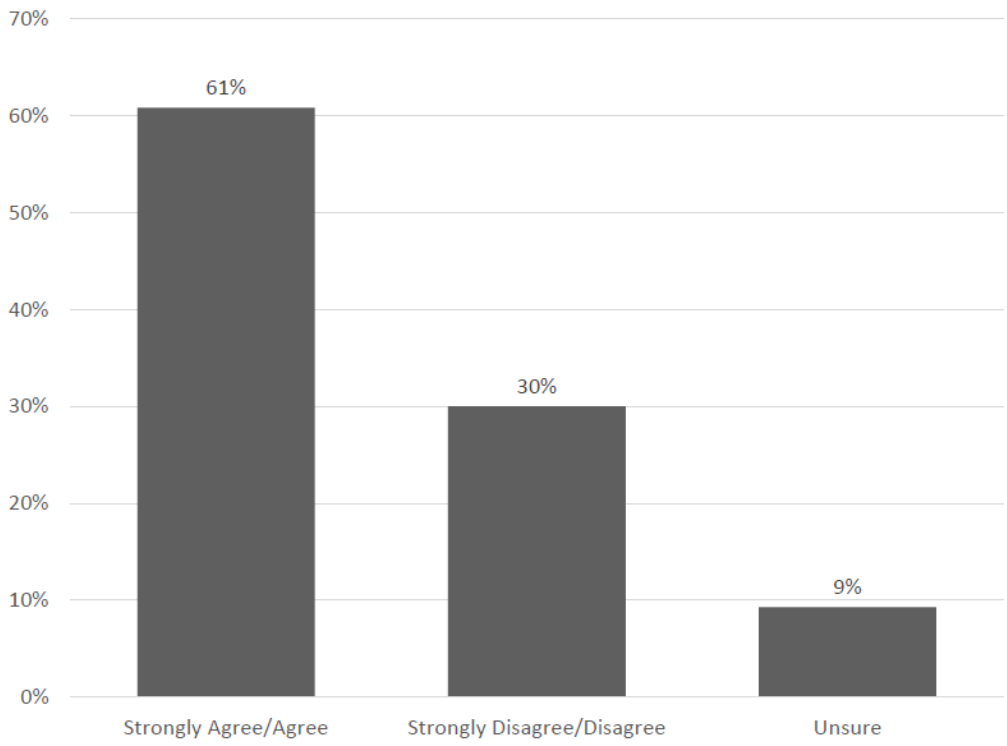

Figure 4. Facility users' opinions related to single-use bottled water being made available for sale in City of London facilities.

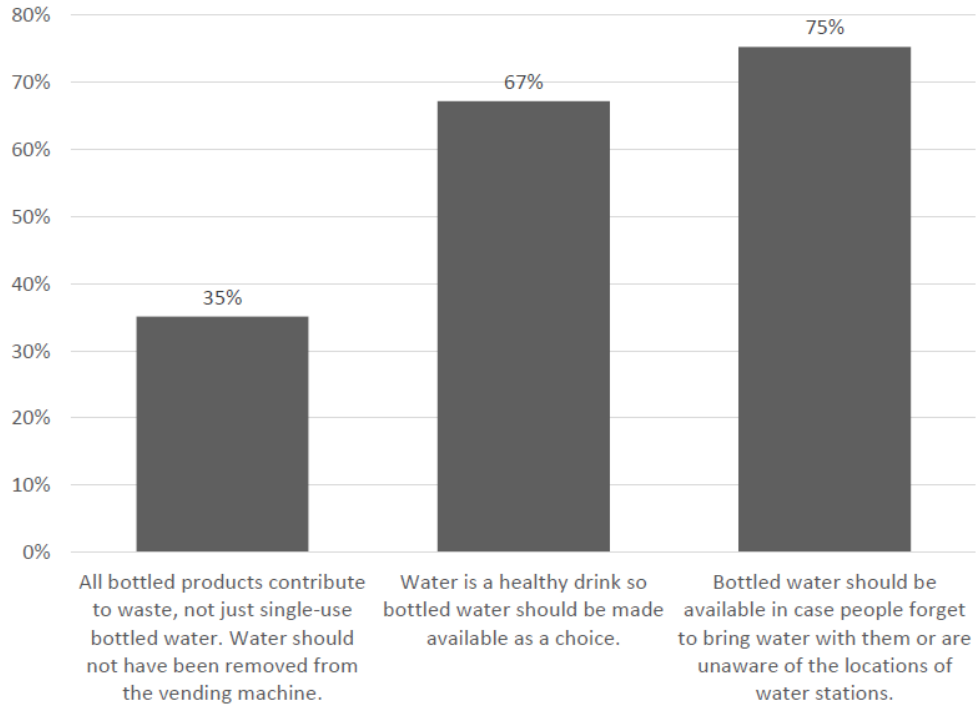

Figure 5. Facility users' reasons provided to support the sale of single-use bottled water in City of London facilities.

Of all respondents who access city facilities, 60.8% indicate they agreed/strongly agreed that single-use bottled water should be made available for sale in city facilities. In fact, of the respondents who completed the survey *in person* at city facilities, 62.7% agreed/strongly agreed with making bottled water available for sale. Facility users indicated that single-use bottled water should be made available because water is a healthy drink (67.2%), and that it should be made available in vending machines in case people forget to bring their refillable bottles or are unaware of the availability of water bottle-filling stations (75.3%).

Of the 30% of facility users that disagreed/strongly disagreed with the sale of bottled water in beverage vending machines in city facilities, the majority indicated that water is available for free from water fountains and bottle-filling stations (64.6%), and that all single-use bottles are an environmental waste issue (64.1%). Some of these facility users (35.1%) also indicated that since they bring their own water from home to the facility, they would not buy it from a beverage vending machine.

Snack Vending and Candy Machines

While the purpose of the survey was focused on the issue of beverage vending, City staff solicited public input regarding the removal of snack vending and bulk candy vending machines. Facility users clearly disagreed with having snacks removed from the snack vending machines (66.3%); however, 58.1% agreed/strongly agreed with the removal of bulk candy vending machines from city-run facilities.

Evidence-Informed Recommendations: Behaviour and Policy Considerations

A healthy food environment in city-run facilities provides healthy options that can improve dietary behaviour while making it easier for consumers to make the healthier choice for themselves and their families. The following evidence was collected from a literature search focused on policies affecting beverage vending machines and influencers of beverage choice behaviour from vending machines. Three databases were searched—Medline, PsysInfo and ERIC—highlighting the issues, interventions, settings and outcomes. Full search strategies, including a full list of terms used, are available from the authors.

Availability of Foods and Beverages in Vending Machines

An individual's food and beverage selections are directly related to hunger level, rather than health outcome (Olstad, Goonewardene, McCargar & Raine, 2015). The environment in which food is provided can make it challenging for people to make healthy choices, depending on what types of food are available for consumption at these sites. Individuals who are influenced by environmental factors to unintentionally make less healthy choices may have a higher risk for becoming overweight or obese (Harrington, 2008; James, Thomas, Cavan & Kerr, 2004; Johnson, Bruemmer, Lund, Evens & Mar, 2009; Minaker, 2011; Shi, 2010). Municipally run facilities are priority settings for supporting healthy dietary behaviours among children, youth and families (Naylor, Olstad & Themen, 2015).

Public Settings

Vending machines have become a vehicle to increase the availability and convenience of unhealthy foods in public settings. Research findings show the availability of vending machines is positively correlated to vending machine use (Lawrence, Boyle, Carypo & Samuels, 2009; Park & Papadaki, 2016). The majority of food and beverage options in public settings are located in vending machines or canteens, but the opportunity to use such settings to promote and provide healthier dietary choices is often forgotten (Irby, Drury-Brown & Skelton, 2014; Olstad et al., 2015; Thomas & Irwin, 2010). Studies show that parents who frequent municipally run facilities, such as recreation centres, use vending machines to purchase foods and beverages mainly for their children and themselves (Thomas & Irwin, 2010). The majority of foods and beverages purchased from such venues are SSBs and high-energy snack foods. Many parents visiting recreational centres with their children also rely on snacks and beverages purchased from vending machines to replace meals (Irby et al., 2014; Olstad et al., 2015; Thomas & Irwin, 2010). Ongoing exposure and easy access to vending machines containing unhealthy foods and beverages influences dietary choices and makes unhealthy eating options more prevalent in these environments (Kelly, 2010; Shimotsu, French, Gerlach & Hannan, 2007).

School Environments

Students in an educational environment can easily access unhealthy foods and beverages from vending machines. The majority of snacks sold in vending machines are high in sugar, fat and saturated fats, and vended beverages are high in sugar (Ermetici et al., 2016). Findings from Park and Papadaki (2016) confirm that the accessibility and use of vending machines were positively associated with snacks and soft drinks consumed by students in school settings. Minaker (2011) explains that the presence of vending machines encourages children to adopt the habit of snacking and consuming SSBs. Furthermore, accessibility of vending machines also encourages students to bring similar unhealthy snacks and

beverages from home (Minaker, 2011). Fostering an unhealthy food environment in one location encourages equally unhealthy food environments elsewhere.

A systematic review conducted by Matthews and Horacek (2015) reported that inaccessibility of vending machines to children, adolescents and adults reduced their purchasing of vended snacks and beverages. The food environment has a strong influence on individuals' dietary habits; therefore, if healthy snacks and beverage choices are offered, individuals will improve their dietary choices. As shown in studies at public transportation sites and workplaces, it is difficult for individuals to make healthy choices when healthy products are not accessible in vending machines (Escoto et al., 2010; French et al., 2010; Kelly et al., 2010; Matthews & Horacek, 2015). It is clear that increasing the availability of healthier choices in vending machines can strongly influence individuals' food and beverage purchasing in recreational settings (Irby et al., 2014; Olstad et al., 2015; Thomas & Irwin, 2010), and, by extension, other municipally run facilities.

Nutrition Information (Food Labels) and Promotions (Advertisements and Logos)

Food is often categorized in the literature as healthy or unhealthy based on the type of food (e.g., milk, vegetables/fruit), its nutritional content (e.g., sugar, sodium), or eating behaviours (e.g., moderation, balanced, variety) (Matthews & Horacek, 2015). Providing children, youth and families with information about healthy eating, along with the rationale for changes to the food environment in municipally run facilities, is necessary to modify their beliefs about the consumption of a healthy diet. For instance, Kocken (2015) demonstrated that factors in the school food environment, such as food labelling or product advertisements, influenced students' consumption of SSBs, energy-dense foods, fruits and vegetables. A similar study by Wouters (2010) revealed that lower nutrition education was directly associated with higher consumption of soft drinks found in school vending machines. A systematic review reported that brand logos and product advertisements are positively associated with consumers' purchasing decisions, specifically of unhealthy foods (e.g., salty snacks, candy and sugar-sweetened beverages) (Matthews & Horacek, 2015). Furthermore, nutrition labels and content claims had a direct impact on product knowledge and consumption (Matthews & Horacek, 2015). Current research confirmed that the use of educational posters was successful in promoting healthy, nutrient-dense products in vending machines (Ermetici et al., 2016).

A major contributor to excessive energy intake is the increased consumption of SSBs commonly purchased from vending machines (Bergen & Yeh, 2006). In addition to the poor nutritional content of beverages sold in vending machines, the new mega-sizing of beverages is a phenomenon that has increased the amount of SSBs consumed. A study by Bergen and Yeh (2006) indicated the addition of energy-content labelling and motivational posters on vending machines was an effective strategy to influence beverage selections purchased from vending machines. As nutrition recommendations and guidelines are constantly evolving, it is difficult for individuals to remain informed about the most current information. Therefore, studies suggest that it is more worthwhile for policy makers to investigate the healthfulness of vended products, such as nutritional content and portion sizes, before offering them to the public (Mathews & Horacek, 2015).

Prices of Healthy versus Unhealthy Foods and Beverages

Food environments and the growing accessibility of lower-priced, calorie-dense foods and beverages are key contributors to the obesity epidemic (Bergen & Yeh, 2006). Studies show that nutrition-dense products are usually perceived as more expensive than calorie-dense products, which seem to have a strong influence on individuals' dietary choices (Matthews & Horacek, 2015). A study by French and colleagues (2010) showed lowering prices of healthy snacks in vending machines increased the sales volumes of healthy vended products at bus garages, similar to other studies conducted at schools and worksite settings. Schultz (2010) reports that multiple studies across the United States demonstrated continued revenue generation after imposing changes to the price of healthy vended products, and in some cases increased profit was seen with increased accessibility of healthy foods and beverages in vending machines. Kocken and colleagues (2012) found that a 25 to 50% price reduction of healthy vended products is the most effective strategy to increase the consumption of healthy foods and beverages, such as bottled water. Similarly, in a systematic review conducted by Grech and Iman-Farinelli (2015), price reductions on healthier options were successful in changing the purchases of adults and children, and produced a significant positive change in the purchase of the discounted items when the incentive was greater than 10%. Alternatively, Block and colleagues (2010) found increasing the price of soft drinks resulted in decreased sales of these products. Grech and Iman-Farinelli (2015) concluded that price incentives are an effective method for changing the buying practices of vending machine consumers.

Pouring Rights Contracts, Sponsorship Agreements and Revenue

Pouring rights contracts are common between schools, municipalities or other agencies, and soft drink companies, where funding is provided to these institutions in return for beverage companies being granted permission to sell and promote their beverage products. Most of the evidence focuses on pouring rights within the school setting.

Pouring rights, and being exposed to unhealthy options and beverage industry marketing, are most contentious in schools, because this is a learning environment where children and youth spend the majority of their day. In Ontario, approximately all secondary schools and almost half of all elementary schools have vending machines (Minaker et al., 2011). The food and beverage industry provides incentives for schools to use highly accessible vending machines in promoting unhealthy beverage products, such as soft drinks, sports drinks and vitamin water. The food and beverage industry takes advantage of less fortunate schools where funding is needed, and schools in neighbourhoods where families have a lower socioeconomic status are more likely to permit sponsorship and promotion (Johnston, Delva & O'Malley, 2007). The result of pouring rights in these neighbourhood schools is the consumption of low-nutrient, energy-dense foods and beverages during children's developmental years. Additionally, with greater exposure in a school environment to food industry logos, colours and other marketing efforts, children are more likely to develop "brand" and "taste" preferences, which may lead to the development of poor dietary habits and impact their health during adulthood (Johnston et al., 2007; Shi, 2010).

Increasing the availability of healthier choices in vending machines can strongly influence individuals' food and beverage purchasing in recreational settings (Irby et al., 2014; Olstad et al., 2015; Thomas & Irwin, 2010). Operators in these settings are often resistant to increasing healthy food and beverage options due to the preconceived notion that healthy foods are not revenue-generating (Olstad et al., 2015).

A recent study by Olstad and colleagues (2015) revealed the number of sales and revenue generated per customer was maintained when healthier vending machine products were introduced. This demonstrates the potential for mutual agreement and partnership benefits between public health and community settings to increase the accessibility of healthier vending machine products (Olstad et al., 2015). Research recommends public health officials review the strategies used by the food and beverage industry to make unhealthy food consumption the normative action in most environments. These strategies may assist operators at municipal facilities to increase sales of healthy products in vending machines (Olstad et al., 2015).

While pouring rights increase access to SSBs, the negative health impact of SSB consumption can be mitigated with wellness policies and nutrition guidelines to influence healthier choices, and is associated with lower SSB availability (Terry-McElrath, O'Malley & Johnston, 2011). The development of targeted nutrition guidelines for municipally run venues results in reduced SSB supplier involvement in choices offered (Terry-McElrath et al., 2011).

Increased Availability of Water

Childhood obesity prevention strategies require environmental changes that support children in making healthy choices. Whether at schools or in recreational/sports settings, children and youth engage in physical activities throughout their day. Physical activity triggers thirst and may increase children's risk of dehydration (Chen & Wang, 2016). Studies have proven that the best rehydration choice in any sports venue is water, and schools are excellent at increasing the accessibility of water fountains to prevent adverse dehydration (Chen & Wang, 2016). However, the high availability of beverage vending machines containing SSBs may increase competition for water consumption and offset energy expenditure from physical activity (Chen & Wang, 2016).

A recent study by Chen and Wang (2016) recommended the complete removal of vending machines containing SSBs from schools and the installation of more water fountains. Jones, Gonzalez and Frongillo (2009) found similar results. These researchers noted that children are three times more likely to purchase SSBs if they are available, regardless of whether healthy drink choices are available. If the availability of SSBs was eliminated, students would purchase and consume fewer SSBs. Providing alternatives to SSBs is not as effective as completely eliminating their availability (Jones, Gonzalez & Frongillo, 2009).

Aside from the availability of SSBs, children's decisions to use water fountains were dependent on water-quality factors, such as taste, temperature and colour. The concern with water quality found in water fountains was later addressed by suggesting the substitution of SSBs in vending machines with single-use bottled water. A number of studies indicate that allowing bottled water and other healthy beverages in vending machines in schools and recreation facilities encourages patrons to purchase healthier options, with preference for water (Ermetici et al., 2016; Irby et al., 2014; Johnston, Delva & O'Malley, 2007; Olstad et al., 2015; Park & Papadaki, 2016; Wiecha, Finkelstein, Troped, Fagala & Peterson, 2006; Wordell, 2012).

A summary of key considerations contained within the evidence is available as Appendix C.

Selected Lessons from the Field: What have other municipalities done?

Recommendations for comprehensive, district-wide policy in coordination with professional education, community-identified tools and technical assistance can translate into sustained, healthy food environments (Mozaffarian et al., 2016). Cradock and colleagues recommend policies that promote community-wide changes to make healthier beverage options more accessible on city-owned properties.

The Ontario Society of Nutrition Professionals in Public Health (OSNPPH) has developed a list of essential elements of a healthy recreation food environment (OSNPPH, 2016), which has been adapted and utilized at a number of municipally run facilities in Ontario and possibly beyond. Below are some examples of municipalities that have implemented changes to the food environment in their municipally run facilities.

Blandford-Blenheim (Oxford County), Ontario
This collaborative project with the Blandford-Blenheim arena in rural Oxford County (Oxford County Public Health, 2016) demonstrated that a healthier food environment is financially feasible and can be achieved by implementing a number of different actions, such as: strategic product purchasing and menu planning to increase availability of healthy foods and beverages; decreasing availability of unhealthy foods and beverages; ensuring competitive pricing of healthier foods and beverages; and effectively using product placement and promotional strategies.

The Blandford-Blenheim recreation facility experienced an increase in revenue and success in implementing the recommendations of the healthier recreation concession project.

Kingston, Frontenac and Lennox & Addington (KFL&A) Public Health
The KFL&A Recreation Centre Food and Beverage Survey Report (KFL&A, n.d.) provided staff at that agency with information pertaining to: recreation centre patrons' food and beverage purchasing behaviours; patrons' perceptions of food and beverages available in recreation facilities; and patron acceptance of healthier alternatives that could be sold in recreation centres. This information helped KFL&A staff to understand user opinions, anticipate barriers and identify opportunities to change the food environment.

The results of their survey indicate public support for increasing the availability of healthy food and beverages in public recreation centres. The results also identify many opportunities to improve the food environment to meet patron demands along with the potential to influence the health of recreation centre patrons.

KFL&A Public Health identify five recommendations that support recreation centres in improving their food environments: engagement with key stakeholders, including municipal recreation departments, recreation centre management, food service providers and vending operators; employment of a phased approach to increase the availability of healthy choices in recreation facilities; addressing identified patron preferences; providing promotional tools to promote healthy choices; and advocating for policies that support healthy food and nutrition environments in recreation centres.

City of Toronto: Parks, Forestry and Recreation

In 2011, Toronto's City Council started a process to change the food environment in Toronto recreation settings, which was supported by political leadership and collaboration between the health department and the city. Their process included voluntary participation in a project to offer and promote healthier food and beverage choices at concessions: a request for proposal (RFP) process for cold beverage vending machine contracts that included a requirement for 50% healthier beverage choices; an RFP for a new snack vending machine contract that included a requirement for 20% healthier snack choices across the city (with a progression to 50% healthier snack choices); and a 100% healthy vending choices pilot project in twenty recreation settings in Toronto.

Though a number of barriers to achieving healthy food environments in recreation settings were cited, the Toronto City Council adopted the RFP for the operation of beverage services for cold drink vending machines and pouring within Parks and Recreation facility locations. For more information about the City of Toronto's cold beverage vending report, please review their staff report (City of Toronto, 2011).

Lucan Biddulph (Middlesex County), Ontario

Changes to the food environment at a recreation facility in Lucan Biddulph, Ontario, occurred over three years through a process of change that focused on: gaining greater control over municipally run facilities; education of council, staff and citizens; taking specific action to affect the food environment within this setting; and working with suppliers to provide improved and competitive pricing.

Results in this municipality included: elimination of advertising of non-nutritional foods; removal of candy machines, a slushy machine and a nacho machine; reduction in the number of beverage vending machines from three to one; reduction in the size of selected snack and beverage portions available; increases in the price of pop to offset the lower price of single-use bottled water; implementation of a water bottle-filling station in a common location in recreation facilities; and the addition of milk, chocolate milk, fruits and eggs to the concession stand menu. For additional information about this project, please contact the author of this report.

King County, Washington, USA

In King County, one local board of health developed a policy approach for healthy food access through vending machine guidelines, and reviewed its impact and approach. They found that the guidelines and recommendations provided "policy guidance" in settings where the board of health does not have any regulatory authority, and facilitated the opportunity to create a healthy beverage environment within municipally run settings frequented by children, youth and families. For more information about this approach, please review the work by Quinn and colleagues (2015).

Boston, Massachusetts, USA

This project implemented and evaluated the impact of the Healthy Beverage Executive Order for all city agencies. The project provided policies to support access to healthy beverages on city-owned properties to make the healthier choice the easier one. For more information about this approach, please review the work by Cradock and colleagues (2015).

Additional examples from other municipalities can be found in Appendix D.

Policy Options for Municipally Run Facilities

In Australia, Miller and colleagues (2014) implemented a policy approach called *Better Choice*, with the goal of improving the food and drink supply in public sector health facilities. This program increased supply and promotion of healthy foods and drinks and decreased supply and promotion of energy-dense, nutrient-poor choices in all food supply areas of municipally run facilities. *Better Choice* is one example of the implementation of a public policy approach to improving the food and drink supply in complex, real-world settings. This is also an effective way to support healthy dietary behaviours and body weights among children (Naylor et al., 2015).

Policy Options for the City of London

Targeting the food environment in schools, workplaces, recreation facilities, community centres and other locations where children, youth and families live, work, play and learn is an important strategy that has gained considerable appeal in the public health community over the past several years (Garner et al., 2014). Health promotion activities are central to the mission of the Health Unit. Consequently, this report outlines policy options which have an opportunity to enhance the food environment to improve health outcomes. The following policy options are informed by the survey results, the review of the evidence and lessons learned from other municipalities. Whichever policy option is selected and implemented, the Health Unit recommends that it be supported with a comprehensive implementation plan, including a communication campaign to maximize reach and impact.

Snack Vending, Bulk Candy Vending and Concession Stands

While the scope of the review was limited to beverage vending, there was an opportunity to gauge public support for changes to snack and bulk candy vending machines that are available in most city-run facilities. Given the level of public support (58.1% agree/strongly agree), the Health Unit recommends that the bulk candy vending machines be removed. The removal of these machines will reduce the distribution of bulk candy—candy that is nutrient-poor and very high in sugar (e.g., gumballs, hard candies, chocolate snacks, etc.).

The results of the survey related to snacks (e.g., gum, chips, chocolate bars, peanuts, etc.) indicate that the snack food environment requires further review and discussion prior to making changes to snack vending machines. There was clear disagreement (66.3% of respondents who access city facilities) to remove snack vending machines from city facilities. However, a healthy food environment in city-run facilities would have a significant, positive impact on the health and behaviour of children, youth and families in our community. A review of the food environment within city facilities, specifically addressing snack food options within vending machines and concession stands, could be of benefit. The report highlights the unique role that municipal governments and health units can play in influencing the food environment to make the healthy choice the easy choice; therefore, the Health Unit recommends continued collaboration with City staff.

Beverage Vending Options

Policy Option #1: Remove all beverage vending machines

This option meets Health Unit recommendations to eliminate the distribution of SSBs in city-run facilities and encourages facility users to drink tap water from fountains and at bottle-filling stations. The removal

of beverage vending machines will help to reduce consumer confusion around those SSBs that are marketed by the beverage industry as "healthier" beverages ("health washed"), because they will no longer be available for sale. From a health perspective, sports drinks, vitamin water and juices also contribute to the negative health effects of too much sugar in the diet, and should not be labelled "healthy" or "healthier" compared to soft drinks and energy drinks. The drink of choice for hydration and health is plain water. Since all single-use bottles generate waste, the removal of vending would have a positive impact on reducing the City's generation of plastic bottle waste.

The key challenge with this policy option relates to public perception about consumer choice. Removing all vending machines may be interpreted by some facility users as removing choices from parents, and leaves no drink options available except for water fountains, water bottle filling stations and concession stands (when available). However, 82.5% of facility users are already bringing beverages of their choice from home to city facilities. The removal of beverage vending machines would send a clear message that all sugary drinks are known negatively to impact the health of its facility users and that facility users are encouraged to choose water from water fountains and bottle filling stations to satisfy thirst.

Removing all beverage vending machines also results in a small loss of revenue. However, if the City of London stops receiving funds from the sale of beverages that increase the risk of unhealthy weights and other chronic diseases, this aligns with the City of London's strategic plan to work with the Health Unit to promote and protect the health of the community. This also aligns with other City-supported community initiatives that are currently promoting the health benefits of drinking water and reducing the consumption of SSBs, such as the Healthy Kids Community Challenge. Decreased distribution of SSBs by the City of London would demonstrate leadership in promoting health and creating healthy environments for families from London and surrounding communities who are accessing programs and services.

