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COMMENTARY

From priority to endgame: the Region of Peel Living Tobacco-Free strategy

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Abstract
Tobacco use presents a tremendous burden on population health and remains the leading preventable cause of morbidity and mortality worldwide. Building on tobacco control successes to date, public health agencies are increasingly aligning with the international "Tobacco Endgame" initiative targeting decreases in tobacco use to less than 5% by the year 2025. The local implementation of this initiative follows a decade of work at Region of Peel-Public Health (RoP-PH), a local health department in Ontario, Canada, which made "Living Tobacco-Free" (LTF) a strategic priority in 2009 with a tactical framework encompassing Research, Protection, Prevention, and Cessation. This commentary provides an overview of the results observed by this local health department's decision to make LTF a strategic priority and discusses the department's next steps in developing a Theory of Change to systematically align continuing efforts to the call for a "Tobacco Endgame".

Résumé
Le tabagisme constitue un fardeau énorme pour la santé des populations et demeure la principale cause évitable de morbidité et de mortalité dans le monde. En se fondant sur les succès remportés jusqu'à maintenant dans la lutte antitabac, les organismes de santé publique s'alignent de plus en plus sur l'initiative internationale de Tobacco Endgame (« sortie du tabac ») qui vise à réduire le taux de tabagisme à moins de 5 % d'ici 2025. Au Bureau de santé de la région de Peel, en Ontario (Canada), on y travaille depuis 10 ans : *Living Tobacco Free* (« vivre sans tabac ») est en effet une priorité stratégique du bureau depuis 2009, dotée d'un cadre tactique qui englobe la recherche, la protection, la prévention et l'arrêt du tabac. Dans ce commentaire, nous présentons un sommaire des résultats observés à la suite de la décision de ce bureau de santé local de faire de « vivre sans tabac » une priorité stratégique et nous expliquons que le bureau élabore maintenant une théorie du changement pour harmoniser systématiquement ses efforts en réponse à l'appel à « sortir du tabac ».

Keywords Tobacco · Smoking · Public health · Canada · Ontario

Mots-clés Tabac · Fumer · Santé publique · Canada · Ontario

Tobacco remains the leading preventable cause of mortality and morbidity in Canada, attributed to 45,464 deaths and $16.2 billion of costs in 2012 (Dobrescu et al. 2017). Between 1965 and 2011, there was a dramatic decrease in Canadian adult smoking prevalence from 49.5% to 16.1% (Statistics Canada 2017), though this change has since then plateaued to 16.2% (Corsi et al. 2014; Statistics Canada 2018).

New public health efforts have formed to continue reducing smoking prevalence. The Tobacco Endgame movement is an ongoing international effort to reduce tobacco use prevalence to < 5% by a set date, for example 2035 in Canada (Government of Canada 2018; McDaniel et al. 2016). Numerous countries, including New Zealand, European countries, and Pacific Island Nations, have adopted an Endgame vision with novel approaches towards tobacco control. Examples of innovative Endgame strategies being developed include annual tobacco tax increases

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and banning tobacco sales to individuals born after a set year (van der Deen et al. 2018).

Tobacco control has been an important aspect of public health programming from municipal to federal Canadian government levels. In June 2018, the federal government created a 5-year tobacco strategy focused on target populations, including LGBTQ+, young adults, and Indigenous Peoples (Government of Canada 2018). The provincial government in Ontario released the 2016 Smoke-Free Ontario Scientific Advisory Committee report and the 2018 Smoke-Free Ontario Strategy to guide the innovative tobacco control efforts of local public health units (Ontario Ministry of Health and Long-Term Care 2018). Municipal-level innovation also remains an important driver of higher-level change. This was well demonstrated by the passage of the Smoke-Free Ontario Act, which followed after multiple Ontario municipalities implemented bylaws enacting smoke-free public places (Statistics Canada 2008).