Policy Option #2: Beverage vending machines with single-use and reusable bottled water only
This option enables the City of London to continue to generate revenue through beverage vending sales, while promoting the consumption of water—the healthiest beverage option. The majority of facility users (60.8%) would like single-use bottled water to be made available for sale in city facilities, both because it is a healthy choice and for those instances when people forget their own water or are unaware of the availability of water fountains/water bottle filling stations.

The environmental impact of adding single-use bottled water to beverage vending machines needs to be considered. The purchase of bottled water may increase, generating additional plastic bottle waste, contrary to the intent behind the bottled-water ban instituted in 2008. However, it is important to note that all bottled beverages for sale in beverage vending machines generate waste, and many facility users reported bringing their own water from home in a refillable bottle (83.1%). Therefore, even with the sale of bottled water in beverage vending machines, the net volume of plastic bottle waste may in fact decrease because of the removal of all other SSBs. The concern about waste could further be mitigated with increased availability of reusable water bottles at city facilities, and by exploring whether or not water in reusable water bottles could be sold from the vending machines.

Last, the increased availability of bottled water may call into question the safety of the municipal water supply by the public. It would be necessary to mitigate this potential misperception with a strong educational campaign that promotes water fountains and bottle-filling stations within city facilities.

Overall, there are long-term positive health impacts by including only single-use and reusable bottled water in the vending machines, and it is supported strongly by the evidence as a means to increase awareness about the health risks associated with consumption of SSBs and the health benefits of drinking water. While the bottled-water issue is complex, this policy option should be considered.

Policy Option #3a: Remove all pop and energy drinks from beverage vending machines and add single-use and reusable bottled water at discounted prices. Decrease serving sizes of remaining SSBs and increase the price of SSBs

This policy option calls for the removal of pop and energy drinks from beverage vending machines. The removal of pop and soft drinks is supported by facility users, with 48% indicating that they agreed/strongly agreed to have them removed, versus only 42% who disagreed/strongly disagreed. Respondents shared even stronger agreement in removing energy drinks with caffeine (63.5%). The removal of these particular SSBs sends a clear message to children, youth and families that these drinks are unhealthy and should not be distributed at city facilities. At the same time, the addition of low-cost, single-use and reusable bottled water to vending machines will help to reinforce the fact that water is the healthiest drink choice. The sale of SSBs in smaller-sized bottles at higher cost would help to decrease sugar consumption and reinforces healthy-eating messaging that SSBs should be consumed sparingly.

The literature recommends providing water at a lower cost compared to SSBs in the beverage vending machine (French et al., 2010; Grech & Iman-Farinelli, 2015; Kocken et al., 2010; Schultz, 2012). Water should be at most half the price of SSBs. Not only would a less expensive option be appealing to the public, but returning water to the beverage vending machine is supported by the survey results.

This policy option, however, is not without its own challenges. Because there is no agreed-upon definition by health experts of the term “healthy” as it relates to vending machine options, it will be difficult to decide and consistently implement changes to this food environment. For example, if vitamin water and sports drinks are kept in the beverage vending machines, SSBs will still be readily available for consumption. The removal of some SSBs and leaving others for sale is sending an incorrect message about the health benefits of sports drinks, vitamin water and other SSBs. This approach encourages “health washing” of so-called “healthier” beverage vending machine choices.

This policy option has some identified challenges from a health perspective and has been identified in the evidence as potentially problematic; however, there are benefits as it relates to facility users’ freedom of choice, portion control and public education around the health risks associated with pop and energy drinks. In addition, it may be more appealing from a business perspective, and is in line with the results from the survey. Further exploration of the unintended consequences of “health washing” and how this policy option would be monitored would be required if this direction were chosen.

Policy Option #3b: Remove all pop and energy drinks from beverage vending machines and decrease serving sizes of remaining beverages

The sale of single-use and reusable bottled water within vending machines is complex, as outlined in Policy Option #2; therefore, this policy option may yield some potential positive health impacts, while eliminating both the benefits and challenges related to the sale of bottled water. Overall, the potential positive health impact of this policy option is lower than Option #3a, because water, as the healthiest choice, is not being added; however, it may be worth consideration as an intermediate action that could be

taken by Civic Administration. This policy option allows for a more robust review of the bottled water ban, while implementing some changes that will improve the food environment at city facilities.

Policy Option #4: Add single-use bottled water to beverage vending machines, keep all other SSBs available for sale and price SSBs higher than water

In reality, water is the healthiest beverage option in beverage vending machines (that do not also sell lower-fat white milk) and should be made available to those who do not have a refillable water bottle available or who choose to refrain from drinking directly out of fountains. Adding water back into the beverage vending machines provides choice to the consumer while generating additional revenue for the City of London.

As recommended in the literature, water should be available at most half the price of SSBs in beverage vending machines (French et al., 2010; Grech & Iman-Farinelli, 2015; Kocken et al., 2010; Schultz, 2012). A less expensive option is appealing to the public and the availability of water in beverage vending machines is supported by the survey results.

The environmental impact of adding single-use bottled water to beverage vending machines needs to be considered. The purchase of bottled water may increase, generating additional plastic bottle waste; however, it is important to note that all bottled beverages for sale in beverage vending machines generate waste, and many facility users reported bringing their own water from home in a refillable bottle (83.1%). Therefore, even with the addition of bottled water to beverage vending machines, the net volume of plastic bottle waste may in fact balance, as those who had previously purchased SSBs switch to the purchase of bottled water. This potential consequence could further be mitigated by increased availability of reusable water bottles at city facilities, and the exploration of whether or not water in reusable water bottles could be sold from the vending machines.

Last, the increased availability of bottled water may call into question the safety of the municipal water supply by the public. It would be necessary to mitigate this potential misperception with a strong educational campaign that promotes water fountains and bottle-filling stations within city facilities. Overall, long-term positive health impacts can be achieved by adding single-use bottled water into the vending options, which would aid in shifting the culture and perception of healthy drinks in this food environment. This policy option is worth consideration given the results of the survey and the potential health benefits.

Policy Option #5: Status quo—beverage options remain the same

While this policy option is the easiest to implement and would yield no loss in revenue and no increase in cost to the City of London, it does nothing to create a healthier food environment within city-run facilities. Further, the survey results indicate that facility users are ready for some changes to be made to drink options available within beverage vending machines. Failure to implement any changes would be ill-advised, especially when steps were taken to solicit public input and the documented benefits associated with municipal policy change are significant.

Recommended Policy Option: Remove All Beverage Vending Machines

After careful consideration of the survey results, the review of the evidence, lessons learned from other municipalities and the five policy options, the Middlesex-London Health Unit recommends that the City of London remove all beverage vending machines from city-run facilities (i.e., Policy Option #1). A summary of the rationale for why this policy option is the preferred approach for the City of London is provided in Table 2.

Table 2. Summary Rationale for the Removal of All Beverage Vending Machines within City of London Facilities

Rationale for the Removal of Beverage Vending Machines
• The majority of London facility users (82.5%) bring beverages of their choice from home. • SSBs are the single largest source of sugar in the diet. • Eliminating the sale of all sugary drinks from vending machines, including sports drinks, vitamin water and juices, sends a consistent message that all sugary drinks contribute to the negative health effects of too much sugar in the diet. This approach avoids "health washing," which labels some SSBs as "healthier" than others. • Water is the best choice to satisfy thirst, to stay hydrated and to feel energetic and alert. • Plain tap water is safe and easily accessible to children and adults, both at home and in city-run facilities from water fountains and bottle-filling stations. • When children are encouraged to drink water at a young age, they are more likely to drink water later in life. • Children with high intakes of SSBs are more likely to be overweight or obese. Each additional SSB consumed per day increases a child's risk of becoming obese by 60%. • The sugar in SSBs promotes bacterial growth and the acid in carbonated drinks weakens teeth, which can lead to cavities. • The removal of beverage vending machines will reduce the number of plastic bottles that find their way into recycling and waste systems. This approach supports the City's current ban on the sale of bottled water. • Decreased distribution of SSBs by the City of London demonstrates leadership in promoting health and creating healthy environments for those families who access programs and services.

Sugar consumption is a major public health concern, with SSBs being the single largest contributor of sugar to children's diets (Langlois & Garriguet, 2011). Excessive intake of sugar has been linked to obesity, type 2 diabetes, cardiovascular disease, dental caries, metabolic syndrome and a lower intake of nutrient dense beverages, such as milk (Standing Senate Committee, 2016; WHO, 2015). In children, a higher intake of SSBs increases the risk of overweight or obesity by 55% (Te Morenga, Mallard & Mann, 2013). Just over 25% of Ontario youth aged 12–17 and almost 64% of Middlesex-London adults self-report being overweight or obese (CCHS, 2014).

In addition to physical health, dietary choices impact mental health, cognitive function, the ability to focus and sleep patterns. The evidence shows that healthy children perform better academically, have better

attendance and behaviour at school, and enjoy improved concentration, memory and mood (CDC, 2014). Properly nourished children are more likely to grow and develop into healthy, active adults (Ontario Ministry of Child and Youth Services, n.d.).

Food and drinks sold in recreation centres, schools, variety stores and workplaces have a significant influence on diet and health (National Collaborating Centre for Environmental Health (NCCEH), 2014). Individuals who are influenced by environmental factors to make less healthy choices may have a higher risk for becoming overweight or obese (Harrington, 2008; James, Thomas, Cavan & Kerr, 2004; Johnson, Bruemmer, Lund, Evens & Mar, 2009; Minaker, 2011; Shi, 2010). Improvements to the food environment are a priority for reducing the prevalence of unhealthy weights and improving health. Municipally run facilities, specifically, are priority settings for supporting healthy dietary behaviours among children, youth and families (Naylor, Olstad & Themen, 2015). Municipally run facilities often serve as community hubs and have the ability to reach and impact a broad cross-section of the population, including higher-need individuals and families. These facilities have the opportunity to help set the foundation for lifelong healthy lifestyles.

In school environments, accessibility of vending machines encourages students to bring similar unhealthy snacks and beverages from home (Minaker, 2011). Fostering an unhealthy food environment in one location encourages equally unhealthy food environments elsewhere. This relationship likely translates to municipally run-facilities, whereby accessibility of vending machines in city facilities also promotes unhealthy food choices in other settings.

Removing all beverage vending machines is recommended from a health perspective, rather than increasing the proportion of “healthier” beverages, the approach taken by other select municipalities. Children are more likely to report purchasing SSBs if they are available, regardless of whether healthy drink choices are available or not (Chen & Wang, 2016; Jones, Gonzalez & Frongillo, 2009). Providing alternatives to SSBs, including water, is not as effective as completely eliminating their availability (Chen & Wang, 2016; Jones, Gonzalez & Frongillo, 2009). As such, researchers recommend the complete removal of vending machines containing SSBs and the installation of water fountains (Chen & Wang, 2016; Jones, Gonzalez & Frongillo, 2009). This change in support of healthy environments for children has already begun in the City of London, with the removal of beverage vending machines from most, if not all, local elementary schools.

There are concerns with increasing the proportion of “healthier” beverages in vending machines, instead of removing all beverage vending machines. Classifying certain beverages as healthier because they contain less sugar than beverages with the highest sugar content, typically soft drinks, is misleading. This practice, often used in beverage marketing by the beverage industry, encourages “health washing” of certain beverages, leading to the consumer misconception that these beverages are healthy. From a health perspective, sports drinks, vitamin water and juices are still SSBs, and, like all SSBs, contribute to the negative health effects of too much sugar in the diet. The beverage of choice for hydration and health is plain water.

Over 60% of City of London facility users surveyed supported the sale of single-use bottled water in city facilities. When facility users decide to purchase a beverage from a vending machine, they want the choice to purchase a healthy option (i.e., plain water) instead of an SSB. From a health perspective, water is the ideal beverage choice. However, from an environmental perspective, single-use water bottles

contribute to environmental concerns, which previously led the City of London to discontinue the sale of single-use water bottles from public facility vending machines, replacing it with easy access to municipal tap water (e.g., water fountains). All single-use bottles, however, require fossil fuels for their production and transport, and contribute to plastic bottle waste, regardless of the type of beverage they contain. The total removal of beverage vending machines would have a positive impact from both a health and an environmental perspective.

Removing all beverage vending machines may be interpreted by some facility users as removing choices from parents and leaving no beverage options available except for municipal water sources (e.g., water fountains) and concession stands (when available). However, 82.5% of facility users are already bringing beverages of their choice from home to city facilities. The beverages most often reported to be taken to these facilities included water in a refillable bottle, coffee, or tea. This common practice of facility users bringing beverages from home offers families the opportunity to make their own beverage choices, supports the health of their families and is more cost-effective than paying premium vending machine prices.

As stated in the current Strategic Plan, the City of London is committed to working with the Health Unit to promote and protect the health of the community. Decreased distribution and sale of SSBs by the City of London would demonstrate leadership in promoting health and creating healthy environments for families from London and the surrounding communities who are accessing programs and services. This also aligns with other City-supported community initiatives that are currently promoting the health benefits of drinking water and reducing the consumption of SSBs, such as the Healthy Kids Community Challenge.

Next Steps and Conclusions

This report outlined the results of the public input survey, summarized a review of the literature and an environmental scan, and provided policy options for consideration by Civic Administration on how best to make improvements to the food environment in city-run facilities. After careful consideration of the policy options, the Health Unit recommends that the City of London remove all beverage vending machines and bulk candy vending machines from city-run facilities. It is recommended that a more comprehensive review of the snack food environment be initiated to explore snack food vending and concessions to identify opportunities to further improve the food environment in these important community hubs.

The City of London prides itself on being a leader in public service collaboration and innovation, and has identified health promotion and protection as a strategic priority. This report clearly outlines the potential long-term health benefits that could be achieved by eliminating the distribution of SSBs through beverage vending machines. Appendix E provides additional information, in a question-and-answer format, about the health risks associated with the consumption of SSBs and the benefits of reducing the availability of SSBs in publicly funded settings.

The survey results show the majority of patrons of city facilities are already bringing their own beverages from home, most often water in a refillable container. However, the results also show that there is support

for the continuation of the sale of certain sugary drinks, including sports drinks, vitamin waters and juices. This indicates the misconception that some sugary drinks are needed for hydration during physical activity, or that these are "healthier" choices. This is an opportune time for the Health Unit to work collaboratively with the Healthy Kids Community Challenge initiative and the City of London to engage in public education activities that: promote municipal water as the beverage of choice; address the "health washing" of various SSBs; and make known the health risks of excessive sugar consumption. There is a lack of awareness regarding the health risks associated with the consumption of all SSBs, and a lack of consumer awareness regarding beverage industry marketing practices. Providing children, youth and families with information about healthy eating, along with the rationale for changes to the food environment in city-run facilities, is necessary to modify beliefs about what constitutes a healthy diet.

When implementing health promotion policies, like making changes to the food environment in community hubs such as city-run facilities, the impact of policy changes is significantly enhanced when supported by a comprehensive communication strategy. In 2017, the Health Unit will work collaboratively with the City of London's Healthy Kids Community Challenge initiative and the City's Parks and Recreation Department to implement an education campaign in and around arenas, aquatic centres and community centres to make known the health risks associated with the consumption of SSBs and the benefits of water. The Health Unit is also committed to working with the Healthy Kids Community Challenge partners to support the upcoming 2017 theme of increasing vegetable and fruit intake because of the importance of the food environment as a whole.

City facilities, like arenas, recreation centres and City Hall, are vital hubs within our community and they can positively impact the health and wellness of children, youth and families. These settings are ideal for the promotion of a healthy food environment, and since food and beverages sold in recreation centres and workplaces have been recognized as having a significant influence on diet and health (NCCEH, 2014), improvements to the food environment remain a priority for the Health Unit. The Health Unit is committed to continuing its work in collaboration with the City of London, now and into the future.

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Appendix A – Survey Tool

City of London Beverage Vending Machine Review – SURVEY

www.surveymonkey.com/r/city-of-london-beverage-vending-machine-review

What is the purpose of the survey?

- The City of London is reviewing what drinks are available for purchase from their vending machines and would like to seek input from city residents who use these facilities.

How will the results be used?

- We want to know what you think about the types of drinks that are available for sale from vending machines at city facilities, including arenas, aquatic centres, Storybook Gardens, community centres and the City Hall cafeteria to help us make the best decision for our city.
- The results will be made available in a report that will be posted on the Middlesex-London Health Unit's website and presented to the City of London's Community and Protective Services Committee in December.

What will I be asked to do?

- The survey will take approximately 5 minutes to complete.
- You may decline to answer any question.
- This survey is voluntary and responses will be kept confidential.

Data Storage and Questions about this Survey

Survey responses are stored by Survey Monkey® and not by the Middlesex-London Health Unit or the City of London, and are governed by the Survey Monkey® Terms of Use. Survey data may remain on Survey Monkey® servers for up to 12 months and are subject to the laws of a jurisdiction outside of Canada.

Any questions about the survey can be directed to:

Linda Stobo, Program Manager
Chronic Disease Prevention and Tobacco Control Team
Middlesex-London Health Unit
Tel: (519) 663-5317 ext. 2388
Email: linda.stobo@mlhu.on.ca

Please select where this survey is being completed. Please check (✓) one only.

- ☐ Argyle Arena
- ☐ Canada Games Aquatic Centre
- ☐ Carling Arena
- ☐ Carling Heights Community Centre
- ☐ City Hall Cafeteria
- ☐ Farquharson Arena
- ☐ Glen Cairn Arena
- ☐ Kinsmen Arena and Community Centre
- ☐ Lambeth Arena and Community Centre
- ☐ Medway Community Centre/Ray Lanctin
- ☐ Nichols Arena
- ☐ North London Community Centre
- ☐ Oakridge Arena
- ☐ Silverwoods Arena
- ☐ Stronach Arena and Community Centre
- ☐ Storybook Gardens
- ☐ South London Community Centre
- ☐ I completed this survey online and not in a city facility.

1a. During a typical year, how often do you go to any of the following city facilities?
(Please check (✓) in the appropriate box for each facility)

	Never	Once a year	A few times a year	Once a month	A few times a month	Once a week	A few or more times a week
Arenas							
Aquatic Centres							
Community Centres							
Storybook Gardens							
City Hall Cafeteria							

2. What is your age?

- ☐ 17 years old or under
- ☐ 18 to 24 years old
- ☐ 25 to 44 years old
- ☐ 45 to 64 years old
- ☐ 65 years old or older
- ☐ Prefer not to answer

3a. Do you bring beverages from home into city facilities (e.g., arenas, aquatic centres, community centres, Storybook Gardens, City Hall cafeteria)?

- ☐ Yes (if yes, proceed to 3b)
- ☐ No (if no, skip to 4a)

3b. If yes, what do you bring with you? Please check (✓) all that apply.

- ☐ Water in a refillable bottle
- ☐ Water in a single-use bottle (e.g., Aquafina, Dasani, Nestle, store-brands, etc.)
- ☐ Coffee and/or tea
- ☐ Fruit-flavoured Water
- ☐ Energy Drinks
- ☐ Hot chocolate
- ☐ Iced Tea
- ☐ Juice
- ☐ Pop
- ☐ Sports drink (e.g., Gatorade)
- ☐ Vitamin Water
- ☐ Other (please specify) _____

4a. Have you ever purchased drinks from vending machines at city facilities (e.g., arenas, aquatic centres, community centres, Storybook Gardens, City Hall cafeteria)?

- ☐ Yes (if yes, proceed to 4b)
- ☐ No (if no, skip to 5)

4b. If yes, at your last visit to a city facility, how many drinks did you purchase from beverage vending machines?

- ☐ One
- ☐ Two
- ☐ Three or more

4c. For whom were these drinks purchased? Please check (✓) all that apply.

- ☐ Self
- ☐ Children
- ☐ Other family members (e.g., spouse, partner, extended family)
- ☐ Friends
- ☐ Other (please specify): _____

5. Please indicate the level at which you agree or disagree with the following statements by placing a check mark (✓) in the appropriate box:

5a. The following drinks <u>should not</u> be available for sale from the vending machines at city facilities (e.g., arenas, aquatic centres, community centres, Storybook Gardens, City Hall cafeteria).

	Strongly Agree	Agree	Disagree	Strongly Disagree	Unsure
Pop and soft drinks (e.g., Pepsi, Diet Pepsi, 7UP, Mountain Dew, Ginger Ale, and Dr. Pepper)					
Sports drinks (e.g., Gatorade)					
Fruit flavoured water (e.g., Perrier Lime, Aquafina Plus)					
Juice (e.g., Dole, Ocean Spray, Tropicana Orange, Lemonade, Apple, or Cranberry)					
Iced tea (e.g., Lipton, Lipton Green, Lipton White)					
Vitamin Water					
Coffee beverages (e.g., Starbucks Frappuccino, Starbucks Ice Coffee, Starbucks Refreshers)					
Energy drinks with caffeine (e.g., AMP)					

5b. Snacks (e.g. gum, chips, chocolate bars, peanuts, candy, etc.) <u>should not</u> be available for sale from snack vending machines at city facilities (e.g. arenas, aquatic centres, community centres, Storybook Gardens, City Hall Cafeteria).

Strongly Agree	Agree	Disagree	Strongly Disagree	Unsure

5c. Bulk candy (e.g. Jawbreakers, Gum Balls, Chews, Runts, etc.) <u>should not</u> be available for sale from candy vending machines at city facilities (e.g. arenas, aquatic centres, community centres, Storybook Gardens, City Hall Cafeteria).

Strongly Agree	Agree	Disagree	Strongly Disagree	Unsure

6. In 2008, a decision was made by the City of London to stop the sale of single-use bottled water from the City Hall cafeteria and from city-owned or city-operated concessions and vending machines in public facilities. Please indicate the level at which you agree or disagree with the following statements by placing a check mark (✓) in the appropriate box:

6a. Since city-owned or operated facilities have water fountains and water bottle filling stations, there should be <u>no</u> beverage vending machines in these facilities.

Strongly Agree	Agree	Disagree	Strongly Disagree	Unsure

6b. Single-use bottled water <u>should</u> be made available for sale in the City Hall cafeteria and in beverage vending machines in city facilities (e.g., arenas, aquatic centres, community centres, Storybook Gardens and City Hall).

Strongly Agree (Proceed to 6c)	Agree (Proceed to 6c)	Disagree (Skip to 6d)	Strongly Disagree (Skip to 6d)	Unsure

6c. If you agreed or strongly agreed with the above statement, why?
(Please check (✓) all that apply)

☐ All bottled products contribute to waste, not just single-use bottled water. Water should not have been removed from the vending machine.
☐ Water is a healthy drink so bottled water should be made available as a choice.
☐ Bottled water should be available in case people forget to bring water with them or are unaware of the locations of water stations.
☐ Other (please specify): _____

(Skip to End)

6d. If you disagreed or strongly disagreed with the above statement, why?
(Please check (✓) all that apply)

- ☐ I don't buy anything from the beverage vending machine so it doesn't matter to me.
- ☐ There are water fountains and water bottle filling stations available for free so I would not pay to get water from the vending machine.
- ☐ I always bring my own water to the facility with me so would not buy it.
- ☐ All single-use bottles are an environmental waste issue.
- ☐ Other (please specify): _____

Thank you for taking the time to complete the survey!

Appendix B – Data Collection Quotas per Location

City Facility	Annual Visits	Proportion of Total	Survey Quota
Argyle Arena	215,000	6.79%	27
Canada Games Aquatic Centre	300,000	9.47%	38
Carling Arena	108,000	3.41%	14
Carling Heights Community Centre	125,000	3.95%	16
City Hall Cafeteria	146,500	4.62%	18
Farquharson Arena	173,000	5.46%	22
Glen Cairn Arena	99,000	3.12%	12
Lambeth Arena and Community Centre	191,000	6.03%	24
Medway Community Centre/Ray Lanctin	146,500	4.62%	18
Nichols Arena	314,000	9.91%	40
North London Community Centre	75,000	2.37%	9
Oakridge Arena	150,000	4.73%	19
Silverwoods Arena	124,000	3.91%	16
Stronach Arena and Community Centre	447,500	14.12%	56
Storybook Gardens	135,000	4.26%	17
South London Community Centre	150,000	4.73%	19

Appendix C – Recommendations Summarized from the Evidence

Vending Machine Options	Offer healthy snacks and beverages in vending machines to enable consumers to make healthier choices when eating and drinking away from home. When revising options available for vending machines, evaluate the healthfulness of proposed products based on nutritional content, portion size and price before agreeing to make them available to the public. Work with food industry representatives to increase the availability and accessibility of healthier vending machine products, specifically reinstating single-use bottled water as a priority option in vending machines.
Water	Offer single-use bottled water at a discounted price compared to sugar-sweetened beverages and beverages that are nutrient-poor (e.g., pop, diet pop, sports drinks, vitamin water, fruit drinks, energy drinks, sweetened tea and coffee beverages, and energy drinks). The discount should be at 50% less than the unit cost for the other beverages to encourage a change in buying practices. Remove SSBs from the beverage vending machine and replace with single-use bottled water.
Policy Development	Review existing wellness policies and nutrition guidelines that have been successfully implemented, evaluated and monitored in municipally run facilities. When implementing a policy change, ensure that there is a comprehensive implementation, monitoring and communications plan to maximize reach and impact.
Education	Implement educational posters to promote healthy, nutrient-dense products available in vending machines, as well as municipally available water.

Appendix D – Lessons from the Field: What have other municipalities done? – Additional Examples

Health Unit	Purpose	Target Population	Key Elements and Resources Developed
Algoma Public Health	To increase healthy choices in recreation settings	Children, youth and adults	Surveys evaluating the food environment and consumer preferences. Reports (2015): http://www.algomapublichealth.com/media/2009/healthy-eating-in-recreational-faciitlies-a-review-of-the-food-environment-in-algoma-march-2015.pdf http://www.algomapublichealth.com/media/2008/consumer-preferences-for-food-and-beverages-in-algoma-recreation-facilities-in-algoma-report-nov-2015.pdf
Grey Bruce Health Unit	To raise awareness and help change attitudes toward food choices offered in recreation centres	Municipal councillors, recreation staff and patrons	Environmental scan report and online survey. 88% would like healthier food and drink options available at recreational spaces. Recommendation: Report is not enough; recreational departments want help with deputations to council to speak to survey results and help convince council to support changing the environment. Next Steps: Create key messages document and talking points to counter any opposition and a presentation for council deputation. Report and Infographic (2016): https://www.publichealthgreybruce.on.ca/About-Us/News-Releases/ArticleID/380
Halton Region Health Department	To investigate the food environment in recreation centres	Recreation centre food environment managers and supervisors	Goal: To establish a baseline of how food is procured in recreation centres and to determine if there is interest from recreation centres in working with the Health Department to make improvements in the food environment. Policy: To assist the City, as part of the Healthy Kids Community Challenge, to implement a Healthy Eating Policy for municipal facility vending and concession kiosks (needs City Council approval to move forward).

Haliburton, Kawartha, Pine Ridge District Health Unit (HKPR)	To increase the availability of healthy foods; To address the placement, promotion and pricing of healthy foods	Municipalities (i.e., Healthy Environments and Policy)	Goal: To continue advocacy efforts with Community Centre to identify types of healthy foods that could be offered, placement of foods, pricing and point-of-purchase promotion To support staff at the Centre, recruit volunteers and develop partnerships (i.e., sourcing suppliers that could provide healthy foods at reasonable prices, or securing funding to assist with promotions)
Kingston, Frontenac and Lennox & Addington (KFL&A) Public Health	To improve healthy food environments in municipal recreation centres	Children, youth and adults	Completed patron survey and recreation facility assessments. Meeting with recreation managers to plan improvements to food offered in canteen, vending machines, etc. City released request for proposal for "25% Choose Most / 25% Choose Less / 50% Not Recommended" criteria for vending machines, with language for position and pricing of "Choose Most / Not Recommended" items Report, Infographic and Promotional Material: https://www.kflaph.ca/en/The-Super-Snackables.aspx
Niagara Region Public Health (NRPH)	To help improve the food environment in recreation facilities by offering healthier food choices	Children, youth and adults	Report (2015): Received comprehensive evaluation of the second phase of the Fuelling Healthy Bodies program, completed by external consultants. Report noted many recommendations beyond the scope and capacity of NRPH public health. Loss of Healthy Communities Fund, which funds this program. Next Steps: With support of health promoter and policy analyst, explore a municipal policy approach, while continuing to support local vendors on a consultative basis. Fuelling Healthy Bodies: Healthy Eating Policy for Sports Teams: http://niagararegion.ca/living/health_wellness/healthylifestyles/fuelling-healthy-bodies.aspx
North Bay Parry Sound District Health Unit	To help improve the food environment in	Youth and adults	Overview: • Advocacy letters distributed to all municipal recreational staff and managers in Jan 2016. • Food charter endorsed by many municipalities in

	recreation facilities by offering healthier food choices		2016. • Plan to work with health promoter to leverage charter in 2017. Long-Term Goal: To have municipalities implement policy related to healthy food options and a healthy eating environment in local recreation settings Request for Proposal (2016): http://www.myhealthunit.ca/en/partnerandhealthproviderresources/resources/rfp-2016-01-general-insurance-and-risk-management-services-program.pdf
Oxford County Public Health	Healthier Recreational Concession Pilot Project, sustainability and expansion plans	Children, youth and adults	Three pilot projects and evaluations for year one complete. Worked with city concession to introduce healthy menu for summer 2016 (sold > 1,300 units healthy product in two months). Next Steps: Share pilot project results and recommendations with recreational managers and municipalities to inform their plans and decision making for food provision and operational costs. Continue working on menu implementation with local Agricultural Society (local berry and dairy suppliers for smoothies). Evaluation Reports: http://www.oxfordcounty.ca/Partners-professionals/Reports-and-publications
Peel Public Health	Healthy Food Policy and Environments	Children, youth and adults	The Peel Healthy Eating Recreation Organization (HERO) evolved into three municipality based projects: Brampton, Mississauga and Caledon. Common Elements: • Using Peel Nutrition Guidelines ("Healthy" food and drink and "Other" categories). • Developing Foods Offered and Used master list (packaged foods, ingredients and recipes). Nutrition Pitfalls: Vending Machines and Workplaces: http://www.peelregion.ca/health/workplace/employees/eating/busy-vending.htm Healthy Vending Machine Choices: http://www.peelregion.ca/health/workplace/health/eati

			ng/vending.htm
Peterborough Public Health (formerly Peterborough County City Health Unit)	To explore opportunities to work with municipal recreational centres on healthy eating initiatives; To promote water in municipal recreation centres	County arenas	Goal: To improve vending with beverages that align with PPM 150 and encourage water consumption. Start with one pilot municipal recreation centre. Goal: To offer healthy beverage options and promote water consumption in recreation facilities. To develop a healthy food and beverage policy. Install water bottle filling stations at county centres and city arenas. Food Policy Report (2011): http://www.foodinpeterborough.ca/wp-content/uploads/2014/07/844_Food+Policy+CFN+Report+March+2011.pdf
Sudbury and District Health Unit (SDHU)	To create supportive environments that make the healthy choice the easy choice	Children, youth, adult influencers and key decision makers	Annual Report (2015): https://www.sdhu.com/uncategorized/2015-annual-report-community-first No Time to Wait: Healthy Kids in the Sudbury and Manitoulin Districts (Change the Food Environment: SDHU Grade = C+): https://www.sdhu.com/resources/research-statistics/research-evaluation/reports-knowledge-products/no-time-wait-healthy-kids-sudbury-manitoulin-districts

Appendix E – Q&A: Sale of Sugar Sweetened Beverages on Municipal Property

1) What are sugar-sweetened beverages?

- Sugar-sweetened beverages (SSBs) are any beverages to which sugar has been added, including soft drinks, fruit drinks, sports drinks, sweetened tea and coffee drinks, energy drinks and sweetened milk or milk alternatives.

2) What are the health concerns with drinking SSBs?

- Excess sugar consumption is linked with poor health outcomes including heart disease, stroke, diabetes, high blood cholesterol, cancer and dental problems.
- Beverages, including soft drinks, fruit drinks, juice and milk contributed to 44% of the average daily sugar intake of children and adolescents and 35% of adults' average daily sugar intake.
- Children with high intakes of SSBs are more likely to be overweight or obese. Each additional SSB consumed per day increases a child's risk of becoming obese by 60%.
- There is a clear link between drinking SSBs and risk of poor diets. When children drink more SSBs, they also drink less water and milk.

3) What is the impact of SSBs on teeth?

- The sugar in SSBs allows for bacteria growth that can lead to tooth decay.
- The acid in carbonated SSBs can weaken teeth and lead to cavities.
- When children drink soft drinks their risk of dental caries nearly doubles.

4) Is there still a concern if people only have one SSB in a day or only once in a while?

- To promote health, the World Health Organization (WHO), Canadian Diabetes Association and Heart and Stroke Association recommend limiting the intake of free sugars to less than 10% of daily calorie intake, which is about 10 teaspoons for a 1700 calorie diet.
- One 355mL can of a typical SSB contains 10 to 12 teaspoons of sugar.
- When children drink SSBs from a young age, they are more likely to prefer the taste of sugary drinks rather than enjoying plain water.

5) Why is water the best choice for hydration?

- Water contains no sugar, calories, additives, preservatives or caffeine.
- In most cases, water is the best choice to replace water lost through physical activity.
- When children drink water at a young age, they are more likely to drink water as they get older.
- When children drink water instead of SSBs they are likely to take in fewer total calories per day.
- Children who consume healthy diets learn better, perform better in school and socially and have more energy to be physically active.
- Municipal tap water is a convenient and free source of hydration.

6) Why should the City of London remove beverage vending machines from their facilities?

- Providing healthy environments fits with the City's strategic plan to promote and protect the health of its residents. It positions the City as a role model for healthier food environments.
- City facilities are often community hubs where families participate in recreation and should help promote lifelong healthy lifestyles.
- Beverage vending machines contain mostly SSBs and contribute to an already high daily sugar intake, especially with local children and youth.
- Consumers, particularly children, are more likely to buy and drink SSBs if they are available.
- Most Londoners already bring their own drinks, mostly water in refillable containers, to City facilities.
- Removing beverage vending machines encourages municipal water consumption.
- This is a business decision to not profit from the sale of SSBs.
- Removing beverage vending machines aligns with other City-supported community initiatives that are currently promoting the health benefits of drinking water and reducing the consumption of SSBs (e.g., the Healthy Kids Community Challenge).
- By removing beverage vending machines, the City is supporting the health of Londoners and making the healthy choice the easy one for Londoners. Providing only municipal water at City facilities takes away the pressure to choose between water and less healthy, more expensive SSBs.

7) Why can't the City of London just add healthier choices into the vending machines?

- Plain water and white milk are the only healthy drink choices for vending machines. All other vended beverages contain sugar, carbonation and/or artificial sweeteners.
- For hydration and health, drinking water is most often the best choice before, during and after physical activity.
- Consumers are more likely to choose a less healthy drink even when a healthier drink is available.
- Selling SSBs with less sugar in the vending machines encourages the public to think these drinks are healthier or healthy, but they are still SSBs.
- In 2008, the City of London was a leader by removing bottled water from City facilities and has the opportunity to continue to lead in reducing environmental waste from disposable plastic bottles.

8) Why are you taking away my freedom to choose what I want to drink?

- Most Londoners already bring drinks, of their own choice, to City facilities.
- If they choose to do so, facility users may purchase drinks readily available for sale elsewhere.
- The argument that facility users' freedom to choose is being affected is similar to arguments used in the past against tobacco legislation. Selling SSBs is not in the best interest of the public, and therefore, it is appropriate for publicly-funded organizations to implement policies that create health promoting environments.

9) What is the issue with 100% fruit juice?

- The natural sugar in juice has a similar effect on teeth and overall health as sugar from other SSBs.

- It is recommended that children drink at most ½ cup (125 mL) juice per day. Juice containers commonly available from vending machines are much larger than this.
- Eating a whole piece of fruit provides water and extra nutrients and is more filling than juice.

10) What is the issue with artificially sweetened soft drinks (i.e., diet soft drinks)?

- Like regular soft drinks, diet soft drinks provide no nutritional value.
- Drinking artificially sweetened drinks can increase the desire for sweet tasting drinks, instead of enjoying plain water.
- The acid in diet soft drinks can weaken teeth and lead to cavities.
- The safety of artificial sweeteners is not well studied in children, especially if they consume a lot over time.

11) What is the issue with vitamin waters or sweetened carbonated waters?

- Vitamin waters and sweetened carbonated waters are still SSBs or contain artificial sweeteners.
- Added sugar provides extra, unnecessary calories.
- Vitamins commonly added to vitamin water are already adequate in the diets of the majority of Canadian children and adults. The body does not use the extra vitamins, but gets rid of them in the urine.
- The acid in carbonated waters can weaken teeth and lead to cavities.

12) Aren't sports drinks the best choice for active people?

- Sports drinks are SSBs that contain electrolytes.
- The beverage industry promotes sports drinks as needed for hydration during and after physical activity. However, the need for extra electrolytes only occurs when physical activity is intense and longer than 1 hour or done in extreme heat.
- For the typical child doing routine physical activity for less than 3 hours in normal temperature conditions, use of sports drinks in place of water is not needed.

Considerations for Vending Machine Beverages

There are a wide range of beverage options available for vending machines, with different health issues depending on additives or ingredients.

Additive or Ingredient	Issue(s)
Artificial sweeteners	• Intensely sweet • Can increase desire for artificially sweet-tasting drinks and foods, instead of plain water and naturally sweet foods (e.g., fruit) • Safety is not well studied in children, especially if they consume a lot over time
Caffeine	• May cause jitteriness, nervousness, anxiety, gastrointestinal upset, tachycardia, insomnia and other negative impacts • Children are more sensitive to effects
Carbonation	• Acidity can weaken tooth enamel and lead to cavities
Sugar (added or natural)	• Contributes to excess sugar in the diet • Can promote bacterial growth and lead to cavities

Note: All single-use beverage containers contribute to environmental waste concerns

Vending Machine Beverages Available

<u>Water</u>

Plain water
- Sugar-free, calorie-free
- Best choice for hydration and to quench thirst

Flavoured waters (e.g., Perrier, Aquafina, Nestle)
- Usually contain added sugar, artificial sweeteners and/or carbonation

Vitamin waters
- Contain added sugar or artificial sweeteners
- Vitamins commonly added are typically already adequate in the Canadian diet

<u>Milk or Soy-Based Drinks</u>

White milk or plain fortified soy beverage
- No added sugar
- Contain vitamins, minerals and protein (amount varies depending on product)

Flavoured milks (e.g., chocolate milk) or flavoured fortified soy beverages
- Contain added sugar or artificial sweeteners
- Contain vitamins, minerals and protein (amount varies greatly depending on product)

Fruit Based Drinks

100% fruit or vegetable juices

- Contain natural sugar
- Contain vitamins and minerals (amount varies depending on product)
- Vegetable juices contain sodium, which causes high blood pressure in excessive amounts (amount varies depending on product)
- Container sizes currently sold in vending machines are larger than daily maximum fruit juice recommended for children (1/2 cup or 125 mL)

Fruit drinks, fruit cocktails, or fruit punch

- Contain added sugar and/or artificial sweeteners
- Usually contain minimal amounts of vitamins and minerals

Drinks that Contain Caffeine

Energy drinks (e.g., AMP, Red Bull)

- Contain added sugar or artificial sweeteners
- May contain carbonation
- Contain high amounts of caffeine
- Contain other additives and herbal ingredients that may have negative impacts
- Additional health concerns when combined with alcohol or physical activity
- Not recommended for children or teenagers

Iced tea (regular and diet)

- Contain added sugar or artificial sweeteners
- Contain caffeine

Flavoured coffee or espresso beverages (e.g., iced coffee, Frappuccino)

- Contain added sugar or artificial sweeteners
- Contain caffeine

Pop and soft drinks (regular and diet)

- Contain added sugar or artificial sweeteners
- Contain carbonation
- May contain caffeine

Other Drinks

Sport drinks (e.g., Gatorade, Powerade)

- Contain added sugar or artificial sweeteners
- Added electrolytes and sugar are only needed when physical activity is intense and longer than one hour, or performed in extreme heat

simcoe muskoka
DISTRICT HEALTH UNIT

Sent by Email at: Jane.Philpott@parl.gc.ca

March 15, 2017

Dr. Jane Philpott
Minister of Health
Government of Canada
House of Commons
Ottawa, Ontario
K1A 0A6

Dear Minister Philpott,

On March 15th the Board of Health for the Simcoe Muskoka District Health Unit passed the following motion:

> THAT the Board of Health write to the federal Minister of Health supporting the federal government's proposal to commit to a target of less than 5% tobacco use by 2035;
>
> AND FURTHER THAT the Board of Health recommend that the federal government's approaches include those identified at the 2016 summit, A Tobacco Endgame for Canada;
>
> AND FURTHER THAT the Board of Health write to the Ontario Minister of Health to recommend that the Smoke Free Ontario Strategy be aligned with the proposed tobacco endgame in Canada.

This motion is in recognition of the fact that despite a substantial reduction of tobacco use in the Canadian population in recent decades, smoking remains the most important cause of death. It is also in recognition that without fundamentally new approaches to tobacco control there will be an inadequate continued reduction in use, and an increase in tobacco-related mortality in the decades to come. Background on this motion, including a definition of the endgame concept can be found in the attached briefing note.

The federal government is to be commended for its stated commitment to the renewal of its Federal Tobacco Control Strategy, and to this end for its consultation paper, Seizing the Opportunity: the Future of Tobacco Control in Canada proposing a target of less than 5% tobacco use by 2035. This is a commendable goal, in keeping with a tobacco endgame approach. The federal consultation paper also proposes six key elements that would help to

address population health inequities and to support tobacco control in priority populations, such as indigenous populations, tobacco users and youth. It also speaks to the importance of capacity building in the pursuit of enhanced tobacco control.

This is commendable content, however the Board of Health supports a further strengthening of the Federal Tobacco Control Strategy with the inclusion of the approaches within the 2016 summit paper, A Tobacco Endgame for Canada (attached).

The tobacco endgame approach proposed in this document includes some of the concepts within the federal consultation paper; however its content goes beyond this, and includes a number of recommendations that are either very well supported by research or are promising new possibilities for action. These include the strong endorsement for increased tobacco taxation (and other price-enhancing strategies) as the most important means of smoking reduction, very well supported by research, with data provided in the endgame report on both the anticipated impact on tobacco use and on government revenues. Others include increasing restrictions on marketing, including instituting plain packaging (which the federal government has already proposed) and implementing a 18A classification (adult accompaniment) for movies that depict smoking.

Both the federal consultation paper and the endgame document speak to the importance of enhancing smoking cessation. The endgame document provides a range actions that are consistent with this goal and would augment those provided within the federal consultation paper. It also proposes strategies to reduce the production, supply and distribution of tobacco, including possible new structures to these ends.

Both documents speak of holding the tobacco industry accountable for its impact on health. The endgame strategies include the importance of litigation and the resulting substantial financial impact on the industry. In addition it should be noted that the release of internal industry documentation would serve to enhance surveillance on tobacco industry strategies and actions.

The endgame paper also cites the importance of new funding streams for tobacco control, and also proposes the creation of an endgame steering committee or “cabinet”. These recommendations would serve as important enhancements to building capacity, in keeping with one of the key elements in the federal consultation paper. In order to develop and maintain a sustained and successful tobacco endgame strategy over time, a clear model of leadership and accountability will be required.

In order to achieve a tobacco endgame, the tobacco control strategies of the provinces would need to align with the Federal Tobacco Control Strategy. To this end the Federal Tobacco Control Strategy should specifically site such provincial alignment, and the policy instruments to achieve this. Consistent with this, attached you will find my letter on behalf of the Board of

Health to Ontario Minister of Health Dr. Eric Hoskins recommending that the Smoke Free Ontario Strategy be aligned with the proposed tobacco endgame in Canada.

The federal government is to be commended for considering a bold but very necessary goal of less than 5% tobacco use by 2035. The Board of Health is entirely in support of this goal, and recommends the inclusion of the endgame strategies that will be necessary to achieve it for the health of Canadians.

Sincerely,

ORIGINAL SIGNED BY

Scott Warnock,
Chair, Board of Health

Att. (3) Briefing Note and attachments
A Tobacco Endgame for Canada 2016 Summit Paper
Letter to Minister Dr. Eric Hoskins

c. Ontario Minister of Health
Chief Public Health Officer of Canada
Chief Medical Officer of Health of Ontario
Association of Local Public Health Agencies
Ontario Public Health Association
Ontario Boards of Health
Simcoe Muskoka local Members of Parliament
Local Members of Provincial Parliament
North Simcoe and Centre Health Integration Networks
Association of Municipalities of Ontario
Simcoe Muskoka Municipalities

simcoe muskoka
DISTRICT HEALTH UNIT

Sent by Email at: ehoskins.mpp@liberal.ola.org

March 15, 2017

Dr. Eric Hoskins
Minister of Health
Government of Ontario
Hepburn Block, 10th Flr.
80 Grosvenor St.
Toronto ON M7A 2C4

Dear Minister Hoskins:

On March 15th the Board of Health for the Simcoe Muskoka District Health Unit passed the following motion:

> THAT the Board of Health write to the federal Minister of Health supporting the federal government's proposal to commit to a target of less than 5% tobacco use by 2035;
>
> AND FURTHER THAT the Board of Health recommend that the federal government's approaches include those identified at the 2016 summit, A Tobacco Endgame for Canada;
>
> AND FURTHER THAT the Board of Health write to the Ontario Minister of Health to recommend that the Smoke Free Ontario Strategy be aligned with the proposed tobacco endgame in Canada.

This motion is in part in recognition of the fact that despite a substantial reduction of tobacco use in the Ontario population with the successes of the Smoke Free Ontario Strategy, smoking remains the most important cause of death. It is also in recognition that without fundamentally new approaches to tobacco control there will be an inadequate continued reduction in use, and an increase in tobacco-related mortality in the decades to come. Background on this motion, including a definition of the endgame concept can be found in the attached briefing note.

In the attached letter to federal Minister of Health Dr. Jane Philpott, I have communicated the Board of Health's commendation of the federal government for its stated commitment to the renewal of its Federal Tobacco Control Strategy, and to this end for its consultation paper, Seizing the Opportunity: the Future of Tobacco Control in Canada (attached) proposing a target of less than 5% tobacco use by 2035. This is a commendable goal, in keeping with a tobacco

endgame approach. My letter to Minister Philpott also cites the Board of Health's support for a further strengthening of the Federal Tobacco Control Strategy with the inclusion of the approaches within the 2016 summit paper, A Tobacco Endgame for Canada (attached), and provides examples of the benefits of this.

The tobacco endgame approach proposed in this document includes some of the concepts within the federal consultation paper; however its content goes beyond this, and includes a number of recommendations that are either very well supported by research or are promising new possibilities for action.

Building capacity is one of the key elements in the federal consultation paper. Continued financial support for tobacco resource centres such as the Ontario Tobacco Research Unit and the Smoking and Health Action Foundation is crucial as their work has been essential over the decades, and will be needed to help inform and guide in a tobacco control endgame in Ontario.

In order to achieve a tobacco endgame, the tobacco control strategies of the provinces would need to align with the Federal Tobacco Control Strategy. Given that the Smoke Free Ontario Strategy is presently under review, its alignment with a tobacco endgame approach presently emerging within the Federal Tobacco Control Strategy would be very timely. Such an approach would be consistent with the provincial government's stated commitment to achieve the lowest smoking rate in the country.

The federal government is to be commended for considering a bold but very necessary goal of less than 5% tobacco use by 2035. The Board of Health is entirely in support of this goal, and recommends the inclusion of the endgame strategies necessary to achieve it. Consistent with this, the Board of Health also recommends that the Smoke Free Ontario Strategy be aligned with the proposed tobacco endgame to achieve better health for Ontarians.

Sincerely,

ORIGINAL SIGNED BY

Scott Warnock,
Chair, Board of Health

Att. (4) Briefing Note and attachments
Seizing the Opportunity: the Future of Tobacco Control in Canada Paper
A Tobacco Endgame for Canada 2016 Summit Paper
Letter to Minister Dr. Jane Philpott

c. Minister of Health of Canada
Chief Public Health Officer of Canada
Chief Medical Officer of Health of Ontario

Association of Local Public Health Agencies
Ontario Public Health Association
Ontario Boards of Health
Simcoe Muskoka local Members of Parliament
Local Members of Provincial Parliament
North Simcoe and Centre Health Integration Networks
Association of Municipalities of Ontario
Simcoe Muskoka Municipalities

simcoe muskoka DISTRICT HEALTH UNIT

BRIEFING NOTE

Item #7.1

Tobacco Endgame

Update: New **Date: March 15, 2017**

Issue

The health and financial burdens of tobacco-related disease in Canada remain unacceptably high, and will continue to increase, even if all MPOWER measures of the Framework Convention on Tobacco Control are implemented. At a recent summit in 2016, a wide array of experts identified key new recommendations to implement toward a tobacco endgame in Canada.

Recommendations

THAT the Board of Health receive this briefing note for information;

AND FURTHER THAT the Board of Health write to the federal Minister of Health supporting the federal government's proposal to commit to a target of less than 5% tobacco use by 2035;

AND FURTHER THAT the Board of Health recommend that the federal government's approaches include those identified at the 2016 summit, A Tobacco Endgame for Canada;

AND FURTHER THAT the Board of Health write to the Ontario Minister of Health to recommend that the Smoke Free Ontario Strategy be aligned with the proposed tobacco endgame in Canada;

AND FURTHER THAT copies be sent to the Chief Public Health Officer of Canada, the Chief Medical Officer of Health of Ontario, the Association of Local Public Health Agencies, the Ontario Public Health Association, all Ontario Boards of Health, and within Simcoe Muskoka the local Members of Parliament, the local Members of Provincial Parliament and the Local Health Integration Networks;

AND FURTHER THAT the Board of Health sponsor the accompanying resolution in Appendix A at the 2017 Annual General Meeting of the Association of Local Public Health Agencies.

Current Facts

Smoking is still a big problem

- A very high number of Canadians are still addicted to tobacco smoking. In 2014, 18.1%, or 5.4 million Canadians aged 12 years and over were smokers[1].
- As a risk factor, smoking is responsible for the most death and disability in Canada[2]. In 2002, 17% of deaths in Canada were due to smoking[3].
- The direct and indirect financial costs of tobacco smoking was estimated to be $18.7 billion in Canada in 2013[4].

The status quo is not enough

- Under the status quo, and even if all the existing technical and policy-based "MPOWER" measures in the World Health Organization's Framework Convention on Tobacco Control were implemented, the health and financial burden of tobacco will continue to grow. For example, smoking-related deaths in Ontario would continue to increase beyond 2030, while smoking rates would fall by less than half over the same time period[5].

Canada is ready for a tobacco endgame

- The concept of a "tobacco endgame" has gained public health support globally[6] and within Canada[5]. The endgame envisions a future that is free of commercial tobacco; it is a strategic process in which measures are implemented that gradually decrease smoking prevalence, demand and supply to extremely low levels. Importantly, it is distinct from an outright ban on tobacco products while demand remains high[5].
- A tobacco endgame defines a desired target for the rate of smoking prevalence and a date by which it is to be met. In 2015, experts convened to form a Steering Committee for Canada's Tobacco Endgame, and the committee subsequently defined an endgame goal of less than 5% tobacco prevalence by 2035 ("less than 5 by 35")[5].
- In 2016, Queen's University hosted a summit on A Tobacco Endgame for Canada (report provided in Appendix B). This process collated the work of experts from broad sectors, including cancer control, health policy, law, tobacco control, academia, medicine, economics, social activism, non-governmental organizations, mental health and addiction, and professional organizations. Importantly, the summit background paper synthesizes recommendations for potential endgame measures in the Canadian context[5].
- The Federal Tobacco Control Strategy is scheduled for renewal at the end of March, 2017[5,7]. This represents a unique opportunity to bring forward a tobacco endgame initiative. To this end, on February 22, 2017 the Federal Government posted a consultation paper entitled Seizing the Opportunity: the Future of Tobacco Control in Canada. This paper proposes a number of endgame strategies (without using this term), including being "committed to a target of less than 5% tobacco use by 2035". Public response to this document is being sought by April 13th, 2017. This paper can be accessed at the following linked location.

Background

The **World Health Organization Framework Convention on Tobacco Control** is a legally binding international health treaty on tobacco control, which 180 countries have ratified, including Canada[8]. To support the country-level implementation of effective tobacco demand reduction policies, the World Health Organization developed an "MPOWER" package of technical measures and resources. The six components of the **"MPOWER" measures** are as follows: **m**onitor tobacco use and prevention policies; **p**rotect people from tobacco smoke; **o**ffer help to quit tobacco use; **w**arn about the dangers of tobacco; **e**nforce bans on tobacco advertising, promotion and sponsorship; and **r**aise taxes on tobacco[9].

The **Federal Tobacco Control Strategy** is a horizontal initiative with a governance structure that spans multiple federal partner organizations, including Health Canada (lead department), Public Health Agency of Canada, Public Safety Canada, Royal Canadian Mounted Police, Canada Border Services Agency, Canada Revenue Agency, and Public Prosecutions Canada. It was initiated in 2001 and renewed for five years in 2012, with an end date on March 31, 2017. The objective of the strategy is to reduce the use of tobacco and tobacco-related death and disease in Canada. The renewed strategy has focused on prioritizing populations with higher smoking rates, and monitoring and assessing the illicit and licit tobacco markets[7].

The background paper**,** A Tobacco Endgame for Canada, is provided in Appendix B. The paper offers a broad suite of innovative measures which could be implemented as part of Canada's tobacco endgame. These strategies are not only novel, and potentially radical, but they are supported by evidence[10]. For example, mandating plain and standardized packaging of cigarettes is an evolutionary intervention that eliminates product promotion[10]. Restructuring the tobacco retail environment and reducing tobacco outlet density may curtail youth smoking; this can be achieved by establishing tobacco retail-free zones around youth facilities or further restricting the types of outlets that can sell tobacco[10].

The expert recommendations from A Tobacco Endgame for Canada are grouped by key approaches:

- dispel myths regarding the economics of an endgame, especially the implications of raising tobacco taxes;
- scale up successful interventions (such as tobacco taxation);
- establish road maps and accountability frameworks in tobacco cessation;
- align supply-side tobacco measures with public health goals;
- further regulate tobacco products to reduce their addictiveness and attractiveness;
- approach vaporized nicotine products (e.g. electronic cigarettes) with the dual aims of promoting cessation in smokers while discouraging use by non-smokers;
- use age-based measures to prevent a new generation of smokers; and
- maximize the health benefits of tobacco litigation[5].

Contacts

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Martin Kuhn, Supervisor Tobacco Free Living	Ext. 7248
Steve Rebellato, Director Environmental Health	Ext. 7487
Charles Gardner, Medical Officer of Health and CEO	Ext. 7219

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DRAFT RESOLUTION FOR alPHa RESOLUTIONS SESSION (YEAR: 2017)

TITLE: **Committing to a Tobacco Endgame in Canada**

SPONSOR: **Simcoe Muskoka District Health Unit**

WHEREAS tobacco use remains the leading cause of preventable death and disease in Canada; and

WHEREAS the direct and indirect financial costs of tobacco smoking are substantial and were estimated as $18.7 billion in 2013; and

WHEREAS 18.1% of adolescents and adults, or 5.4 million Canadians, were still smokers in 2014; and

WHEREAS under the status quo, and even with the implementation of all MPOWER measures under the World Health Organization Framework Convention on Tobacco Control, Ontario research has estimated that smoking-related deaths will continue to increase beyond 2030, while smoking rates will decline by less than half in the same period; and

WHEREAS a tobacco endgame shifts the focus from tobacco "control" to envision a future that is free from commercial tobacco, and is a strategic process to implement measures that gradually decrease smoking prevalence, demand and supply to extremely low levels; and

WHEREAS there is growing support in Canada and globally for a tobacco endgame, with the adoption of Endgame targets by Ireland, Scotland, Finland, and New Zealand; and

WHEREAS a Steering Committee for Canada's Tobacco Endgame was convened in 2015 and identified an endgame goal of less than 5% tobacco prevalence by 2035; and

WHEREAS a summit on A Tobacco Endgame for Canada in 2016 brought together experts from broad sectors and published a Background Paper with evidence-based and innovative recommendations for tobacco endgame measures in Canada; and

WHEREAS the Federal Tobacco Control Strategy is scheduled for renewal after March 31, 2017;

WHEREAS the federal government's consultation paper Seizing the Opportunity: the Future of Tobacco Control in Canada proposed a number of endgame strategies including being committed to a target of less than 5% tobacco use by 2035;

WHEREAS the provincial Smoke Free Ontario Strategy is also presently under review; and

WHEREAS it is the position of alPHa that Governments of Canada, Ontario and Canadian municipalities must act immediately to minimize the use of tobacco products and their related health impacts;

NOW THEREFORE BE IT RESOLVED that the Association of Local Public Health Agencies write to the federal Minister of Health supporting the federal government's proposal to commit to a target of less than 5% tobacco use by 2035;

AND FURTHER THAT the Association of Local Public Health Agencies recommend that the federal government's approaches include those identified at the 2016 summit, A Tobacco Endgame for Canada;

AND FURTHER THAT the Association of Local Public Health Agencies write to the Ontario Minister of Health to recommend that the Smoke Free Ontario Strategy be aligned with the proposed tobacco endgame in Canada;

AND FURTHER THAT copies be sent to the Chief Public Health Officer of Canada, and the Chief Medical Officer of Health of Ontario.

A Tobacco Endgame for Canada

Summit

Queen's University
September 30 to October 1, 2016

Background Paper

This document, which describes a potential endgame for commercial tobacco, was prepared with contributions from members of the Steering Committee and Action Groups. It does not necessarily reflect the views of any of the individuals who participated in its development, nor of the organizations with which they are affiliated.

TABLE OF CONTENTS

INTRODUCTION

WHY DOES CANADA NEED A TOBACCO ENDGAME?

THE BURDEN OF SMOKING RELATED DISEASE CONTINUES TO INCREASE.

Great strides have been made in tobacco control in Canada and globally over the past few decades through implementation of measures, including those endorsed by the international Framework Convention for Tobacco Control [FCTC].[1]

Nevertheless, smoking prevalence remains substantial – 18.1% of Canadians over 12 years of age, representing 5.4 million Canadians).[2] The overall burden of smoking related illness and death from cancer and from respiratory and cardiovascular diseases continues to be devastating. In 2002, 37,000 Canadians died from tobacco associated illnesses – the size of a small town being wiped off the map each year. Canadians lose an estimated 515,607 person years of life every year as a result of premature mortality from tobacco smoking.[3]

This burden of mortality and morbidity comes with substantial direct and indirect *financial costs* for Canada. The calculation of the costs of tobacco associated illness usually assesses the impact of illness from a macroeconomic perspective by aggregating costs across all economic agents. This approach derives a societal cost of the illness divided into direct costs (expenses incurred because of the illness (health costs, enforcement, etc.), and indirect costs (e. g. lost wages due to diminished productivity). It does not include welfare and leisure time costs or benefits and does not account for long term changes in demographic composition. Intangible costs such as pain and suffering are also not considered.

These costs are substantial: For the 2013 year, Krueger et al. estimated that tobacco smoking resulted in total costs of $18.7 billion in Canada. [4] Direct health care costs alone totaled $6.4 billion. These results are similar to those from 2002 where the estimates were $17 billion per year with $4.4 billion in direct health care costs.[5]

The future burden of disease (and associated costs and lost productivity) does not look brighter - even with implementation of all the MPOWER measures found within the FCTC*. For example, in Ontario, the absolute numbers of deaths are predicted to *increase* year over year for the next 2 decades [figure 1] and smoking rates will decline only by less than half over the same period [figure 2]. Figures 1

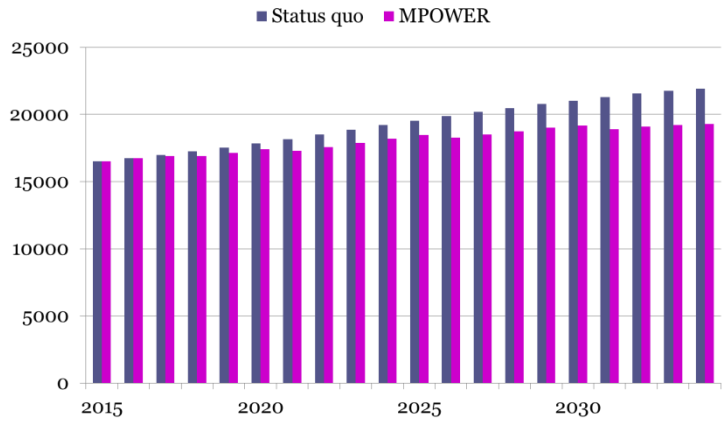

Figure 1: Predicted numbers of deaths in Ontario over time under the scenario of status quo policy environment, and one in which the recommendations of the WHO MPOWER framework are fully implemented.

* *The WHO Framework Convention on Tobacco Control (WHO FCTC) and its guidelines provide the foundation for countries to implement and manage tobacco control. To help make this a reality, WHO introduced the MPOWER measures. These measures are intended to assist in the country-level implementation of effective interventions to reduce the demand for tobacco, contained in the WHO FCTC.*

and 2 incorporate MPOWER measures implemented in Ontario in 2012, but do not factor in implementation of MPOWER measures subsequent to 2012, nor measures going beyond the MPOWER package of measures.[6†]

There is no justification for continuing with incremental declines in commercial tobacco use, given the overwhelming evidence about the devastation that it causes. Complaisance cannot be tolerated when we know that transformative action now will prevent hundreds of thousands of people from becoming sick and dying.

This recognition is becoming more widespread and is increasingly leading to the view that a strategy for an "endgame" for commercial tobacco is required.

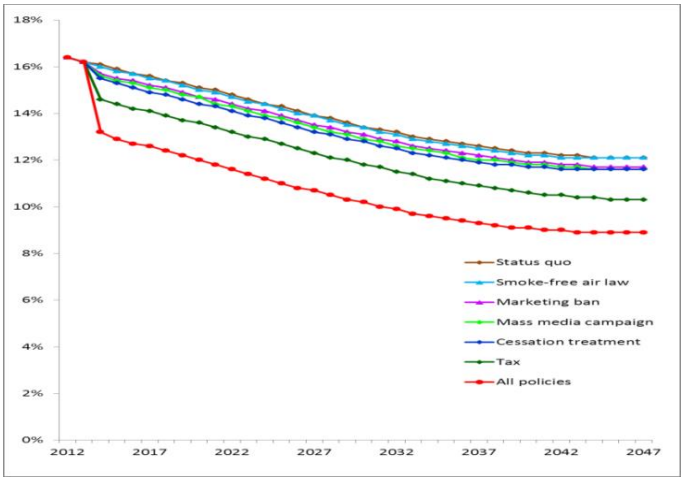

Figure 2: predicted prevalence of smoking in Ontario over time under the scenario of status quo policy environment, and one in which the recommendations of the WHO MPOWER framework are fully implemented.

TOBACCO ENDGAME DISCOURSE IS GROWING

The idea of a "Tobacco Endgame" is based on the perspective that "*control*" of tobacco will never be enough to deal with the epidemic of tobacco related diseases and that the focus must be shifted to develop strategies to reach a *future that is free of commercial tobacco*. This notion of Endgame, is qualitatively different from tobacco control strategies currently in place, perhaps best conveyed through the words of Ruth Malone in a recent publication:

> *"An endgame addresses tobacco as a systems issue, rather than an individual behaviour; addresses health and political implications; reframes strategic debates; advances social justice; and is fundamentally transformative in changing how tobacco use and the tobacco industry are regarded. An endgame is not merely more of the same, in that it requires an authentic public policy commitment to achieving a true endgame, as opposed to continuing to envision the public health challenge as an ongoing war of attrition"*
>
> *Incremental change cannot fix this public health emergency, at least not absent a vision of an endpoint when the threat will be eradicated. Thus vision and goals are in some ways more important than specific tactics. What remains astonishing is the degree to which the social construction of tobacco as normal and desirable, accomplished over the last century by a savvy industry, still blinds many to the urgency of our task and the contradictions inherent in our own messages about tobacco."* [7]

† *These graphs seek to illustrate the impact of the implementation of MPOWER measures in Ontario based on the Simsmoke model, a model developed outside Canada. The graphs do not seek to illustrate the impact of all measures implemented in Canada, or where Canada has implemented measures that go beyond the MPOWER standard.*

This is not a view espoused by only a few academics, indeed the idea of Endgame for tobacco is gaining support in the global public health community.[8]

For example: In 2011, The Canadian Public Health Association in a paper entitled "*The Winnable Battle: Ending Tobacco Use in Canada"* called for a fall in pan-Canadian smoking prevalence rate of less than 1% by 2035.[9] The 2014 US Surgeon General's Report on 50 years of Progress in Tobacco Control described the need for a vision for ending the tobacco epidemic "*this nation must create a society free of tobacco related death and disease*".[10] Confidence in implementing innovative measures to reduce smoking is further bolstered by the recent victory of Uruguay against a trade challenge by Philip Morris International. The World-Bank dispute resolution tribunal was clear that governments can move "in advance of international practice" and "innovate to protect health."

A "Tobacco Endgame" defines a desired target for the *rate* of smoking prevalence (e.g. 0% or less than 5%) and a *date* by which it is to be met (e.g. 2025). *Strategies* for Endgames are comprised of public health and policy measures through which these ambitious targets are believed to be achievable. No country has, as yet, both developed and achieved a tobacco Endgame – but in four countries documents with an Endgame goal have been published. These include:

- Ireland – less than 5% by 2025[11]
- Scotland – less than 5% by 2034.[12]
- Finland - 0% by 2040 or earlier[13]
- New Zealand – "minimal levels" (or 5%) by 2025[14]

Published information within these documents vis-à-vis Endgame Measures vary in their detail, content and the amount of evidence available to support them (indeed this is by definition the case for *truly* novel measures – if never before deployed, evidence of effectiveness will not yet exist).

A Tobacco Endgame Initiative for Canada – Development of Proposals for the Summit

Canada has not yet articulated an Endgame Goal or strategy - but in recent months interest has been growing across numerous groups in creating a Canadian Tobacco Endgame. Furthermore, the Federal Tobacco Control Strategy is scheduled for renewal in 2017 – thus there is a unique opportunity to bring an Endgame initiative forward.

In early 2015, a small group of experts met to discuss a local proposal for Queen's University to host a Summit on the topic of a Tobacco Endgame Strategy for Canada. Such an event would coincide with the 175th anniversary of the University and inspire development of bold new ideas for moving from tobacco control towards tobacco elimination.

The individuals engaged felt that the time was right for such discussion. However, they indicated that firstly more widespread engagement was needed in planning and secondly, the Summit itself should not simply be a series of speakers, but rather an opportunity to debate potential options for Endgame measures that would be suitable in a Canadian context. This would require work developed by a series of action groups in advance of the Summit.

In short order, a Steering Committee was formed, which first met on July 8, 2015 to discuss the vision for the creation of a set of truly innovative proposals that could be implemented as Canada's Tobacco Endgame. The

agreed goal of the Committee and the "definition" of Endgame proposed was to achieve ***less than 5% tobacco prevalence by 2035*** ("Less than 5 by 35"). If this were to be achieved hundreds of thousands of Canadian lives would be saved in this century, this work could serve as a model for other countries, once more putting Canada at the forefront internationally in its efforts to stem the Tobacco epidemic.

Subsequently, a series of "Action Groups" were populated with a wide array of experts drawn from cancer control, health policy, law, tobacco control, academia, medicine, economics, social activism, NGOs, mental health and addiction, professional organizations and more. As shown in Table 1, some Action groups were tasked to discuss and document the potential endgame measures that could be brought to the Summit, and others to reflect on how best to engage with stakeholders, communicate and evaluate the Summit work in the months that followed.

Table 1 – Action Groups and Their Topics

Action Group	Questions to address
Economics/Business case	What are the short and long term impacts on the Canadian economy of achieving an Endgame (e.g. reduced taxation revenue but increased health and longevity of workforce increases income tax revenue)
Regulation and Law	What are the potential changes to regulation around tobacco that could substantially limit its availability and use?
Cessation and Prevention	What are options available to substantially enhance cessation efforts and to prevent tobacco uptake by non-smokers?
Product	What changes to commercial tobacco can be made to substantially reduce its addictiveness/appeal and are appropriate to implement in the Canadian context?
Litigation	What are the opportunities to maximize the impact of litigation on the tobacco industry?
Engagement of "Actors" (political and otherwise)	Who will need to be engaged before and after Summit and how if the Endgame implementation is to be successful?
Communication and Public/Professional Engagement	What strategy will be needed to create the public and professional engagement before and after the Summit to ensure the Endgame is implemented?
Evaluation and Research	What types of questions and funding opportunities will need to be in place to evaluate the work and success of the Endgame?

The work of these Action Groups, and the ideas they brought forward, are reflected in the papers that follow in this document. Not surprisingly, proposals from different Action Groups showed some overlap (for example – measures to enhance prevention of smoking behaviour identified by the Cessation and Prevention Action Group overlapped substantially with some measures brought forward by the Regulation and Law Action Group). To address this, efforts were made to consolidate the proposals into thematic topics reflected in the papers that follow. Where appropriate, each paper identified potential Endgame recommendations for discussion. These will be the topics for discussion and debate and the summit.

CONSIDERATIONS AND CONTEXT

E-Cigarettes – the promise and the challenge

While no Action Group was specifically tasked to discuss E-Cigarettes, this topic arose in both the Cessation/Prevention and Regulation/Law Action Groups. Comments on this technology and similar electronic nicotine delivery devices as "Endgame" enabling (or not) are separately presented.

Dispelling Myths.

The notion of a Tobacco Endgame may raise the specter of one or more topics seen by some as immediately meaning an Endgame is impossible. A few words are needed to dispel the following myths:

- **Smuggling and contraband**
  It is often argued that any measure to restrict/reduce commercial tobacco product access (historically taxation increases) *inevitably* lead to an increase in illegal smuggling and rise in contraband product availability *negating* the impact of those tobacco control measures. The evidence does not support this. A summary of data outlined in a 2015 report from the Ontario Tobacco Research Unit found that tobacco tax increases have an overall impact in *reducing* tobacco use (and increasing tobacco tax revenues), *even when* there is some small amount of accompanied contraband tobacco use. Many of the small proportion of smokers who move to contraband tobacco return to legal tobacco within a short period of time. Furthermore, accompanying increased tobacco taxes with anti-contraband measures are effective in minimizing leakage to contraband tobacco.[15]

- **Governments will not be able to withstand loss of taxation revenue**
  As tobacco sales fall, it is sometimes argued that governments' loss of revenue from taxation will be a show-stopper. The Economics Action Group has undertaken a review of the literature and developed a model to address the questions around loss of tobacco taxation revenue as a frequently cited potential barrier to substantial reduction in tobacco consumption. Their findings are described in detail in this background paper, and will be important context for the Endgame discussion.

- **Isn't Endgame just another word for Prohibition?**
  In a word, no. The Endgame is about a strategic process and series of measures that gradually decrease smoking prevalence, demand and supply to extremely low levels. This is quite different from an outright ban on tobacco products where demand remains high.

These myths cannot stand in the way of the need to address the enormous public health burden that the tobacco smoking epidemic has and will continue to cause.

WHERE MORE WORK IS NEEDED

It is clear that a single Summit and a one-year process will not be able to address all the ideas, issues and opportunities the discussion of a Tobacco Endgame brings to the fore. Two needing more work are highlighted here:

- **Tobacco use by First Nations, Inuit and Métis Peoples**
  There is a need as well to highlight the particular circumstances of Indigenous Nations with respect to tobacco. For many First Nations people, tobacco historically has been and is used in traditional and spiritual ceremonies, for prayer and thanks. While tobacco is viewed as sacred among Indigenous Nations, the recreational use of commercial tobacco is addictive and harmful. Recreational smoking rates in Canada's First Nations, Inuit and Métis (FNIM) peoples are extremely high. Statistics Canada estimates that daily smoking rates among First Nations on or off reserve, Métis and Inuit are more than twice as high as for non-Aboriginal Canadians.[16] In parallel, the health burden of smoking related illnesses is also extremely high. A recent report from the Canadian Partnership Against Cancer summarizing programs available for First Nations, Inuit and Metis people in Canada identified that many are in place across Canada but noted

that relatively few smoking cessation programs developed by, with, and for First Nations, Inuit, or Métis exist in Canada, highlighting an opportunity for improvement.[17] It is clear that engagement and consultation within FNIM organizations and communities will be extremely important to undertake as a strategy for a (commercial) tobacco free future is developed and implemented, including strategies developed within and by FNIM communities are essential to maximize the reduction in smoking prevalence. It is equally important to distinguish between traditional tobacco and commercial tobacco in the development of any strategy going forward.

- **Poverty, equity and disadvantaged populations**
  There is strong evidence that smoking prevalence rates are higher amongst Canadians with the lowest incomes and those with mental health diagnoses. The disproportionately high rate of smoking in these groups tracks with their increased burden of tobacco-related illnesses, adding substantially to the disparities in health that they experience. While an Endgame strategy cannot be expected to address the root causes of higher smoking rates in each of these groups, programs and policies emanating from Endgame work must reflect, where appropriate, differing community needs and practices. It is important to note that some of the recommendations found within sections of this paper directly reflect on challenges facing some of these groups, such as access and affordability of treatment for cessation and other measures.

The sections that follow document the ideas for Endgame measures that were discussed by many individuals who volunteered their time, their vision and their spirit over the past year. We go with open minds into the Summit to debate, discuss and improve these ideas further. We strongly believe that now is the time to commit to a Tobacco Endgame Strategy in Canada. The status quo is simply not an option. The hundreds of thousands of Canadians who, in the decades ahead, will otherwise be destined to suffer the ill health and premature deaths that tobacco smoking will bring, need action and leadership now.

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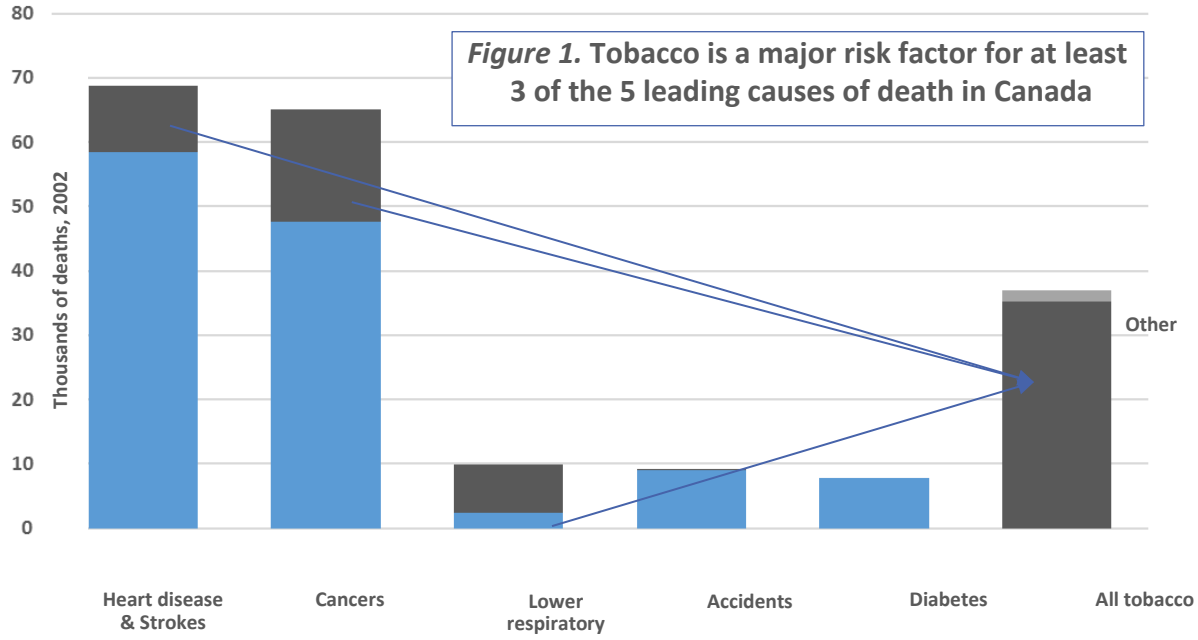
1. THE ECONOMICS OF SMOKING

DISPELLING THE MYTHS THAT MAY STAND IN THE WAY OF AN ENDGAME

The burden of tobacco use in Canada is enormous. Few people are aware of the magnitude and the full range of health risks of smoking.[1] While many people are aware that tobacco has long been a recognized cause of lung cancer, fewer are aware of the other cancers as well as cancers of the lip, oral cavity, nose, paranasal sinus, pharynx, larynx and esophagus, urinary bladder and ureter, kidney, liver, colorectal, pancreas, uterine cervix, stomach, bone marrow (myeloid leukemia) and is a suggestive cause of breast cancer.[2] Other than cancer, tobacco causes ischemic heart disease, stroke, aortic aneurysm, and type 2 diabetes.[2] Smoking also causes respiratory diseases including chronic obstructive lung disease, and impaired lung function in children and adults. It also causally contributes to the burden of pneumonia, asthma, and tuberculosis. Other diseases include fetal deaths and still births, SIDS, ectopic pregnancy, low birth weight, periodontal diseases, and erectile dysfunction.[2] Each year, the list of diseases suspected or known to be caused by tobacco grows longer – Figure 1 illustrates some of this graphically.



Modeled on graphic used by WHO and available at: http://www.who.int/nmh/publications/fact_sheet_tobacco_en.pdf

As a result of these tobacco related diseases, ***in 2002, 37,000 Canadian died from tobacco use,*** and this burden is expected to remain very high for years to come as described in the Introduction section. The cumulative burden of tobacco related diseases leads to 23,766 deaths among males and 13,443 among females each year.[3] Canadians lose an estimated 515,607 person years of life every year as a result of premature mortality resulting

from tobacco smoking. This burden does not only fall upon the very old. These estimates include 58 boys and 33 girls under the age of one who died as a result of tobacco-attributable causes, and approximately 1,000 non-smokers who died as a result of second hand smoke exposure. Jha et al. (2013) estimated that a male non-smoker in the United States has an 81% chance to live to 70, but a smoker only a 55% chance.[4]

FINANCIAL BURDEN

This incredible burden of morbidity and mortality has direct financial costs for Canada. The primary method of calculating the societal costs of tobacco associated illness has been to assess the impact of illness from a macroeconomic perspective by aggregating costs across all economic agents. This approach derives a societal cost of the illness divided into direct costs (expenses incurred because of the illness (health care costs, medical products costs, etc.)), and indirect costs (e. g. lost wages due to diminished productivity). It does not include welfare and leisure time costs or benefits and does not account for long term changes in demographic composition. Intangible costs such as pain and suffering, or the negative impact of odours are also not considered.[5]

For the 2013 year, Krueger et al. (2015) estimated that tobacco smoking resulted in total costs of $18.7 billion dollars in Canada[6]. ***Direct health care costs alone totalled $6.4 billion.*** This compares to the estimate of $17 billion dollars in costs per year with $4.4 billion in direct health care costs estimated for the year 2002 by the Canadian Centre for Substance Abuse (Rehm, Baliunas, Brochu et al. 2006). [7] Krueger et al. also calculated that if the prevalence of smoking across Canada were reduced to the levels in British Columbia (12.7%), Canada would save $2.8 billion per year in direct and indirect costs. Similarly, Popova, Patra, and Rehm (2009) estimated that modest interventions aimed at reducing smoking prevalence (implementing a 10% price increase and increasing coverage of behavioural counselling, nicotine replacement products and physician's advice) would lead to a savings of 33,307 hospital days and $37 million dollars per year across Canada.[3]

Canada has already started to see some benefits from reductions in smoking prevalence over the last decades. For example, Manuel et al. (2016) measured the direct health care costs and change in costs between 2003 and 2014 of health care utilization of smokers and ex-smokers compared to non-smokers adjusted for age and SES using health administrative data.[8] They found that 9.9% of Ontario health care costs could be directly attributed to smoking ($880 million). Over 10 years, *the* ***cumulative cost savings attributed to a small decline in tobacco use were $4.3 billion, accounting for 88% of the total health cost savings realized by the province's interventions against unhealthy behaviours****.* Recent estimates from the United States suggest that a 10% reduction in smoking prevalence would generate $63 billion in savings the following year.[9]

COSTS ESTIMATES FROM ENDGAME INITIATIVES AROUND THE WORLD

While reducing death and disease is the primary purpose of Endgame initiatives, there has long been recognition that a benefit of reducing smoking prevalence is a reduction in the financial costs associated with tobacco use.

While different countries have different ways of accounting for these costs, it is clear that the magnitude of the cost of tobacco related illness is large.

Summary of costs from Tobacco Endgame initiatives

Country	Per Capita Direct costs
New Zealand	463
Canada	$183
Ireland	$160
Scotland	$96
United Kingdom	$57

1. **Tobacco Free Finland 2040**

   The Tobacco Free Finland 2040 action plan does not include direct cost estimates. The report describes tobacco control as an "investment and positive action". Next steps include the development of an investment plan and the identification of cost effective interventions. The government report further suggests need to estimate costs but this has not been done.[10]

2. **Smokefree Aotearoa 2025 (New Zealand)**

   The New Zealand initiative was developed with focus on selecting "cost effective" or "cost efficient" rather than cost saving interventions. However, they calculated health care costs attributable to smoking by comparing the costs of health care in those who smoked to never smokers in health administrative databases, either identified through hospital coding or through linkage with a population survey.[11]

   Findings: Direct excess health care costs of smoking over never smoking were estimated to be in the range of $1.9 billion NZD up to $2.34 billion annually.

3. **Tobacco Free UK**

   Action on Smoking and Health (ASH) UK estimate of the cost of smoking provided a 2014 estimate of the overall cost of smoking to the UK for policy purposes. The ASH UK model includes health care, loss of productivity, cost of the cigarette package, absenteeism, loss of productive output (human capital), environmental costs, and fire costs. This method used additive attributable risk to estimate health care costs.[12, 13]

   Findings: 13.9 billion pounds per year, 2 billion pounds in direct health care costs attributed to smoking.

4. **Scotland 2034**

   The Scottish Endgame initiative used the Global Burden of Disease Project attributable fractions to estimate direct financial costs.[14] They subsequently applied the percentage of costs attributable to tobacco to actual health care costs in each region of Scotland to calculate tobacco related health care expenditures.

   Findings: Direct costs up to 509 million pounds per year

5. **Ireland 2025**

   The Tobacco Free Ireland report[15] refers to a number of external costs studies, including "A study on liability and the health costs of smoking" commissioned by the EU.[16] This report calculated direct costs, productivity costs (absenteeism), premature mortality in monetary terms using smoking attributable fractions. The report also calculated the cost of mortality using a willingness to pay model.

   Findings: Direct costs of 500 million Euros, productivity losses of 160 million Euros and premature mortality cost valued at 3.5 billion Euros.

TAXATION AND LOST REVENUE - A MYTH WORTH DISPELLING

Cigarette taxes bring in significant revenue to governments at the national and provincial level.

In 2014-2015 Canadian Federal and Provincial governments received $8.2 billion from the sale of tobacco.[17] There is concern expressed by those opposed to tobacco elimination that reducing the number of smokers would decrease government revenue and that this would be of such a magnitude that it would not happen. However, there is overwhelming Canadian and international evidence that increases in tobacco taxes can reduce tobacco use and increase government tax revenue.[18-25] At current taxation and tobacco use rates, taxes on tobacco products have the dual effect of decreasing the demand for tobacco and increasing government revenue. In fiscal year 2014-15, the federal government collected more than $3 billion in cigarette taxes.[26] In Ontario and Québec, Canada's largest provinces, the provincial governments collected more than $1 billion each.

If Canada achieves 'less than 5 by 35' through non-tax interventions, total taxes collected on the sale of tobacco products would dwindle substantially. Given that in 2014, 18.1% of Canadians aged 12 and older smoked either daily or occasionally,[27] it could be expected that annual tobacco tax receipts decrease by as much as 75% from 2035. Moreover, during the period of transitioning from 18% to 5% smoking prevalence, the cumulative amount of tax losses year over year would be far from negligible. Achieving 'less than 5 by 35', however, need not be achieved solely on the back of non-tax interventions. In the case, albeit extreme, that 'less than 5 by 35' is achieved solely through tax and price increases, the cumulative tax revenue gains during the transition period could be considerable. Irrespective, then, of the substantial cost savings gained from reductions in health care spending and reductions in indirect costs to society detailed above, it may be that during the period of transition to "less than 5" there may be minimal changes in government revenue, assuming that increased tax rates are a component of an Endgame strategy.

Our objective is to simulate the effect on tax revenue of achieving 'less than 5 by 35' in Canada.

METHODS

Full details for the simulation model appear in the Supplement. This model simulates the impact of tax and price increases required to achieve 'less than 5 by '35' by examining the impact on taxation revenues under three different scenarios: 1) 'less than 5 by 35' is achieved through non-tax interventions and excise taxes are increased only to keep up with inflation; 2)'less than 5 by 35' is achieved solely through excise tax increases; and 3) 'less than 5 by 35' is achieved through non tax intervention and excise tax increases that raise prices by 5% in real terms annually. We used accepted estimates of elasticity for changes in tobacco prices for adults (-0.4) and twice that for youth. The model accounts for population growth and inflation. We used data for the province of Ontario to simulate the impact of tax and price increases required to achieve 'less than 5 by 35' on tax revenue. At current tax rates, it is expected that Ontario will collect about $1.5 billion in 2016. All monetary figures below are in constant $2016.

RESULTS:

***Scenario 1*:** 'Less than 5 by 35' achieved solely through non-tax interventions (excise taxes assumed to keep up with inflation):

- Tax revenue, 2035: $163 million
- Tax revenue, 2016 - 2035: $12,605 million
- Tax revenue, annual average, 2016 - 2035: $630 million

Scenario 2: 'Less than 5 by 35' achieved solely through excise tax increases (assuming an underlying annual downward trend in smoking prevalence and consumption of 2.5%). Note that such a scenario requires that taxes increase annually by more than 20%:

- Tax revenue, 2035: $5,054 million
- Tax revenue, 2016 - 2035: $ 68,884 million
- Tax revenue, annual average, 2016 - 2035: $3,444 million

Scenario 3: 'Less than 5 by 35' achieved through non-tax interventions and excise tax increases that raise prices by 5% in real terms, annually:

- Tax revenue, 2035: $673 million
- Tax revenue, 2016 - 2035: $24,261 million
- Tax revenue, annual average, 2016 - 2035: $1,213 million

SUMMARY:

If Canada achieves 'less than 5 by 35' through non-tax interventions, annual tobacco tax receipts would decrease from about $1.5 billion to about $160 million in 2035. However, if tax rates increase such that prices increase by 5% annually (in excess of inflation) — a policy pursued by France from 1991 to the early 2000's — average annual tax revenue would amount to about $1.2 billion and the cumulative taxes collected between 2016 and 2035 would be near $25 billion.

Scenario 2 of the model, which shows that extremely high cigarette prices would be needed to achieve the 'less than 5 by 35' goal through taxation *alone*, underscores the need for a comprehensive policy for the Tobacco Endgame that relies on both tax and non-tax interventions.

Allowing for a portion of the effect of tax and price increases on tobacco use and consumption to be directed towards contraband cigarettes would reduce tax receipts, as expected, but does not invalidate any of the key findings. Similarly, our results are not sensitive to the use of a more conservative own-price elasticity estimate of -0.3.

Lost taxation revenue should not be a barrier to the Endgame. The analysis shows that with a sensible taxation policy, revenue impact over the period of implementation is minimal irrespective of the health care and social savings. Ultimately, however, it is important to recognize that the massive health and mortality burden due to tobacco is not worth sustaining for any amount of profit or revenue.

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SUPPLEMENT TO CHAPTER 1 – Data and Methods for Tax and Price Increase Simulation Model

Baseline data:

- Smoking prevalence and daily number of cigarettes consumed per smoker, by age: we used the most recent cycle (2014) of a large national survey, the Canadian Community Health Survey (CCHS) and obtained point estimates for smoking prevalence and intensity.
- Projected population: we used Statistics Canada medium growth population projection scenario (M1: medium-growth, 1991/1992 to 2010/2011 trend, CANSIM Table 052-0005).*
- Excise tax rate and revenue: we obtained current tobacco excise tax rates and more recent estimates of tobacco excise tobacco tax revenue from provincial Ministries of Finance
- Total cigarette tax paid sales: as a measure of tax-paid sales we used cigarette wholesale data as reported by tobacco manufacturers to Health Canada.

Baseline model parameters and assumptions:

- Own-price elasticity: there is overwhelming evidence that individuals respond to changes in tobacco prices. In high-income countries such as Canada and the United States, it is generally accepted that a 10% increase in prices would reduce total consumption by about 4%; and that half of the reduction comes from a reduction in the number of smokers and half from a reduction in consumption among continuing smokers.[1] It is also generally accepted that youth respond more to changes in prices — about twice as much as older adults.[1] Consequently, as a baseline assumption for own-price elasticity for cigarettes, we used -0.4 for adults (20 years of age and above) (-0.2 for own-price prevalence elasticity and -0.2 for own-price consumption elasticity), and twice that for youth (12 to 19 years of age).
- Pass-through rate: tax changes do not necessarily lead to price changes as manufacturers are rarely required to pass on the full extent of tax increases to consumers. Manufacturers often under- or over-shift tax changes. In mature cigarette markets such as Canada, manufacturers typically over-shift tax increases. As a baseline assumption, we assumed that tobacco manufacturers over-shift tax increases by 10%.
- Prices: in order to estimate the effect of tax changes on smoking, it is necessary to estimate first the effect of tax changes on current prices. We used $0.40 per cigarette stick.
- Underlying trend: smoking prevalence in Canada has steadily decreased since the mid-1960s. In 1965 about half of all Canadians aged 15 and above smoked. By the early 2010s, only about 20% did.[2] This steady decline was due to many factors such as information on the harmful effects of active smoking and secondhand smoke, tobacco control policies such as smoke free policies, advertising bans and taxation and changes in anti-smoking sentiment. Although it is difficult to disentangle the effects of each of these factors, it seems reasonable to assume that the downward trend in smoking prevalence observed between the early 2000s and the present would not abruptly end in the near future. In the last decade for which data are available, smoking prevalence, on average, declined annually by about 2 and 3% depending on the province. We assumed an underlying trend of 2.5% in annual decrease in both smoking prevalence and daily number of cigarettes consumed per smoker.
- Expected inflation: as a measure of expected inflation we used 2% annual increases to reflect the Bank of Canada's 2% inflation-control target.
- Cigarette tax evasion: although cigarette tax evasion has many causes, high taxes undeniably create an incentive for tobacco users and manufacturers to elaborate ways to evade tobacco taxes. Although the illegal nature of cigarette tax evasion makes it intrinsically difficult to measure accurately, cigarette tax evasion in some Canadian regions such as southern Ontario is not negligible. While recognizing this, our model does allow for a portion of the effect of tax and price increases on tobacco use and consumption to be directed towards contraband cigarettes.

Model Limitations

- A reduction in smoking prevalence and consumption in excess of current trends would inevitably lead to future populations that are larger than projected by Statistics Canada's medium growth population projections.
- There is strong evidence than higher incomes increase the demand for tobacco products.[1] However, income growth in Canada is projected to be relatively low. Consequently, income effects are unlikely to affect the above results.
- Our approach examines the effect of changes in tobacco excise rates on tobacco excise revenue and not on harmonized sales tax (HST) as ex-smokers and continuing smokers that reduce their consumption will very likely divert their spending towards goods and services that are also subject to HST.
- Our approach does not address the issue of tax avoidance such as brand switching. However, because governments in Canada rely entirely on tobacco specific excise taxes and not on specific ad valorem taxes, tax avoidance is a lesser concern.

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2. BUILDING ON SUCCESS.

SCALING UP INTERVENTIONS THAT WORK

Canada has implemented an impressive array of regulatory interventions, but at their current levels, they are not sufficient for advancing smoking rates to less than 5 percent by 2035. However sufficient scaling up‡ of some of these measures has the potential to make a substantial impact on the prevalence of tobacco use.

Five areas of existing regulatory activity with proven effectiveness should be scaled up as part of Canada's Tobacco Endgame Strategy: 1) tax and price measures, 2) tobacco advertising and promotion bans (including plain packaging); 3) banning smoking in additional settings; 4) anti-contraband measures and 5) new funding streams.

1. TAX AND PRICE MEASURES

A. Increase tobacco taxes substantially:

Price has been one of the most effective tobacco reduction measures. There is strong evidence of high quality indicating that for every 10% increase in price of tobacco, consumption will decrease by around 4%. Jha and Peto[1] recommend tripling taxes to double price and decrease consumption by 50% - a course of action successfully undertaken in both France and New Zealand. The impact of tax increases on achieving the Endgame target is explored in more detail in the section addressing economic aspects.

B. Curtail price-based marketing incentives:

Federal legislation prohibits most marketing incentives, but not three-tier pricing model (premium, mi-tier and budget). Evidence shows that smokers who switch to discount brands less are likely to quit. Prohibitive (high) pricing could serve as a motivator to reduce consumption and as a market entry barrier.[2] Twenty five U.S. states have minimum price laws, but these are weakened by loopholes allowing trade discounts and promotional incentive programs New York State has have disallowed such incentive programs.[3] Minimum price laws may risk increasing tobacco industry profits and reducing the pricing room available to governments to increase taxes.

2. BAN ALL TOBACCO PROMOTION, INCLUDING THROUGH IMPLEMENTATION OF PLAIN AND STANDARDIZED PACKAGING

A. Plain & Standardized Packaging (PSP)

PSP regulations remove graphics, logos and brand colours from tobacco packages and standardize pack shape and size. Plain packs have drab colors and maintain health warnings. The Canadian Cancer Society suggests that plain packaging would:

- eliminate promotional aspects of packaging;
- curb deceptive messages conveyed through packaging;

‡ Various measures might be considered as "scaling up" existing interventions. Though some measures are included in this section entitled "scaling up", some measures in other sections of the paper might also be considered "scaling up".

- enhance the effectiveness of health warnings; and
- reduce tobacco use.[4]

Studies using experimental subjects show that plain packaging reduces the appeal of tobacco products and makes them less attention-grabbing, by reducing perceived attractiveness of the package, and by alleviating positive associations between specific brands and a smoker's identity.[5] Studies using post-market data conducted in Australia following the implementation of plain packaging regulations provide a real-world understanding about the various impacts of plain packaging. The Single Source Survey Data conducted by Roy Morgan (an Australian market research company) found that the implementation of plain packaging (combined with enhanced graphic health warnings) resulted in a significant decline (0.55 percentage points) in smoking prevalence (among Australians 14 years of age or older) post-implementation compared to the anticipated prevalence without the implementation of plain packaging.[6]

Plain and standardized packaging could be accompanied by a single presentation requirement, that is one brand variant per brand family, as Uruguay has implemented.

Zacher and colleagues, using an observational study, compared the change in the prevalence of pack display and smoking outdoors, before and after implementation of plain packaging legislation.[7] They concluded that following the full introduction of cigarette plain packaging legislation, smoking in outdoor areas of cafés, restaurants and bars declined by 23%.

B. Enhance package health warnings

Package health warnings are recognized to be cost-effective and are at present the most extensive communication in Canada to discourage tobacco use. Warnings can be enhanced by increasing their size, by improving content, and by increasing the frequency with which they are changed/refreshed.

C. Close holes in laws banning tobacco advertising and promotion

The remaining advertising in Canada is comparatively small and does not have nearly as large an effect as in the past. Nevertheless, advertising on matches/lighters, direct mail, bars, price signs at retail, online advertising and within the tobacco trade continues to encourage initiation and to make it more difficult for some smokers to quit. Young Canadians are still exposed to these promotions despite the intent of the *Tobacco Act* to reduce tobacco promotions to young people.

D. Retail advertising & promotion

With retail display bans in effect across Canada, there is evidence that the tobacco industry continues to promote its products at retail outlets by way of incentive payments to retailers for pushing their products mainly by offering discounts and extra payments to retailers. Quebec's Bill 44 will ban this practice effective November 2016 and other Canadian jurisdictions could do the same. In most provinces, total display bans have tobacco products sold from closed spaces that are clearly visible to customers. Under-counter storage is also feasible and should be considered.

E. Smoke-free movies (18A classification)

Movies are a powerful vehicle for promoting tobacco use. A substantial body of scientific evidence indicates that exposure to smoking in movies is a significant cause of smoking initiation and progression to regular smoking among youth. Higher exposure to onscreen tobacco increases the uptake of smoking among youth and undermines tobacco prevention efforts. 37% or more of youth who start smoking do so

as a result of seeing smoking in movies. Establishing an 18A classification (adult accompaniment) for movies that depict smoking would decrease initiation and gradually prevalence.

3. Ban smoking/tobacco use in more places

While smoking is banned in almost all indoor places and some public places there are still some gaps that could be closed as part of Canada's tobacco endgame. By not closing these gaps, substantial parts of the population continue to be subjected to physical and social exposure to smoking. The social acceptability of smoking in these places contributes to initiation and impedes the success of quit attempts. Modelling is an essential element of childhood development and substantial evidence shows that increased youth exposure to tobacco use increases tobacco initiation among youth. Places where smoking is yet to banned in many Canadian jurisdictions include post-secondary school campuses, public spaces/workplaces on First Nation reserves, social and other multi-unit housing, and some outdoor public places. Also, in many jurisdictions, waterpipe smoking is not included in smoking bans.

4. Prevent contraband

Contraband tobacco trafficking undermines tobacco control efforts by curbing the effectiveness of tax increases and by causing government to be reluctant to adopt many policies out of fear that smokers will turn to the contraband market.[8] In Canada, anti-contraband measures that have been implemented include the following: (1) licencing; (2) marking/labeling; (3) record keeping/control measures: (4) enforcement; (5) export taxation: (6) tax harmonization; (7) aboriginal tax agreements/compacts; and (8) Memoranda of Understanding and legal agreements.[9] Yet, contraband activity continues to be a problem and as other tobacco endgame measures are implemented, it poses a risk of potentially increasing proportion.

Evidence from Quebec has shown that anti-contraband efforts can be successfully implemented. In 2008-09 the Quebec government increased efforts to control contraband tobacco through the Actions Concertées pour Contrer les Économies Souterraines (ACCES) tobacco committee which aimed to dismantle smuggling networks and to recover the tax losses linked to the illicit trade in tobacco. The actions that were taken since 2008 have led to a reduction in illegal tobacco trade and smuggling as well as increased revenue from taxes on tobacco products (from $654 million in 2008-2009 to $1,026 million in 2013-2014 without an appreciable increase in smoking rates in Quebec).[10] There are a series of contraband prevention measures that have not yet been implemented by federal and provincial governments.

We are cognizant of the possibility that unless appropriate measures are taken, contraband could become a challenge of a different order of magnitude, the farther down the road we go toward constraining and transforming the existing commercial industry and the price/tax structure. There is a need to consider what anti-contraband measures might be needed to prevent the illicit tobacco supply from both the tobacco industry and illegal manufacturers from increasing in parallel with increasingly strong measures to curtail demand and supply of commercial production.

5. New Funding Streams

To encourage, support and supplement tobacco endgame interventions it is necessary to maintain and strengthen tobacco control activities carried out by a variety of actors at the national, provincial and regional levels. Funding for tobacco control activities has been unstable and low in comparison to CDC recommended

levels. To enable the other endgame measures, it is suggested that that the polluter pay principal be applied; and money so raised be used to support tobacco control activities:

A. Tobacco manufacturer license fee:

Since 2009, the US FDA has required a tobacco manufacturer license fee to recover the annual cost of the FDA's tobacco activities (in fiscal year 2016-17, FDA tobacco budget is US$635 million). In Canada, between 1998 and 2001, the Senate on three occasions adopted bills that would have required a tobacco manufacturer license fee but these bills were not considered by the House of Commons. In B. C., legislation to require a tobacco manufacturer license fee was adopted in 1998 but was never proclaimed and was later repealed by a new government following an election. Many provinces have levies/license fees on industry sectors to pay for a particular initiative (e.g. levies on hotel rooms, such as 4% per stay with funds raised used to cover the cost of tourism promotion for the city/province; levies on potato growers to pay for the promotion of potatoes from the province.) Also many industries are subject to a "polluter pays" system of cost-recovery for damages resulting from harmful activities or events. For example, the costs associated with oil spills and train derailments are often paid by the companies involved. Tobacco companies should not be excused from the polluter pays principle, especially since Canadian governments are seeking significant damages for healthcare costs resulting from tobacco industry negligence and deception. Governments could require the tobacco industry to pay at least a portion of tobacco-related health care damages up-front through license fees rather than waiting for an unpredictable decision by the Courts.

B. Registration fee for every product:

Manufacturers can also be required to pay fees based on a per product basis (e.g. federally for approval of drugs, or medical devices). These are sometimes referred to as "user fees".

OPTIONS FOR SUBSTANTIAL SCALE-UP

- Increase tobacco taxes substantially
- Curtail price-based marketing incentives
- Implement plain and standardized packaging
- Enhance package health warnings
- Implement a full ban on tobacco advertising and promotion, including at retail
- Require movies that depict smoking to have an 18A classification, or equivalent
- Ban smoking in additional places, and ensure smoking restrictions apply to herbal water pipe products and to any product that is smoked
- Implement additional measures to reduce contraband
- Implement an annual tobacco manufacturer license fee to recover the annual cost of federal/provincial/territorial government tobacco control strategies
- Require tobacco manufacturers to pay an annual registration fee for each product

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3. NO SMOKER LEFT BEHIND.

TRANSFORMING ACCESS TO TOBACCO CESSATION

To reduce smoking prevalence in Canada to under 5% of the estimated population of 37 million Canadians in 2035, the absolute number of smokers in Canada will need to fall from today's estimated 5.4 million people to under 2 million.[1] While prevention strategies will be central to achieving this, they alone will be insufficient to achieve the goals of less than 5% prevalence and to stem the excess deaths expected from tobacco use. This means we will have to introduce new approaches to increasing the proportion of smokers who are successful in quitting from today's two in three to at least four in five within the next two decades.[2]

Evidence suggests this is possible: many Canadians have successfully stopped smoking, especially those who are more affluent and educated.[3] ***The Endgame challenge will be to make quitting a reality for all Canadians who want to quit, and to ensure that no smoker is left behind.***

Smoking behavior and related illnesses cross all social groups but are particularly prevalent in the least well educated in society. The prevalence rate of current smoking is significantly higher for Canadians with lower levels of education compared to those with higher levels of education. In 2012, Schwartz et al[4] described that Canadians aged 18 years or over who had less than a high school education, completed high school, or completed some post-secondary education reported a higher prevalence rate of current smoking (29%, 24%, and 23%, respectively) than those who had completed post-secondary education (17%). Nevertheless, the greatest absolute number of current smokers is observed among Canadians who had completed post-secondary education, representing 2.6 million of the (then) 5.4 million smokers aged 18 years or over in Canada (or 49% of all smokers).

SMOKING CESSATION AND INEQUITIES

There is also strong evidence that smoking prevalence rates are higher in some Canadian communities than others – and these higher rates of tobacco use add substantially to health inequities .

In terms of individual smoking/tobacco cessation programs, improving access to tools that are known to help people quit (i. e. counselling, quitting medications and behavioural interventions) may represent the most promising approach for reducing smoking rates in disadvantaged groups. However, many authors conclude that more research is needed to establish the most effective interventions for some vulnerable high-risk groups (e. g. prisoners, homeless).

Furthermore, a recent report from the Canadian Partnership Against Cancer summarizing programs available for First Nations, Inuit and Metis people in Canada identified that many are in place across Canada but noted that relatively few smoking cessation programs developed by, with, and for First Nations, Inuit, or Métis exist in Canada, highlighting an opportunity for improvement.[5]

It is clear: In addition to interventions aimed at the general population where the greatest numbers of smokers are, new strategies are needed to specifically target and meet the needs of the populations where smoking rates are highest, and to find interventions that have a relatively greater impact in these groups.

EVIDENCE TO SUPPORT CESSATION ACTIVITIES

Cessation of smoking and other tobacco use will be greatly supported by the variety of Endgame actions which have been proposed for new regulations, product and marketing changes, etc. Putting these measures in place, however, will not remove the need for increasing support for new and existing programs targeted at helping *individual* smokers to quit.

For over 50 years, governments and health systems have recognized the risks of tobacco use and the importance to individual and public health of reducing smoking rates. Unfortunately, this recognition has not yet translated into a commitment to scale-up efforts and provide a sufficient dose of effective treatments to achieve a more substantial population-level change. Doing so in a framework that includes accountability for action will be a necessary step to achieving an Endgame for tobacco.

The foundation for such programs, and the evidence to support them, has been solidly built. Recent reviews have been undertaken by CAN-ADAPTT (the Canadian Action Network for the Advancement, Dissemination and Adoption of Practice-informed Tobacco Treatment), the U. S. CDC (Centers for Disease Control and Prevention), the Cochrane Collaboration and others. The measures validated by these reviews have been endorsed by the World Health Organization and other health authorities, and are among the obligations of countries which are party to the Framework Convention on Tobacco Control (FCTC).

A wide range of clinical and social interventions have been demonstrated to increase the number of quit attempts and the chances of a smoker successfully quitting. Even low intensity methods, like the brief provision of physician advice or self-help materials, will lead to fewer smokers. The most successful cessation programs are those which provide smokers with both behavioural support and stop smoking medications.[6]

Yet most smokers do not receive any support at all when they try to quit, even though doing so would likely increase the likelihood of their succeeding. The province of Ontario, for example, has implemented several interventions to support quitting, but these have reached fewer than 7% of the smokers in that province.[7]

To put these effective supports within the reach of smokers, they must be implemented in a number of settings in ways that ensure their use. For this reason, the FCTC recommends that governments "strengthen or create a sustainable infrastructure which motivates attempts to quit, ensures wide access to support for tobacco users who wish to quit, and provides sustainable resources to ensure that such support is available."[8] The U. S. Centres for Disease Control and Prevention recommends a budget of US$4.05 per capita for cessation interventions. No Canadian jurisdiction meets this level of investment.

Other population-wide and community interventions, such as advertising campaigns, taxation and price increases, social marketing and communications, health warning labels, Quit and Win competitions, news stories and other earned media,[9] or even pharmaceutical advertisements, can increase the likelihood of a smoker making a quit attempt.[10] These programs can be directed at the general population, or delivered to specific communities. The U. S. FDA, for example, recently launched a "This Free Life" campaign aiming to prevent and reduce smoking among lesbian, gay, bisexual and transgender young adults, who are twice as likely to use tobacco as other people their age.[11] The CDC recommends an average expenditure of US$1.69 per capita in for such mass-reach activities.

As health care systems are under the jurisdictional authority of the provinces, smoking cessation supports have primarily been the responsibility of provincial governments. Collaboration among governments has resulted in

the provision of some pan-Canadian services, such as Quit Lines. The Ottawa Model for Smoking Cessation is available in hospital and primary care locations in 48 cities.[12]

The ability of a smoker to gain access to clinical or community services to support cessation varies greatly depending on the part of Canada in which they live.[13] Some, but not all, provinces cover the costs of stop smoking medications. The province currently providing the greatest access is British Columbia, where in 4 years more than one-quarter of smokers have been provided with no-cost cessation medications to help their quit attempts.[14]

Today, there is no health system in Canada which is committed and resourced to provide a smoker with the same level of treatment for nicotine dependence as would be provided to treat the diseases caused by addiction to other substances. This must change.

TRANSFORMING CESSATION EFFORTS TO ACHIEVE THE ENDGAME GOAL

Transformation in the delivery and accountability of cessation efforts are required to achieve the endgame goal. The recommendations that follow are primarily focused on achieving this transformation through increasing the ***scale*** of the policy interventions, the ***accountability*** imposed on those who design and deliver cessation programs within the system, and finally through ***embedding*** the majority of the interventions within our universal health care system, as well as workplaces and community organizations. Beyond scaling up, transformation will occur through ***scoping out*** cessation with recommendations regarding novel interventions to overcome tobacco addiction and as well, actions that could specifically address the high smoking rates in disadvantaged and impoverished populations.

1. OPPORTUNITIES FOR SCALING UP.

A. Treatments that are universal, comprehensive and accessible.

Smoking cessation program access should be available through **all** health care settings. Institutions, clinicians *and* health care professionals should be accountable for screening, documenting, providing cessation programs, and be appropriately funded to provide smoking cessation counselling and treatment as they would for any other medically necessary treatment. Quit lines should be sustained with increased promotion.

Health care institutions should be responsible and accountable for screening for smoking and delivering smoking cessation programs to the smokers in their care; inpatients should have standard NRT orders provided, and electronic medical records should include mandatory fields for smoking and discussion of cessation. In recognition of its importance, access to smoking cessation, documentation of screening rates, and prescription of smoking cessation medication and counseling should be included as a *Required Organizational Practice*[15] in the accreditation of hospitals and clinics. This metric should also be included in the Health *System Performance indicator list* developed by the Canadian Institute for Health Information.[16] Funding support that follows patients from inpatient to outpatient settings could ensure cessation begun in hospital could be sustained after discharge without interruption.

B. Expanded settings and new partnerships for access to cessation services:

- **Supportive and pro-active workplaces**

  Programs and policies should be developed and implemented at the workplace to promote cessation. These could include a ban on smoking in all workplace settings, indoor and outdoors, incentives for

employers to support cessation, better engagement of workplace health and safety systems and workplace benefit programs. Coverage for cessation treatments must be included in benefits packages and must be mandatory for all employers.

- **Supportive and enabling communities**
  Many smokers are recipients of community and social support and can be reached through housing shelters, community centres, and access points for social service supports. This social infrastructure should be engaged to reach smokers and to make support for quitting a standard offering.

- **Residential and Ambulatory Addiction Programs**
  Individuals admitted to such programs for drug and alcohol addiction treatments should also receive treatment for any addiction to tobacco. The treatment of this addiction should be an integrated within these programs and all programs should be accredited to provide integrated tobacco addiction treatment as part of the service offering. People requesting specific services to address severe tobacco use disorder should be admitted residentially as well if appropriate.

The work in specific communities to transform access to appropriate cessation services, tools, and programs should also identify opportunities to collaborate with initiatives which address improving the health of the overall community.

C. Increased health professional expertise

At the core of this recommendation is the strong conviction that as a risk factor for disease, smoking must be screened for and managed just as other risk factors, such as hypertension or hyperlipidemia, are addressed in clinical practice. All health professionals should be capable of screening for and delivering smoking cessation treatment. Training should be included in the competency based curricula, for all regulated health professions.

D. Access to essential medicines and treatments

Behavioural counselling and access to evidence based pharmacotherapy for smoking cessation should be easily and freely available, with no restrictions on duration. This will require changes in policy for drug coverage in both the private and public sectors. Further steps to reduce cost can be taken, such as removing sales taxes (e.g. HST, PST, GST) from NRT and prescription smoking cessation products.

E. NRT – indicated use for as long as is needed

Some consumers use nicotine replacement products (e.g. nicotine gum) on a long-term basis as a substitute for smoking. Some physicians advise their patients to do so. However in Canada on the labelling for NRT, there is no indicated use for NRT to be used on a long-term basis. For example, the insert inside a package of nicotine gum states “Consult your doctor if you are finding it difficult to reduce your intake of nicotine gums or after using the product for 6 months” and “Do not use for more than 6 months without consulting a doctor”. The indicated use on the label should be modified to indicate that NRT could be used as long as is needed. One country, the United Kingdom, has implemented this measure.

F. E-Cigarettes and similar electronic nicotine delivery systems (ENDs)

The role of e-cigarettes in a Tobacco Endgame is discussed elsewhere. With respect to smoking cessation, although ENDS may be useful tools to lead to successful quit attempts in some tobacco smokers (see, for example, April 2016 report by Royal College of Physicians[17]), e-cigarettes as currently marketed and used

will not likely move prevalence of smoking very far toward achieving endgame targets. This may, however, change in the future. Caution is advised in promoting e-cigarettes as long-term substitutes for cigarettes as the health effects of regular long-term use are not known. Data are currently evolving on the impact and effectiveness of these devices as cessation aids and should be monitored to determine how best to frame their use in the Endgame discourse. Regardless of their value as Cessation aids, in Canada regulation is required that, at a minimum should include: product content (including nicotine levels, other additives); and they should not be marketed in a way that will promote their use by non-smokers or by youth. Notwithstanding uncertainty surrounding e-cigarettes as smoking cessation devices, they may in the future have potential as a tool in helping phase out tobacco and achieve the endgame, as discussed later

G. Respect and inclusion

The right of all smokers to cessation support should be recognized by ensuring that services and programs are offered in ways that are culturally-appropriate, respectful and adapted by and for the communities and cultures they serve.

2. OPPORTUNITIES FOR SCOPING OUT

The impact of fully implementing the proven measures identified above can be strengthened by the development of novel cessation supports and by fostering innovation within the systems that provide them to reach more smokers and groups of high smoking prevalence.

A. Novel approaches targeted at individuals

The Action Group recommends further development of novel approaches for cessation approaches, and offers the following as ideas that could be considered:

- Financial or other gift incentives for smokers to quit.[18]
- Free NRT coupon and cessation program information mandatory inclusions in packages of tobacco products.
- Proactive recruitment of smokers into cessation programs using novel technologies, text messaging services, apps, mobile/outreach services

B. Novel approaches to address disadvantaged populations

While it is expected that the scaled up interventions noted above will have substantial impact for Canadians in all circumstances, specific strategies to promote cessation in populations with circumstances that are associated with higher smoking rates must also be developed. *A variety of approaches will be required to address the many social, economic, personal, cultural and political factors which contribute to inequities in tobacco use.*

C. Novel wide-reach media campaigns that are hard-hitting and sustained

Mass media campaigns can be effective at reducing smoking rates if they are well-designed, high-impact and sustained.[19] Campaigns which focus on tobacco industry denormalization have been singled out as being particularly effective and a number of U.S. states, including California, Massachusetts and Florida, have demonstrated the impact that such programs can have.[20] No Canadian jurisdiction has yet attempted to launch comparable campaigns.

A key goal of comprehensive tobacco control is to increase the population cessation rate. The Ontario Tobacco Research Unit has estimated Ontario's cessation rate, that is, the proportion of smokers who remain quit for twelve months, to be only 1.9% [21].This cessation rate has remained unchanged for many years. The OTRU has estimated that the provincial smoking cessation rate would need to double in order to achieve a five percentage point reduction in smoking prevalence, a five-year target set in 2010 by the provincial Tobacco Strategy Advisory Group.[22] This five percentage point reduction is equivalent to 490,000 fewer smokers in Ontario[23].

Public Education and mass media campaigns have been shown to increase quit attempts and increase population cessation rates.[24] Evidence has shown that messages that communicate the negative health effects of smoking and elicit a strong emotional response through the use of testimonials and graphic imagery are more effective at promoting recall and in motivating quitting behavior. A recent mass media campaign conducted by the Centres for Disease Control (CDC) in the United States featuring testimonials from former smokers about the serious harms they experienced from smoking was found to be effective, resulting in over 1.6 million quit attempts and over 100,000 quit attempts lasting at least six months.[25] There are many opportunities for local communities to use paid and earned media to extend the messages of larger campaigns that may be implemented at a provincial level. State-wide and local partnerships were critical to securing additional media coverage, both paid and earned, for the CDC campaign, contributing to the overall success of the campaign.

THE CHALLENGES AHEAD AND HOW TO OVERCOME THEM

Escalating community and health system support for smoking cessation to an Endgame scale is a complex endeavour that will require the active engagement of a multitude of systems and actors.

Policy and administrative changes will be required at the federal, provincial, regional, municipal and institutional levels. Training, regulatory and accreditation systems will have to be enhanced, and supportive infrastructures with accountability frameworks must be put in place. The necessary human and financial resources will have to be secured in sufficient quantity and sustained over time.

Such challenges are not unique to tobacco control. Other disease prevention measures - food safety, clean water, mass immunization, mental health - have similarly required a multi-tiered system change. Oversight mechanisms and accountability frameworks are a necessary component of such programs.

Catalyzing this engagement and accountability for its success is a "must do" Endgame action.

RECOMMENDATIONS

Short term

- Federal and provincial ministries of health, through the Tobacco Control Liaison Committee or other mechanism, should collaborate in the development of a roadmap to expand and adequately fund community, workplace and clinical smoking cessation programs to Endgame scale.
- Each ministry of health should create a smoking cessation accountability framework for its healthcare system and related transfer payment agencies as part of the cessation program framework.
- Pan-Canadian research funding agencies together with the Federal Tobacco Control Liaison Committee should collaborate in the development of a research road map as well as a strategy for the funding required to support the required research in support of the End Game

Medium term

- Implementation of the expanded cessation programs will begin alongside the accountability framework
- In collaboration with the ministry of health, ministries of labour and social services should integrate smoking cessation supports within their service delivery systems.
- Organizations which train, regulate, accredit or fund health care professionals or institutions should be required to report on the measures they have taken to respect the right of smokers to receive effective cessation support.
- The federal minister of health should provide bi-annual reports to parliament on the status of smoking cessation across Canada.

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4. ALIGNING TOBACCO SUPPLY WITH PUBLIC HEALTH GOALS

For more than half a century, governments have tried to discourage people from smoking by increasing public knowledge about the dangers of smoking and by seeking to influence behaviours in directions away from smoking. This demand-reduction approach has worked only modestly well: Canada still has 5.4 million smokers (18% of adults) and smoking is still the largest preventable cause of disease and death. But even with implementation of a series of new measures, this will not be sufficient to take us where we need to go as long as the tobacco industry is working the other side of the street.

Tobacco companies work diligently to drive up product sales, the direct consequence of which is continued tobacco use, recruitment of new tobacco users and substantial amounts of avoidable morbidity and mortality. The impetus for tobacco companies to act so harmfully is entrenched in Canadian commercial law: as business corporations, tobacco manufacturers have a legal obligation to maximize profits and shareholder value. [1] This requirement conflicts with the public health objective of eliminating tobacco use, and with health regulations and other laws. [2]

The conflict between laws which encourage tobacco supply and those which discourage tobacco demand can be resolved in ways which favour health. Doing so can increase the impact of existing tobacco control measures and can contribute to achieving an endgame for tobacco. Failing to do so will leave unaddressed some structural impediments that will continue to slow our progress and will make it unlikely if not impossible to reach the Endgame target.

In recent years, several proposals have been made to complement this demand-side approach with measures to control the supply of tobacco products. These suggestions address the central dilemma of tobacco control – how the industry's drive for profits harms health. All seek to reduce both the supply and demand for tobacco and all intervene in some way on the profit-maximization goal of tobacco companies. Some would place restrictions on tobacco supply while others aim to would reduce tobacco's harms. Still others envision a phase-out of tobacco, some at a faster rate than others.

Some of these ideas closely resemble each other, while others are distinct to the point of being incompatible with others. Some are more clearly intended to end tobacco use than others. Some contemplate that it is the marketplace that will guide the outcome, while others see that as a role for the regulator. (Both marketplace and regulator have in the past successfully phased out harmful products. No one has banned straight razors, but they have been largely replaced by electric razors and safety razors. Government has demanded a ban or phased-out end to other unwanted goods, including hydrochlorofluorocarbon refrigerants, lawn darts, baby walkers and incandescent light bulbs.[3]

NEXT GENERATION INTERVENTIONS FOR TOBACCO SUPPLY

Transformative next-generation regulatory interventions can be considered under four sub-themes: 1) limiting retail tobacco availability, 2) aligning industry behaviour to public health goals 3) limiting the supply of tobacco products available for sale; 4) other.

1. LIMIT RETAIL AVAILABILITY

Many jurisdictions restrict the retail availability of products less harmful than tobacco, such as alcohol, to designated, licensed and highly regulated outlets. Yet tobacco products are now available at just about every corner store. Alcohol research demonstrates that restricting retail availability is a highly effective policy at reducing use. Tobacco research indicates that high outlet density is associated with increased initiation and impeded quitting. Three retail availability reduction policies - higher cost retail licensing, zoning and tobacco only stores - aim to reduce smoking-related harms through the same general mechanisms. The theory of change for decreasing retail availability is that it would decrease access to tobacco by reducing overall availability and decreasing exposure to marketing. These would help reduce social cues for smoking which may reduce initiation of smoking by youth, decrease cigarette consumption for those who continue to smoke and decrease relapse during quit attempts by current smokers. The ultimate goals of these interventions, within a comprehensive tobacco control strategy, are to decrease initiation, increase long-term cessation, and contribute to the denormalization of tobacco retail marketing--resulting in an overall decrease in tobacco use.

Secondary or indirect evidence includes cross-sectional studies which do not allow the inference of causality. Evidence summarized by Tilson[4] and from several cross-sectional studies suggests that higher tobacco retail density is associated with smoking-related outcomes in youth, including initiation;[5] increased risk or prevalence of smoking;[6] number of cigarettes consumed;[7] purchasing cigarettes from retailers;[8] and attitudes and intentions towards smoking.[9] In a recent Ontario study, Chaiton et al[10] found that higher tobacco retail density was associated with higher smoking at the public health unit level. Among current adult smokers, proximity of tobacco retail outlets, rather than outlet density, has been shown to be related to relapse during cessation attempts in two cohort studies.[11]

A. Higher cost retail licensing

Licencing-associated strategies could be used to reduce the retail availability of tobacco products by:

- limiting the number of licenses that can be issued (and perhaps reducing this limit over time);
- increasing the licensing fee;
- not renewing licenses to existing license holders;
- not granting licenses to particular retailers; and
- holding an auction or lottery for a limited number of available licenses.[12]

In addition, certain conditions of license such as limiting the hours and/or days during which tobacco can be sold could also aid in reducing tobacco retail availability.[13] An Australian study showed that a 15-fold increase in retail license fees (from $12.90 AUD to $200 AUD per annum) could be an effective method for reducing the number of active tobacco licenses (purchased or renewed).[14] They found that the total number of tobacco licenses significantly decreased by 23.7% from one year to two years after the first of

four fee increases.[15] The fee change did not appear to be a sufficient disincentive for venues such as tobacconists and convenience stores, for which tobacco accounts for a large proportion of revenue.

B. Zoning

Potential zoning restrictions to reduce tobacco retail availability include:

- capping the number of retailers in a specific geographical area;
- prohibiting retailers within certain distances of schools or other youth-oriented facilities;
- prohibiting retailers along access routes to schools;
- stipulating a minimum distance between tobacco retailers; and
- restricting the location of tobacco retailers to certain areas.[16]

Private liquor stores in Alberta are subject to municipal zoning restrictions such as prohibiting retailers within certain distances of schools or other youth-oriented facilities and establishing minimum the distances between retailers. It is anticipated that cannabis retailers will be subject to municipal zoning restrictions once the sale of marijuana is legalized.

C. Tobacco-only stores

Government-controlled or licensed outlets could offer cessation, and volume purchases could reduce wholesale prices while allowing high net prices via taxation. This has not been implemented in any jurisdiction.

Another approach that has been suggested is to transform retail supply and directly align retail behaviour with public health goals, including by incentivizing them to support cessation efforts and provide passive and/or active cessation advice. Tobacco companies, through a combination of financial carrots and sticks, have turned retailers into promoters of tobacco products. Under any of the proposed retail reforms, retailer behaviour could be realigned to reduce smoking.

2. Changing Tobacco Supply

Measures in this category seek to modify the behaviour of tobacco suppliers by re-directing their motivation, incentives or obligations towards the achievement of tobacco reduction.

A. Performance-based regulations

Traditional regulation imposes behavioural requirements on a regulated industry, but does not oblige it to achieve the regulatory objective. In a performance-based regulation (PBR) the onus is placed squarely on the regulated companies to achieve the objective while granting some flexibility in how that is done. PBR could be used to hold companies responsible for achieving annual targets for reductions in smoking prevalence, with financial incentives and penalties to motivate compliance.[17]

B. Regulated market model

The regulated market model would create a state-controlled tobacco distribution monopsony with a public health mandate. This new middle link in the distribution chain would seek to reduce harm from tobacco.[18]

C. Non-profit enterprise with public health mandate

The problem of profit-maximization in the tobacco business could be squarely addressed by converting the tobacco industry into a non-profit enterprise with a public health mandate. Under this scenario, the entire supply of tobacco products would be directed towards an accelerated and steep decline in use. One way to achieve this would be by expropriating the existing Canadian operations. The estimated cost, about $15 billion, is somewhat less than the amount of tobacco excise taxes collected in two years and is a fraction of the amount claimed in damages in provincial health care cost recovery suits.[19] A strong argument can be made that it would be financially prudent for governments to secure these assets while awaiting the outcome of the lawsuits to ensure at least partial recovery of any healthcare damages that are awarded

D. Market conditions could be changed to advantage "clean nicotine" over tobacco products. Advertising and price advantages could be given to pharmaceutical nicotine[20].

3. LIMIT SUPPLY OF TOBACCO PRODUCTS AVAILABLE FOR SALE

Measures in this category aim to decrease the supply of tobacco products as the specific regulatory focus. These measures, while differing in their structure, would all substantially change the way the tobacco companies do business, make tobacco suppliers responsible for achieving reductions in tobacco use, and would fundamentally change the motivation of tobacco companies. By reducing supply, there is an expectation that price would increase and availability would decrease leading to both less initiation and decreased consumption. These interventions also address the often rapidly evolving nature of tobacco products as the industry adapts to changing demand patterns. Supply limitation measures can be implemented so at to affect more or less rapid change. Related ideas not included here are proposals to abolish the commercial sale of tobacco products[21] or to prohibit smoked tobacco products.[22]

A. Sinking Lid

It has been proposed that an ever-declining cap (sinking lid) be placed on tobacco available for sale each year. Predictable annual declines in tobacco supply would occur towards a fixed target, likely within two decades.[23] A variation of sinking lid would be to phase out both conventional cigarettes and e-cigarettes in a coordinated fashion, with e-cigarettes getting a marketplace advantage of a slower phase-out[24§].

B. Cap and Trade

Under a cap and trade system a firm and ever-declining cap is placed on supply. Producers who go over their cap could trade their overage, for a fee to other suppliers who were under their cap. In this way, the cap would be achieved for the entire industry. Such a cap-and-trade system has found currency in programming reductions in carbon emissions. Currently, Ontario, Quebec and California operate a joint system to achieve declines in carbon emissions.[25] Alberta has maintained a cap-and-trade system on carbon emissions from large emitters for almost a decade. The acid rain problem in Canada and the U. S. was large solved through a joint cap and trade program that was implemented in 1990 through amendments to the *Clean Air Act.* Under a new cap and trade system, it may be possible to enlist participation from manufactures that are currently operating illegally or quasi-legally through participation incentives. Increased legal participation would help to limit contraband activity.

C. Moratorium on new tobacco products

All new tobacco products and all new packaging for existing products could be banned with the potential long-term result of reducing tobacco product supply as demand for existing products would decrease. This idea has gained currency in Quebec.[26] A quasi moratorium is in effect in the United States, where current USA FDA premarket approval regulations make it difficult, but not impossible to introduce new tobacco products.[27]

4. OTHER PROPOSALS.

A. Capping tobacco wholesale prices

Capping tobacco wholesale prices would decrease tobacco industry profitability. Lower wholesale prices would decrease the excessive profits generated by the tobacco companies through many of their brands. Lower profitability reduces the incentive of tobacco companies to maintain their sales, and to defend activities (such as promotion) that contribute to sustaining sales.

B. Tobacco supplier profits surtax

A manufacturers' tobacco income surtax was implemented in Canada in 1994. Corporate restructuring has allowed some multinational tobacco companies operating in Canada to largely avoid this surtax and their income tax responsibility while continuing to transfer most of their $1 billion per year profits to their overseas owners. The surtax should be extended to ensure it applies to all tobacco manufacturers and importers, including through application to corporate dividends as necessary.

Elements of proposals to reform tobacco supply	Diminish profitability	Influence Market availability	New supply infrastructure	New Accountability Framework	Continued use anticipated	Phase out anticipated	Market-driven outcome	Regulator-driven outcome
1. Limit Retail Availability								
A. Higher cost licensing	●	●			●		○	○
B. Zoning		●			●			●
C. Tobacco-only stores			●	●	●			●
2. Align Supply to Public Health Goals								
A. Performance-based Regulations				●		●	○	○
B. Regulated Market Model		●	●		●			●
C. Non-profit enterprise with a public health mandate			●	●		●		●
D. Market conditions could be changed to advantage "clean nicotine" over tobacco products			○		●		●	○
3. Limit Supply								
A. Sinking lid				●		●	○	○
B. Cap and trade				●		●	○	○
C. Moratorium on new tobacco products		●			●			●
4. Other								
A. Capping wholesale prices	●				●			●
B. Tobacco supplier profits surtax	●	○			●		○	●
C. Permit to purchase tobacco products					●			●

○ = *potential element;* ● = *inherent element*

The World Oncology Forum that met in Lugano Switzerland in 2012 had as its recommendation number one: *"Wage war on tobacco, by far the biggest cause of cancer death across the globe. Extend to all countries the anti-tobacco measures already found to be effective and tax the profits made from tobacco"*[28]

C. Permit to purchase tobacco products

A permit for individuals to purchase tobacco products is seen as a way to encourage smokers to quit (cessation) and reduce smoking onset (prevention), as it would establish a disincentive to smoke, as well as a mechanism for potential tobacco users to receive targeted information and support.[29] Mandatory permits have the potential to decrease demand for tobacco products and thus eventually to decrease profitability. In terms of prevention, requiring a permit to purchase tobacco products would also enable assurance that the individual's age meets the minimum age for legal sales and would facilitate the retailer's role in avoiding sales to minors.

OPTIONS FOR ALIGNING SUPPLY WITH PUBLIC HEALTH GOALS

No single supply-side measure discussed above would be certain to produce, by itself, an Endgame result. All of them can be considered in the context of expanding current tobacco control strategies simultaneously shrinking both supply and demand for cigarettes.

There are many details that remain to be worked out with any of the ideas proposed to date. More ideas will hopefully emerge. The absence of this information is no reason to stall policy development at this stage.

Governments, civil society organizations and individuals with responsibilities for public health should:

- Adopt in principle that tobacco supply must be aligned with public health goals.
- Identify, develop and implement supply-side tobacco control measures suitable for a Canadian Endgame for tobacco use with potential measures for consideration including:
  - Limiting retail availability through high cost retail licensing, zoning or potentially tobacco only-stores;
  - Changing tobacco supply through: performance-based regulations, a regulated market model, non-profit enterprise with public health mandate;
  - Limiting tobacco supply through: sinking lid, cap and trade, moratorium on new tobacco products,
- Conduct policy audits and ensure that all laws, regulations, policies and programs, are aligned with the public health goal of eliminating tobacco use.

In addition:

- Approaches should be studied to control tobacco wholesale prices

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5. PRODUCT REGULATION

Regulating tobacco products themselves has the potential to reduce prevalence and to contribute to the Endgame objective of less than 5% prevalence by 2035. The tobacco industry has a long history of marketing products that have had the effect of increasing prevalence, thus product regulation has the potential to do the opposite.

Historically, many efforts regarding product regulation have sought to reduce the harmfulness of cigarettes. Approaches that at first seemed to many to be promising turned out to be failures. Filter cigarettes increased in popularity in the 1950s, with marketing that associated filters with reduced harm. Cigarettes with lower machine-based tar yields were marketed in Canada in the 1950s, but marketing of "light", "extra light" cigarettes etc. really accelerated in the 1970s. Many consumers would perceive "light" and "mild" cigarettes to be less harmful, and thus would switch to these products instead of quitting altogether. It is now understood that the experience with "light" and "mild" cigarettes has proved to be a public health disaster. Lower tar and nicotine numbers from machine-based test methods are not representative of human smoking behaviour.

The tobacco industry has spent billions of dollars over decades in seeking to develop and market less harmful cigarettes, but to date has not been successful in marketing a less harmful cigarette that has had sustained consumer acceptability. The tobacco industry has far greater product knowledge than do regulators and the public health community, knowledge that the industry has gone to great effort to conceal.

Product regulation can be a difficult area. The tobacco industry can use its extensive product knowledge to get around or reduce the impact of regulatory measures. For the most part, there is almost no successful international regulatory experience to draw upon in terms of regulating the product itself.

Nevertheless, governments are taking increasing action regarding the product, and considering potential regulatory measures. In Canada, there are existing measures to reduce cigarette flammability (ignition propensity), [1] to restrict flavours and additives, [2] and to require reporting to Health Canada of additives/ingredients and other product characteristics.[3]

Consistent with the Endgame, this paper only considers potential measures to reduce prevalence to help achieve the Endgame objective of less than 5% prevalence by 2035. Thus measures seeking to reduce the harm of tobacco products – such as reducing the level of specific harmful emissions in cigarette smoke – are not covered by this paper.

The potential role of e-cigarettes in contributing to a reduction in smoking prevalence is covered elsewhere.

1. MARKET SURVEILLANCE AND RESEARCH

It is essential to have knowledge of tobacco products in the marketplace, including characteristics of tobacco products and product trends. Canada, through the federal *Tobacco Reporting Regulations*,[4] has relatively extensive reporting requirements for the tobacco industry, but these requirements are insufficient. The

tobacco industry is required to report to Health Canada information on a brand by brand basis for sales, additives/ingredients, constituents in tobacco, toxic emissions, marketing expenditures and research. However, much of the brand specific information (sales, additives/ingredients, marketing expenditures) as well as research information is not publicly disclosed. There are gaps in the reporting regulations: for example, there is no requirement to report information for water pipe tobacco as this was not an issue in 2000 when the regulations were adopted. British Columbia previously required public disclosure of additives on a brand by brand basis (1998-2007),[5] but this is no longer the case, and has never been done federally.

The US FDA has a far more extensive research and surveillance initiative than Canada, the cost of which in the US is part of the US$635 million annual FDA tobacco control budget (fiscal year 2016-17). The entire cost of the FDA's US$635 million tobacco control budget is recovered through a license fee on tobacco manufacturers that is paid based on market share.[6] Guidelines under the WHO Framework Convention on Tobacco Control (FCTC) recommend that governments recover the cost of product regulation initiatives and provide a number of cost recovery options to consider[7] – one such option is the licensing fee on the tobacco industry that has been implemented by the FDA.

The federal government in Canada could enhance its market surveillance and research activities, including through more extensive reporting regulations on the tobacco industry, through public disclosure of reported information, and by fully recovering the cost from the tobacco industry.

2. BANNING FLAVOURS/ADDITIVES

Flavours in tobacco products make tobacco use more attractive and palatable, among both adults and youth. The national Youth Smoking Survey for 2012-13 found that of high school students in Canada who use tobacco, 50% use flavoured tobacco, and of high school students who smoke, 29% smoke menthol.[8] A report prepared for the US FDA provides an evidentiary summary of how menthol contributes to increased smoking initiation and reduced smoking cessation.[9]

Bans on flavours	Flavours, excl. menthol	Menthol	Implementation date
Newfoundland		○	01-07-17
Prince Edward Island			
Nova Scotia		●	31-05-15
New Brunswick		●	1-01-16
Quebec		○	26-08-16
Ontario		○	1-01-17
Manitoba			
Saskatchewan			
Alberta		●	30-09-15
British Columbia			
Yukon			
Northwest Territories			
Nunavut			
Government of Canada	●		05-07-10 15-12-15

○ = legislation adopted; ● = in force

Canada has taken steps to restrict flavours. The federal government has banned flavours in cigarettes, most cigars, and blunt wraps, with an exception for menthol.[10] The federal government now has plans to remove this menthol exemption, and thus to ban menthol in cigarettes, most cigars and blunt wraps.[11] Six provinces (Alberta, Ontario, Quebec, New Brunswick, Nova Scotia, Newfoundland) have banned flavours in tobacco products including menthol (Ontario and Nova Scotia exempt some cigars and traditional pipe tobacco; Alberta exempts traditional pipe tobacco, water pipe tobacco and some cigars). These menthol bans include bans on menthol capsules in filters. Provincial legislation bans "characterizing" flavours (though wording of provincial legislation varies) while federal legislation bans flavours and additives that enhance flavours in any quantity. Certain additives are exempt from the federal ban, typically where the additives have a functional role in the cigarette such as affecting burn rate.[12]

There are further federal restrictions on additives beyond flavours. Federal legislation bans amino acids, caffeine, essential fatty acids, probiotics, vitamins, glucuronolactone, taurine, and most mineral nutrients in cigarettes, most cigars, and blunt wraps.[13]

Legislation should ban all flavours including menthol in all tobacco products; flavour bans should apply to flavours in any quantity and should not be limited to just "characterizing" flavours. There should also be a ban on all additives in all tobacco products except those additives that are specifically permitted; the role of justifying any permitted additives should be with the tobacco industry, not with government. Some additives currently permitted in cigarettes should be prohibited (footnote 12 lists a series of permitted additives). An extensive flavouring/additive ban has been adopted in Brazil, although it has not yet been implemented pending a court challenge, and an expert evidence review has supported this regulation.[14]

3. CIGARETTE ATTRACTIVENESS

There are several potential measures regarding standardizing the appearance and attractiveness of cigarettes, including width and length, appearance of cigarette filters and paper, and having a health warning on the filter overwrap.

A. Size:

Slim and superslim cigarettes target females and associate smoking with glamour and weight loss; many consumers perceive slim and superslim cigarettes as less harmful.[15] In recent years, the tobacco industry globally has placed emphasis on marketing slim and superslim cigarettes, with tremendous success. Global slim/superslim cigarette sales increased from 221 billion in 2008 to 347 billion in 2012, representing an increase in market share of global cigarette sales from 7% to 11%. [16] In the EU, the Tobacco Products Directive initially proposed by the European Commission in 2012 contained a ban on slim cigarettes, i.e. cigarettes with a dimension of less than 7.5 mm.[17] However, due to tobacco industry lobbying, this provision was not in the final version of the Directive that was approved. The EU Directive does ban slim pack formats,[18] as does Australia[19] and Quebec[20] legislation, but the EU, Australia and Quebec do not ban slim cigarettes themselves. A typical cigarette diameter is 7.55 mm. In the US, Camel Wides are sold with a diameter of 9mm. A typical length for cigarettes in Canada is 72 mm for regular length, with King Size at 85mm, and some cigarettes with a length of 100 mm or 120 mm. Thus a product standard could specify that the cigarette diameter must be within 7.5 mm to 7.7 mm, and that the length must be a specified dimension or must not be longer than 85 mm.

B. Appearance

Federal legislation bans colouring of cigarette paper and filters, with an exception for imitation cork filter overwraps, and an exception that allows trademarks to appear on cigarettes. [21] Further measures should be taken to make cigarettes less visually appealing by standardizing the appearance of the filter, prohibiting additives that make paper whiter, and considering other measures. By prohibiting additives that make paper whiter, the appearance of cigarette paper would be more like the appearance of unbleached recycled paper. Standardizing the appearance of filters would help prevent the tobacco industry from conveying perceptions of reduced health risk because of the filter. Prohibiting tobacco industry trademarks on cigarettes could be included as part of plain packaging requirements, as Australia has done.

C. Warnings on cigarettes

Health warnings have long been required on tobacco packaging, but to date no country has required a health warning on the cigarette itself. Tobacco companies know the communications value of the cigarette, and have placed tobacco company brand names, logos and colour indications on the cigarette, normally on the filter overwrap part, or close to the filter on part of the cigarette that would normally not be burned. (Australia has prohibited tobacco companies from placing brand indications on cigarettes.) There were 29.5 billion cigarettes sold in Canada in 2014, meaning that warnings on cigarettes would receive substantial exposure. Placing warnings on the filter overwrap portion of cigarettes is a measure recommended for consideration in FCTC guidelines.[22] No country has yet required health warnings on cigarettes themselves, though Singapore requires a tax-paid marking "SDPC" on cigarettes (SDPC stands for Singapore Duty Paid Cigarette).

D. Palatability

Over a period of decades cigarette chemistry has been progressively altered to make cigarettes feel better, taste better, smell better, be easy to inhale and deliver a satisfying smoke. It has been suggested that cigarettes could be reverse engineered to slowly make them less attractive across these dimensions in ways that should be virtually imperceptible to smokers but would more quickly discourage young people from taking up smoking. Cigarettes can be made less inhalable, and nicotine can be made less bio-available, by raising the pH. The elasticity of cigarettes can be adjusted (an elastic cigarette is one where it is made easier for the smoker to obtain nicotine because nicotine delivery increases faster than the puff volume).

4. CIGARETTE ADDICTIVENESS

Nicotine is the addictive substance in tobacco products, and nicotine is highly addictive.[23] There have been a number of potential measures that have been raised regarding nicotine addictiveness.

One proposal is to reduce nicotine in cigarettes to levels that are not addictive.[24] Most cigarettes have 10-15mg of nicotine in the tobacco portion of the cigarette. It has been proposed to reduce nicotine content to 0. 5mg, with a level of 0.5mg essentially representing a 95% reduction in nicotine (caffeine can be removed from coffee, but there may still be some caffeine in decaffeinated coffee; regular beer may have 5% alcohol, while non-alcoholic beer may have 0.5% alcohol). The objective and expectation with this approach is that cigarettes would no longer contain enough nicotine to addict new users, and would no longer contain enough nicotine to sustain use by smokers generally. Studies are being conducted in this regard.[25] To date, however, no country has implemented a regulation to reduce nicotine content. And issues have been raised about factors that may make this proposal not workable/effective, especially in the Canadian context. Those issues include contraband and potential compensatory behaviour by smokers to adjust for reduced nicotine. In the US, Quest brand cigarettes with such low nicotine content were introduced in the market, but the cigarettes were a market failure and were removed from the market. Herbal cigarettes, which contain no nicotine, have been on the Canadian market for decades but have never had any material sales volume. Research is ongoing regarding the potential for reduced nicotine content cigarettes.

Another potential approach has been taken in the European Union in the new Tobacco Products Directive, prohibiting additives in quantities that would increase addictiveness to a significant or measurable degree. It is not clear yet the extent of the impact that this measure will have.[26] Given the addictiveness of nicotine,

approaches should be studied for the Canadian context to prevent tobacco products from being made more addictive, and to provide for tobacco products to be less addictive.

5. Filters

It has not been demonstrated that filters have reduced the health consequences of smoking. Filters, however, may make it easier to smoke. Tobacco companies have increasingly introduced types of filters that create the perception that the filter reduces health risks. Examples include having carbon in filters, or du Maurier's "duPlus" filter that contains a recessed opening. Many filters have ventilation holes that reduce machine-measured tar and nicotine yields (though machine test methods are not representative of human smoking behaviour). Approaches that could be studied would be to ban ventilation holes in filters or to ban filters altogether. Among the aspects to be examined would be deceptiveness related to filters.

Recommendations

Canada should adopt product regulation standards to reduce tobacco use:

- Implement a well-financed surveillance and research initiative paid for by companies through a license fee on tobacco manufacturers
- Ban all flavours including menthol in any quantity (not just "characterizing" quantities) in all tobacco products
- Ban all additives except those that are specifically allowed, with the tobacco industry to justify any permitted additives; ban some additives currently permitted for cigarettes
- Standardize the appearance of cigarettes by specifying width and length dimensions, by standardizing the appearance of cigarette filters and paper, and by requiring a health warning on cigarette filter overwraps.

In addition:

- Approaches should be studied to prevent tobacco products from being made more addictive, and to provide for tobacco products to be less addictive, including by reducing nicotine content
- A measure should be studied regarding a ban on ventilation holes in filters or a ban on filters altogether
- Approaches should be studied to reduce the palatability of tobacco products

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11 Health Canada, Notice to interested parties — Proposed order to amend the schedule to the Tobacco Act (menthol), Canada Gazedtte Part I, April 30, 2016.

12 Pursuant to the Schedule to the *Tobacco Act*, the flavours ban for cigarettes, most cigars, and blunt wraps includes a ban on Fruits, vegetables or any product obtained from the processing of a fruit or vegetable (excluding activated charcoal and starch); spices, seasonings and herbs; sugars and sweeteners (excluding starch); mineral nutrients (excluding those necessary to manufacture the tobacco product).
The additives exempt from the ban on flavours and additives that enhance flavours are: benzoic acid (CAS 65-85-0) and its salts; butylated hydroxytoluene (CAS 128-37-0); carboxy methyl cellulose (CAS 9000-11-7); citric acid (CAS 77-92-9) and its salts; ethanol (CAS 64-17-5); ethoxylated sorbitan monolaurate (CAS 9005-64-5); fumaric acid (CAS 110-17-8); glycerol (CAS 56-81-5); guar gum (CAS 9000-30-0); menthol (CAS 89-78-1); l-menthol (CAS 2216-51-5); l-menthone (CAS 14073-97-3); n-propyl acetate (CAS 109-60-4); paraffin wax (CAS 8002-74-2) propylene glycol (CAS 57-55-6); rosin glycerol ester (CAS 8050-31-5); sodium acetate anhydrous (CAS 127-09-3); sodium alginate (CAS 9005-38-3); sorbic acid (CAS 110-44-1) and its salts; triacetin (CAS 102-76-1); tributyl acetylcitrate (CAS 77-90-7).
For cigars weighing between 1.4g and 6g, there is an exemption for rum, wine, whiskey and port flavours.

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6. ELECTRONIC CIGARETTES

Electronic cigarettes (e-cigarettes; also referred to as Electronic Nicotine Delivery Systems [ENDS]) are battery powered devices that are used to heat and aerosolize a solution containing propylene glycol, vegetable glycerin, flavourings and sometimes nicotine.[1] There is a vast range of e-cigarette products available and a wide range of use patterns, including e-liquids, device components, and heating mechanisms. E-cigarettes vary in look (from cigarette look alike to large tank devices), power and temperature of heating mechanisms and efficiency and effectiveness in delivering aerosol into the lungs. E-liquids vary in use of propylene glycol and vegetable glycerin, flavouring additives (with thousands of flavours) and nicotine content (ranging from zero to levels higher than contained in tobacco cigarettes).

E-cigarettes present as a both potentially contributing as a solution to the tobacco epidemic and as a health problem, which complicates policy development.

Widespread use of e-cigarettes risks posing a new public health problem. A recent systematic review of e-cigarette health effects research concluded that the evidence of potential health effects is sufficient to suggest that anybody who is not a current smoker of tobacco cigarettes should not vape electronic cigarettes.[2] Moreover, the health effects of long-term regular use of e-cigarettes have not yet been studied. The review found that carbonyls, tobacco specific nitrosamines (TSNAs), and impurities were frequently detected in e-liquids at low levels. Low levels of carbonyls, VOCs, TSNAs, metals, impurities, and particulate matter have been found in e-cigarette aerosol. E-cigarette use may result in low levels of passive exposure to nicotine, organic compounds, metals, and particulate matter. Air quality measurements have found high levels of particulate matter in indoor vaping by a large number of people. In addition, the strengthening of evidence about the effects of nicotine on brain development suggests that people should not vape nicotine e-cigarettes until they are in their 20s.[3] The Surgeon General's conclusion that there is sufficient evidence about the effects of nicotine on the development of the fetus suggests that pregnant women should not be exposed to nicotine e-cigarette aerosol.[4]

While in absolute terms, e-cigarettes pose health risks, there is widespread consensus that they are less harmful, and many say very greatly less harmful than smoking tobacco cigarettes thus offering a potential solution to the tobacco epidemic. Large numbers of smokers quitting via vaping and then quitting vaping as well or even just switching to vaping could help move tobacco use prevalence down. As the tobacco endgame is about decreasing tobacco smoking prevalence, not about decreasing ingestion of nicotine through e-cigarettes or other ways, e-cigarettes may have a legitimate place in a tobacco endgame strategy. However, systematic reviews of research on e-cigarettes as a cessation aid indicate that while some smokers successfully quit by vaping e-cigarettes, they make up only a small proportion of smokers both who have tried vaping and who have not tried vaping.[5] While some smokers using certain kinds of e-cigarettes in certain ways may quit smoking, some smokers may become dual users which may or may not lead to cessation. By far, most smokers who try e-cigarettes, do not become vapers and do not quit. The state of the evidence about the effectiveness of e-cigarettes as a smoking cessation aid is currently assessed as very low to low, due primarily to methodological weaknesses of current studies.[6]

Possible reasons why large proportions of smokers are not quitting through vaping include: inadequate nicotine delivery stemming from mechanics of the device and from difficulty in using the device properly; e-cigarettes being unsatisfying for smokers for other reasons (not same feel…); lack of knowledge about harms; not wanting to switch from one bad thing to another, but preferring to quit altogether; clinicians unwilling and unable to help smokers quit via e-cigarettes.

Policy environments for e-cigarettes are evolving in divergent ways in the United Kingdom and the United States. Each approach is supported by a growing and sometimes conflicting evidence base. The U.K. Royal College of Physicians recently recommended that regulation "should not be allowed significantly to inhibit the development and use of harm-reduction products by smokers" and that "in the interests of public health it is important to promote the use of e-cigarettes, NRT and other non-tobacco nicotine products as widely as possible as a substitute for smoking in the UK"[7]. In contrast to this, the United States government is taking a more cautious approach. In May, 2016, the United States Food and Drug Administration extended its jurisdiction to regulate e-cigarettes and all other tobacco and nicotine products, including those not yet on the market[8]. All existing and new products will be subject to significant regulatory requirements, including premarket review and authorization. The US Preventive Services Task Force has concluded that current evidence is insufficient to recommend e-cigarettes for tobacco cessation among adults.

Into this complex area, an approach has been suggested which may provide guidance for Canada. "From a public health perspective, VNP (vaporized nicotine products) policies should aim to discourage experimental and regular use of VNPs by never smokers who would not have smoked otherwise while encouraging innovations in VNP products that promote smoking cessation". [9]

In future, there may be potential for e-cigarettes to bring large proportions of smokers to quit or switch to vaping by addressing these obstacles. Research and development to explore this possibility might be part of an Endgame Strategy with the possibility that down the road, e-cigarettes could become an important part of the solution so long as policies are put in place to prevent them from becoming a problem for non-smokers, or for deterring cessation.

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7. PREVENTING A NEW GENERATION OF SMOKERS

Tobacco addiction has been called the major pediatric disease of our time.[1] It is during adolescence and young adulthood that tobacco use begins and that addiction to smoking is established. Although the chronic diseases caused by tobacco use may not be noticed by the smoker until later in life, they are rooted in that first youthful smoking experience.

Efforts to prevent young people from smoking have been a key element of tobacco control programs for decades. But only in recent years, following the implementation of measures designed to reduce smoking initiation (tax increases, bans on advertising and retail displays and large health warnings), has there been a large increase in the proportion of teenagers and young adults who never try smoking.[2]

But even with many of these measures in place, tobacco companies are still able to recruit new customers. Over the past 10 years, about 1 million young Canadians have become smokers. At present in fact, by the time they turn 20, one in five Canadians identify themselves as smokers.[3]

Tobacco companies benefit from and exploit the social and environmental factors that influence young people to smoke. Their brands are sold as image-laden "badge products" to young people who are seeking to establish an identity and to gain social acceptance. The presence of smoking in movies and videogames, and in the community that surrounds them, helps signal to youth that smoking is a social norm.

All young people are at risk of smoking, but some are especially vulnerable. Family circumstances (such as living with a parent who smokes), personal circumstances (such as having used other drugs, being depressed or having difficulties at school), and public policy circumstances (such as having easy access to affordable tobacco products, not receiving adequate information about the risks of smoking or being exposed to marketing) can increase the likelihood of a young person beginning to use tobacco.[4] The first smoking experience of the post-millennial generation does not necessarily resemble that of their parents'. The range of inhalable products that are available to them – including cigarettes, e-cigarettes, shisha, marijuana – provide many gateways through which regular smoking and addiction may follow. The changing regulatory environment around e-cigarettes and marijuana, and the development of novel products will present new challenges.

Public health measures to prevent youth smoking have evolved considerably, as evidence on effectiveness and political support for stronger measures have grown.[5] The comprehensive set of demand-reduction measures promoted by the World Health Organization and included as obligations in the Framework Convention on Tobacco Control (FCTC), reflect a scientific and policy consensus on effectiveness for smoking prevention. These measures include higher tobacco taxes and prices, elimination of all promotions for smoking, smoke-free laws and policies, public education, high impact mass media campaigns, community programming, among others.

Many of the regulatory measures are already in place in Canada, including some – such as display bans in retail stores and graphic health warnings – that were pioneered here. Others, such as plain packaging and comprehensive flavour bans, are imminent. But there remain several ways in which smoking prevention measures in Canada do not meet international best practices. These include the absence of a price strategy and the low-tax policies of the two most populous provinces. Only a limited number of public awareness activities, such as De Facto,[6] have been sustained over time.

Tobacco control is a shared responsibility of governments at all levels, and there is a wide variety of approaches taken by different jurisdictions, yielding a patchwork approach to tobacco control. Youth access laws restrict

sales of cigarettes to people over 18 in some provinces, and to those over 19 in others. Surveillance systems to monitor youth tobacco use are in place nationally, with additional systems in some provinces but compliance monitoring and enforcement vary substantially across provinces and territories.

Several innovative programs which engage young people in peer-to-peer efforts to support prevention and cessation have been put in place in some provinces. These include programs at universities, such as 'Leave the Pack Behind',[7] and Exposé,[8] as well as programs in high schools and youth centres or in the community.[9]

Achieving Canada's Endgame target of less than 5% smoking prevalence by 2035 will have at its heart policy and regulatory measures that will substantially reduce the proportion of young Canadians reaching their 20th year who smoke from 19% down to 0%. A broad array of novel regulatory changes will be required to achieve this – many of these are described in detail earlier in this paper.

Endgame Options for Prevention

There are additional novel measures that could *provide a transformative leap forward* in preventing a new generation of smokers or could *substantially strengthen existing prevention approaches*. Interventions from both these categories will be required to achieve the endgame goal of "less than 5 by '35".

1. Age-based restriction on legal sales of tobacco.

A. Stage I: Increasing the minimum age for sales to minors to 21 and potentially 25 years.

About 20 years ago, the federal government raised the minimum age for buying cigarettes from 16 to 18, which was subsequently raised to 19 by some provincial governments. Evidence of the benefits of increasing the minimum age to 21 has recently encouraged legislators in California and Hawaii and many US municipalities to adopt this change.[10] [11]

B. Stage II: A Canadian Tobacco-Free Generation

The Tobacco Free Generation proposes to phase-in an end to tobacco use via prevention of new smokers by prohibiting tobacco sales to all persons born after a specific date (the year 2000 in the cited reference)[12] Legislation to implement this measure has been proposed in Tasmania, Australia but there is no evidence to date of the success of this approach. This proposal is clearly transformative and merits discussion within a Canadian Endgame Strategy.

2. Strengthen / develop financial penalties to reduce youth tobacco use

A. Youth Purchase-Use-Possession laws

Currently young Canadians who are in possession of tobacco products are liable for sanctions under law in Alberta and Nova Scotia, although such measures are rarely enforced. The youth possession features of the federal law were rescinded in 1994. Several U. S. states have adopted such measures.[13] Youth possession laws have generally not been recommended by health organizations in Canada.

B. Make tobacco manufacturers responsible for youth tobacco use

A "strict liability" standard is already used with respect to tobacco *retailers*, who face consequences if they sell cigarettes to under-age customers even if there was no intent to commit a crime.[14] These penalties can be increased and made more powerful as a deterrent to youth smoking.

Tobacco manufacturers do not face similar responsibility for youth smoking or any repercussions for young people using their products. To the contrary, they benefit from the additional sales and the future revenues. Proposals for ways to reverse these incentives were made over 20 years ago,[15] and were reflected as a "look-back" obligation of the 1997 draft Global Settlement negotiated with U. S. tobacco companies. As part of an endgame strategy, Canada could develop a requirement for tobacco manufacturers to "pay" for the costs of under-age smoking through a levy based on an assessment of their anticipated future sales revenues to this group thus reversing the economic incentives of manufacturers to recruit new smokers. The intent would be to not only remove any incentive to stimulate youth smoking but impose a penalty to remove incentives for tobacco companies to promote youth smoking.

OPTIONS FOR PREVENTION STRATEGIES

The following could be included in an Endgame for Tobacco in Canada.

- A pan-Canadian change to minimum age for legal purchase of tobacco products to age 21.
- Consideration of further age-based restrictions on sale, such as a minimum age of 25 or a maximum birth year of 2000.
- Improvements in accountability and deterrence for smoking onset.

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8. LITIGATION AND THE ENDGAME

LITIGATION IS PART OF A COMPREHENSIVE APPROACH TOBACCO CONTROL.

In recent years, governments and citizens' groups have looked to the justice system for support in strengthening tobacco control. Courts are seen as a way of both holding the industry accountable for past wrongdoing and helping change the way they behave in the future.[1] Litigation is acknowledged as "an important part of comprehensive tobacco control" in the Framework Convention on Tobacco Control (FCTC).[2]

The negligent behaviour of tobacco companies has already been proven in a Canadian court. After a lengthy trial and a review of a 50-year history of tobacco industry actions, the Quebec Superior Court ruled in 2015 that the industry's "ruthless disregard for the health of their customers" was an "egregious fault" under Quebec law. By promoting their brands while misleading smokers about the harmfulness of their products and impeding the efforts of others to provide this information, the companies broke four Quebec laws, including by unlawfully interfering with the right to life, security and integrity of the person guaranteed by the Quebec Charter of Rights and Freedoms. [3]

Trials like these can be a forward-looking tool to improve public health.

- Legal actions can result in the release of documents, increased media attention and enhanced public awareness of the harmfulness of smoking, the tobacco market, and tobacco company behaviour. This will increase public and political support for stronger measures in response.
- Large financial awards can support health objectives by leading to an increase in the price of cigarettes, which will reduce tobacco consumption and internalize some of the costs of tobacco use in the market ("market deterrence").
- The actual or potential financial consequences of large lawsuits may destabilize and change the tobacco market in other ways that could benefit health, by driving down profitability and attractiveness to investors. Weakening the economic situation of companies may make structural reforms to the industry more feasible.
- Litigation against tobacco companies could deter future wrongdoing. Companies can be forced by legal proceedings to change their behaviour, or may be encouraged to do so by the consequences or threat of litigation.

Canada is one of the few countries where governments have turned to the courts to reclaim the costs of treating the diseases caused by the wrongful actions of this industry, or where the companies are facing large damages from class action suits initiated by consumers. To date, court actions have not been prominent within the context of tobacco Endgame discussions.

1. THE CHALLENGE OF SUING BIG TOBACCO

Tobacco litigation has a long history, particularly in the United States. For decades, tobacco companies emerged virtually unscathed from any lawsuit filed against them by individual smokers. They used their wealth to deploy a legendary "scorched earth" strategy of outspending, intimidating and defeating claims, and used legal strategies to create winning conditions in courts.

The situation changed in the 1990s, when a new "third wave" of large class actions and state government health care cost recovery lawsuits was launched in the United States. In 1998, the tobacco industry entered settlements first with four state governments individually (Mississippi, Florida, Texas and Minnesota), followed by the remaining 46 states in the historic Master Settlement Agreement in which the companies agreed to pay US$246.5 billion over 25 years, as well as agreeing to other measures, such as some marketing restrictions. The settlement has been used to fund the Truth Foundation (previously called the American Legacy Foundation), among other measures.[4]

These events were seen as a turning point in tobacco litigation, and inspired action in Canada and elsewhere. Within a decade, more than a dozen lawsuits against tobacco companies were filed in Canadian courts on behalf of smokers, including class actions[5] individual suits[6] and small claims cases.[7] In 1998, the first Canadian provincial government initiated a health care cost recovery suit, and by 2015 each of the provinces had done so. Federal and provincial governments also filed suits to recover tobacco tax revenues which had been lost when the companies engaged in illegal contraband sales.[8] The federal government has also initiated criminal investigations and laid charges against the companies under federal tax laws.[9]

All three of the major tobacco companies operating in Canada entered into settlement agreements with the federal and provincial governments concerning civil claims related to contraband. The three companies were also convicted of contraband on guilty pleas. Total fines and civil payments reached $1.7 billion, though for two companies the civil payments were payable over roughly 12 years thus substantially diminishing their real value.[10]

In comparison with litigation in other countries, tobacco lawsuits in Canada have gone poorly for the companies. Two of the class actions resulted in a decisive judgment against them and damages 15 times their annual profits.[11] They agreed to settle federal and provincial claims for lost tax revenues. Tobacco companies have also been unable to prevent the filing of provincial health care cost recovery suits, although company actions have contributed to delays in any of these getting to trial.

Beyond the U. S., the industry has continued to defeat many, but not all, lawsuits against them.[12] In 2016, Philip Morris International reported that of the 442 claims filed against it since 1995, it had ultimately won all but three cases, and these are still under appeal. Two of those losses are in Canada.[13]

2. THE CHALLENGE OF TRANSLATING LAWSUITS INTO HEALTH OUTCOMES

Winning litigation against the tobacco industry does not automatically reduce the number of people who smoke. Translating successful court actions into effective tobacco control measures (let alone game-changing Endgame measures) has proven challenging, prompting concerns with the management of tobacco litigation by some governments.

In the United States, the Master Settlement Agreement included provisions to reduce tobacco advertising, finance the American Legacy Foundation (now the Truth Initiative) and release industry documents. These measures, and the impact of the cigarette price-increase used to finance the payments, were considered to have contributed to a reduction in smoking.[14] [15] Settlement provisions and implementation have been criticized for various reasons, including the long-term payment schedule ties state interests to continued smoking, and the failure to use settlement funds to help reduce smoking.[16]

Political actors can also impede the impact of litigation. For example, a lawsuit filed in 1999 (during the Clinton administration) by the U. S. Department of Justice under the *Racketeer-Influenced and Corrupt Organizations Act* was considered to have been undermined by subsequent administration's decision to reduce financial claims against the industry. Ultimately, the ruling by Justice Gladys Kessler excoriated the industry[17] but did not result in any financial award or successful injunctive measures.[18]

In Canada, the contraband settlements in 2008 and 2010 were reached through secret negotiations between provincial and federal governments and the industry, and ultimately were found to have done little to address the harm to public health caused by the deliberate undermining of tobacco tax policies. These agreements were considered to have been "tobacco-friendly" because of the relatively small amount of the payments agreed to, the abandonment of criminal charges and the resulting acquisition of direct control over tobacco growing by the companies.[19]

The overall impact of private lawsuits is difficult to measure. The health impact of the Quebec class actions is yet to be fully felt. They do, however, illustrate the importance of the legal reforms adopted by Quebec to assist tobacco litigation, and that the historic procedural barriers and systemic use of procedural delaying and obstructing tactics. Although the Court articulated standards for health warnings which exceed those currently on the package, the companies have made no discernable changes to the packaging or marketing of their brands since the ruling. The $15 billion award of damages is under appeal, although two of the three defendants have been required to put in trust a large portion of their annual profits until a final ruling is made. The financial and health impacts of these cases and any ripple effects are still unknown. The final outcome of these cases may prove to be game-changers: upholding the lower court award of $15 billion would likely bankrupt the companies.

The approach that the companies will take to the provincial lawsuits as they move forward is a matter for speculation. It can be expected that, as in other lawsuits, tobacco companies will seek to delay as much as possible provincial government lawsuits from going to trial.

The approach that the provinces will take in furthering these suits is also unknown, and there has been no invitation for public health input into these processes to date. More than a decade after the first provincial lawsuit was filed, the public remains largely unaware of these important proceedings.[20] There is a desire for these suits to go to trial and be resolved in a way that is transparent to the public and which improves the health of Canadians. If provincial governments follow the example of their American counterparts and resolve their suits through settlements, the benefits of a public and transparent trial will be lost.

The government medicare cost recovery lawsuits provide a major, historic opportunity to benefit public health and tobacco control. The extent of public health outcomes will largely depend on priority that is given to health outcomes in the government's management of these cost recovery suits.

3. THE OPPORTUNITIES FOR NEW APPROACHES

In addition to civil liability suits, the legal system may offer other opportunities to alter the behaviour of tobacco companies and to improve public policy, as illustrated by experience in Canada and elsewhere (see box).

The behaviour of the companies has been found negligent under Quebec civil law, but has not yet been assessed under the federal Criminal Code. (David Doherty, currently a Justice of the Ontario Court of Appeal, once offered an opinion that criminal charges against the companies might succeed.[21]) The scope of harm caused by this industry's products justifies such a reflection, and could contribute to realigning the behaviour of the companies and the individuals who work within it to less harmful outcomes.

Courts can be asked to correct industry behaviour or to change government policy. Currently, government enforcement actions do not typically go beyond specific infractions of tobacco-specific laws, like sales to minors, smoking restrictions, promotion restrictions, and contraband. Other harmful aspects of tobacco product marketing could be addressed through legal actions under consumer protection legislation, human rights and other laws. Citizens can ask the courts to review whether government actions are consistent with established policy or with rights established under law.

RECOMMENDATIONS

Litigation can contribute to an Endgame for tobacco and can facilitate the implementation of Endgame measures. The following are ways to maximize the health benefits of tobacco litigation.

- Provincial governments should bring health care cost recovery lawsuits to trial.
- There should be transparency in any settlement negotiations, such that public health voices are actively included.
- Health care cost recovery lawsuits must have effective public health outcomes, including investing part of proceeds in tobacco control.
- Governments should not agree to litigation outcomes that would see tobacco industry payments directly or indirectly tied to continued tobacco industry sales.
- Tobacco control laws should include enforcement mechanisms which allow injunctions to be sought by private citizens or civil society organizations.
- Funding should be available to help provide access to courts for those seeking injunctions in support of tobacco control.
- Efforts should be made to explore legal mechanisms to advance tobacco control including mechanisms to catalyze government action.
- Governments and nongovernment organizations should be ready to identify action measures should the outcomes of the Quebec class actions provide opportunities for significant change.

TYPES OF LEGAL ACTION

Health care providers can sue for the costs of treating tobacco-related disease. Following the U. S. example, governments in a handful of countries filed health care cost recovery claims. Health care cost recovery claims are active in Canada, Brazil, Nigeria and South Korea.[22]

Individuals can sue for compensation. Personal injury claims by individuals have succeeded in some U. S. states, where tobacco companies now face thousands of such claims.[23] Outside the USA, they are less common and rarely successful: Philip Morris International reports that it is currently facing 69 such suits outside the U. S. A, including 2 in Canada.

Class action suits can be filed on behalf of individuals. Class action suits are not permitted in many countries, but they are allowed in Canada, and there are currently nine such claims. Of these, only three have been authorized to proceed as class actions, two of which – the Quebec *CQTS/Blais* and *Létourneau* class actions – reached a successful trial judgment. Outside the USA and Canada, Brazil is the only other country outside the United States and Canada where tobacco class actions are known to be under way.

Courts can be used to trigger changes in government policy. Citizens groups in countries with such diverse legal systems as Argentina, Belgium, India, the Netherlands, New Zealand, Pakistan and Venezuela have sued their governments for failure to apply tobacco control measures. In other areas of health policy (assisted dying, medical marijuana, private health care services), legal actions have been used by citizens' groups to force change. In Canada to date, there has been little in the way of such "offensive" litigation in terms of tobacco control, though there have been some related to exposure to tobacco smoke with human rights claims for discrimination of the basis of disability,[24] occupational claims for unsafe workplaces,[25] and worker compensation.[26] Proceedings have also been attempted to place tobacco under the *Hazardous Products Act*,[27] and to have the federal government ban misleading descriptors "light" and "mild".[28]

Citizens' groups can ask courts to enforcement tobacco laws. In France non-governmental organizations have the right to sue tobacco companies for violation of tobacco control laws, and have done so successfully on multiple occasions. [29] [They are able to retain a portion of any fines levied against the companies for infractions of the law]. Quebec consumer groups have a similar right to ask the court to enforce that province's *Consumer Protection Act*, but no such attempts have yet been made with respect to tobacco products. At least once, a private prosecution in Ontario resulted in a fine against a retailer for selling cigarettes to children.[30]

Criminal charges can be laid. Just as tobacco companies have been held liable under civil law for wrongdoing, the companies and the individuals directing them can face charges under the *Criminal Code*.[31] Private prosecutions can be filed for criminal offences, although government prosecutors have the right to take over the prosecution or to required that the charges be discontinued.[32]

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LOOKING TO THE FUTURE

An authentic commitment to an Endgame strategy for Canada will require the development of enabling measures and structures. These will include funding to support strategy development and implementation and the creation of new structures (or revision of old structures) to oversee it and to report on its success.

It will also require a culture of openness to consider new and at times what may appear to be bold ideas that Canada may be the first to implement. There is no recipe that currently exists for achieving a tobacco-free future and thus those in leadership roles from the fields of policy, charity, professional organizations, research and advocacy who embrace a vision for Canada's Endgame will need to pull together to reach success.

The following specific actions are recommended:

1. CREATION OF AN ENDGAME STEERING COMMITTEE OR "CABINET"

To ensure continued development of an Endgame initiative it is recommended that a broad consortium of organizations coalesce to form a Cabinet whose role will be to ensure ongoing engagement of the charitable, public, research and professional sectors in the initiative. One (or two) key organizations will need to embrace this as an activity they will lead – and house a secretariat to organize meetings, develop communication strategies and ensure this initiative gains momentum at all levels of government in Canada. It is proposed that Cabinet roles would include:

a. *Communication:* Public communication and education about the Endgame initiative – including within special populations
b. *Advocacy:* to encourage Endgame discourse and ideas are embraced by policy makers and government
c. *Ensuring accountability* of those in leadership to pursue Endgame measures
d. *Engage* with relevant federal government and FPT structures
e. *Report* to public on progress

2. ENABLING RESOURCES:

A. Enhanced Funding Support:

To encourage, support and supplement tobacco endgame interventions it will be necessary to maintain and strengthen tobacco control/elimination activities carried out by a variety of actors at the national, provincial and regional levels. New funds are required not only for ramping up some activities (e.g. surveillance) in the short term, but as investment in the Endgame strategy *development and implementation.*

Recently, funding for tobacco control in Canada has been unstable and low in comparison to the U. S. Centers for Disease Control (CDC) recommended levels. CDC recommends governments invest about US$10.50 per capita in interventions designed to promote quitting, reduce exposure to second hand smoke

and reduce smoking onset.[1] The recent budget of the federal health portfolio (including Health Canada and the Public Health Agency of Canada) has been $37.6 million per year. In 2014-205, the most recent year for which information is available, $28.3 million in expenditures on tobacco control by the health portfolio were identified.[2]

Funding is required to enhance tobacco control investments at all levels of government if Endgame initiatives are to be considered. In the main, tobacco control and achieving the endgame will be self-financing activities. The costs of implementing the measures will be mitigated by increased revenue from new tobacco taxes, reduced health care costs and general improvements to the economy that will result from more people living longer, happier and more productive lives. Some of the measures proposed here will even generate new revenues. These include raising excise taxes, imposing licensing fees and a revived surtax on tobacco company profits. Sources of funding include a number of opportunities to extract additional funds from manufacturers as was outlined in detail in the paper section "*Building on Success".*

3. New Structures, Consultations and Accountabilities

A. Strengthen tobacco industry surveillance

Canada already requires tobacco companies to report on a wide array of activity, including sales, manufacturing, ingredients, toxic constituents and emissions and research and promotional activities.[3] Although these data have been used in government reports and academic research, there are still difficulties in accessing information and limitations in the material itself. Publicly available data is limited. The problem encountered over the years is the difficulty to access from the government the information required. More extensive reporting requirements and more publicly available information is required.

B. Creation of a Foundation to lead tobacco reduction programming:

An independent foundation that engages in non-regulatory tobacco control activity would add value to the Endgame goals and could grow from the Endgame Cabinet activity. If properly set-up, the benefits of an independent foundation (which could be funded by funds extracted from Tobacco industry) are that it could engage in effective initiatives that governments would be unwilling to do on their own and allow for long-term sustainable funding for tobacco control activities. The foundation could do hard hitting ads, public communication and information dissemination that the governments may be unwilling to do. As an example, in the United States, the American Legacy Foundation (now called the Truth Initiative) was created through a tobacco industry litigation settlement – the 1998 Master Settlement Agreement involving state medicare cost recovery lawsuits. The Truth Initiative is focused on achieving a culture where all youth and young adults reject tobacco.

C. Government and Organizational Accountability for the Endgame

As an Endgame strategy is created, it must embed within it clarity around which organizations and/or levels of government are accountable for undertaking and achieving the interventions and targets described. Without overt descriptions of accountability, and reporting, tracking success and mitigating challenges will not be possible. Achieving the ambitious target of less than 5% by 2035 will require that accountabilities be clear and that Canadians be informed about progress towards the Endgame goal on a regular basis.

D. Consult and Collaborate with First Nations, Inuit and Metis (FNIM) Peoples

As described in the Introductory Section of this document, engagement and consultation within FNIM organizations and communities will be extremely important to undertake as a strategy for a (commercial) tobacco free future is developed. Collaboration and partnership with Indigenous organizations will be required for the advancement and delivery of endgame initiatives, including policies and legislative changes.

E. Industry Accountability

In various sections this paper describes numerous approaches to pushing the Tobacco Industry towards greater accountability – these include around novel approaches to reducing youth smoking, increasing their contribution to tobacco control and surveillance, paying for health costs, and eliminating practices that induce sales by retailers, and changing the product and its packaging. Through continued litigation, the tobacco industry could be held accountable for the millions of lives it has foreshortened in the past, and could be required by law to achieve a reduction in tobacco use.

THE BEGINNING OF THE END(GAME)

The Steering Committee for the Summit believes that this work, and the Summit itself, will be the beginning of a new discourse on tobacco control in Canada – with a shift from "control" of tobacco to the unwavering belief that we must achieve a tobacco free future for our citizens. Those who are suffering, who have died prematurely or are too young to speak for themselves, deserve our focus and courage in working together to realize this vision.

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Office of the
Prime Minister

Cabinet du
Premier ministre

Ottawa, Canada K1A 0A2

March 7, 2017

Lee Mason
Board of Health Chair
Algoma Public Health
294 Willow Avenue
Sault Ste. Marie, Ontario
P6B 0A9

Dear Lee Mason:

On behalf of the Right Honourable Justin Trudeau, Prime Minister of Canada, I would like to acknowledge receipt of your correspondence enclosing a resolution from the Board of Health for the District of Algoma Health Unit. I regret the delay in replying.

Thank you for taking the time to share this resolution with the Prime Minister. You may be assured that your comments, offered on behalf of the Board of Health, have been carefully reviewed.

As you may know, the issue you raise regarding the legalization and regulation of cannabis falls under the purview of the Honourable Jody Wilson-Raybould, Minister of Justice and Attorney General of Canada, to whom you sent a copy of your letter. I am certain that Minister Wilson-Raybould appreciated being made aware of the resolution.

Once again, thank you for writing to the Prime Minister

Yours sincerely,

R. Olshansky
Executive Correspondence Officer

Canada

March 28, 2017

Porcupine
Health Unit • Bureau de santé

The Honourable Dr. Eric Hoskins
Minister of Health and Long-Term Care
Hepburn Block, 10th Floor
80 Grosvenor Street
Toronto, ON M7A 2C4

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169 Pine Street South
Postal Bag 2012
Timmins, ON P4N 8B7

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email: info4you@porcupinehu.on.ca
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Dear Minister Hoskins,

RE: LOW-INCOME DENTAL PROGRAM FOR ADULTS AND SENIORS

On March 17, 2017, the Porcupine Health Unit Board of Health passed the following resolution:

WHEREAS, the Board of Health for the Porcupine Health Unit recognizes the importance of dental health in the overall health and well-being in our population; and

WHEREAS, the Porcupine Health Unit has identified that oral health concerns lead to greater emergency department and day surgery visit rates in our area, than the Provincial average; and

WHEREAS, a 2015 Porcupine Health Unit Study demonstrated that more than a third of emergency department visits for dental concerns are repeat visits, and the highest proportion of repeat visits are in the 19-44 year age group; and

WHEREAS, there is a great cost to both acute health care services and the individual patient from a lack of dental care. Pain, low self-esteem, complications from antibiotic treatment, and infections which may be serious and progress rapidly are all common complications of a lack of dental services; and

WHEREAS, the majority of these acute dental complications are avoidable with proper dental treatment, and the lack of treatment is largely due to an inability to pay for dental services;

NOW THEREFORE BE IT RESOLVED THAT, the Board of Health for the Porcupine Health Unit appreciates the Ministry of Health and Long-Term Care's plan to address this important public health issue, but encourages consideration for more urgent implementation of expanded public dental programs for those living on low incomes; and

FURTHERMORE BE IT RESOLVED THAT, a copy of this resolution be forwarded to the Honourable Dr. Eric Hoskins, Minister of Health and Long-Term Care, Dr. David Williams, Chief Medical Officer of Health for the Ministry of Health and Long-Term Care, the Association of Local Public Health Agencies, Ontario Boards of Health, and Gilles Bisson, MPP, Timmins - James Bay.

Thank you for your attention to this important public health issue.

Yours very truly,

Donald W West BMath, CPA, CA
Chief Administrative Officer

DW:mc

Branch Offices: Cochrane, Hearst, Hornepayne, Iroquois Falls, Kapuskasing, Matheson, Moosonee, Smooth Rock Falls

March 22, 2017

VIA EMAIL

The Honourable Eric Hoskins
Minister – Minister's Office
Ministry of Health and Long-Term Care
Hepburn Block, 10th Floor
80 Grosvenor St
Toronto, ON M7A 2C4

Dear Minister Hoskins:

The Leeds, Grenville and Lanark Board of Health is very concerned about two recent initiatives of the Ministry of Health and Long-Term Care – the Expert Panel on Public Health and the Healthy Menu Choices Act.

With respect to the Expert Panel on Public Health, you stated in your letter of January 18, 2017:

> "The work of the Panel will include a review of various operational models for the integration of public health into the broader health system and the development of options and recommendations that will best align with the principles of health system transformation, enhance relationships between public health, LHINs and other public sector entities and improve public health capacity and delivery."

We have learned that the work of the Expert Panel will be done in confidence and will not include consultation with local public health units. This is in contrast to the Liberal government's commitment to transparency in its work. The Expert Panel will be making recommendations that could have a profound impact on how we do business, and yet we won't have any opportunity to provide input into the discussion or the options being considered. To rectify this concern, the Board requests that all recommendations from the Expert Panel be made public, and that a formal consultation process be undertaken with all Ontario public health units before any decisions are made about the integration of public health into the broader health system.

The implementation of the Healthy Menu Choices Act requires a significant investment of resources at the local level and among the food premise industry. Concerns have been raised by other organizations about the effectiveness of this measure. Has the Ministry of Health and Long-Term Care identified indicators of success that will assess if this investment is justified; and are these indicators being tracked? The Liberal government has publicly stated a commitment to accountability. The Board of Health requests that the Minister respect this commitment and notify all parties how the impact of the Healthy Menu Choices Act will be assessed.

Sincerely,

Anne Warren, Chair
Board of Directors
Leeds, Grenville and Lanark District Health Unit

AW/hb

cc: Steve Clark, MPP Leeds-Grenville
Randy Hillier, MPP Lanark-Frontenac-Lennox and Addington
Jack MacLaren, MPP Carleton-Mississippi Mills
Ontario Boards of Health

The Corporation of the

Municipality of Huron Shores

March 30, 2017

ATTENTION: Hon. Charles Sousa,
Minister of Finance

SENT VIA E-MAIL: charles.sousa@ontario.ca

Dear Honourable Sousa:

Re: Res. #17-03-23 – Support Algoma Public Health re: tobacco industry

The Council of the Corporation of the Municipality of Huron Shores passed Resolution #17-03-23 at the Regular Meeting held Wednesday, February 8th, 2017, as follows:

> "BE IT RESOLVED THAT the Council of the Corporation of the Municipality of Huron Shores supports Resolution No. 2016-109 from the **Board of Algoma Public Health** in its request, with respect to the **tobacco industry** and/or its front groups, that the Ontario Ministry of Finance take the following actions:
>
> (a) Raise tobacco excise taxes; and
> (b) Enhance enforcement activities designed to reduce the presence of contraband tobacco in Ontario communities."

Should you require anything further from this office in order to address the above resolution, please do not hesitate to contact the undersigned.

Sincerely,

Deborah Tonelli

Deborah Tonelli, AMCT
Clerk/Administrator

DT/cks

Cc: Dr. Marlene Spruyt, Medical Officer of Health, Algoma Public Health

P.O. Box 460, 7 Bridge Street, Iron Bridge, ON P0R 1H0
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