The Region of Peel-Public Health (RoP-PH) is the second most populous health unit in Ontario, home to approximately 1.4 million people. The burden of tobacco remains significant within Peel, with a currently estimated 10.9% prevalence of smoking (Statistics Canada et al. 2013/14).

In 2009, RoP-PH adopted *Living Tobacco-Free* (LTF) as a 10-year strategic priority to reduce the local tobacco use prevalence. To guide other local public health practitioners, this commentary summarizes a decade of work done by RoP-PH under the LTF strategic priority. The paper also discusses future steps towards adopting a departmental Theory of Change (ToC) model for tobacco control that aligns with the Tobacco Endgame goals.

From burden to strategic priority

In 2008, *A Comprehensive Report on Health in Peel* was the first major report by RoP-PH of regional population health status data. The data supported the development of the *2009–2019 Peel Public Health 10-Year Strategic Plan*, which identified four program priorities for the next 10 years. LTF was the strategic priority concerning tobacco and identified two goals: decrease smoking prevalence from 19% to 15% by 2020, and decrease smoking prevalence among adolescents (aged 12–19) from 12% for males and 10% for females to 7% by 2020 (Statistics Canada et al. 2000/2001, 2003, 2005).

RoP-PH subsequently created a framework for LTF that included Research and the three tobacco control pillars: Prevention, Protection, and Cessation. The goal and objectives for each pillar are as follows:

- Prevention: prevent adolescent smoking initiation and progression to regular tobacco use.
  1. Decrease the number of adolescents/young adults who try tobacco or tobacco-related products.
  2. Decrease the number of adolescents/young adults who become regular tobacco users.
  3. De-normalize tobacco use.
  4. Prevent adolescent access to tobacco and e-cigarettes.

- Cessation: increase the number of quit attempts made by Peel smokers.
  1. Increase the number of quit attempts.
  2. Support access to cessation resources in the community, especially for priority populations.

- Protection: protect Peel residents from exposure to second-hand smoke.
  1. Decrease exposure to second-hand smoke.
  2. Increase the number of smoke-free spaces.

The Research component and Protection, Prevention, and Cessation pillars were operationalized as shown in Table 1.

The first 5 years lay the foundations of infrastructure, policy, and programming. Most encouraging was a reduced tobacco use prevalence from 15.1% in 2009/2010 to 10.9% in 2013/2014 (Statistics Canada et al.). Other steps forward included the *Burden of Tobacco Report* (2012), an outdoor smoking bylaw to prohibit smoking in playgrounds and sporting areas, and a primary care cessation program with local Family Health Teams and Community Health Centres.

The Burden of Tobacco report indicated that adolescent smoking prevalence had decreased to less than 5% (Statistics Canada et al. 2005, 2007/2008, 2009/2010), which informed the health department's decision to shift focus to the young adult population, with a smoking prevalence of 17% (Statistics Canada et al. 2013/2014). During this time, RoP-PH also shifted focus from direct provision of cessation services, including clinics and group counselling, to a population health cessation approach focused on collaboration with stakeholders, including the Human Services Department and pharmacists.

A midway review revised the trajectory for the LTF priority for 2014–2019 and broadened the goal so "fewer residents of Peel start smoking, more quit, and there is less exposure to second-hand smoke". Operations were updated as listed in Table 2, which, in now approaching the LTF strategy's end, have been instrumental in achieving a variety of objectives (Table 3).

Research completed informed several decisions to implement or stop certain interventions. For example, a rapid review on waterpipe use in Peel (2015) led to enacting the *Peel Waterpipe Smoking By-law*, which prohibits waterpipe smoking in settings where tobacco smoking is banned. Conversely, a 2010 review showed no evidence that Quit and Win contests were effective in achieving long-term cessation, which led to the discontinuation of this Peel program.

Table 1 Overview of operations that started in 2009 from the Living Tobacco-Free strategic plan, organized by areas defined in the framework

2009 Region of Peel *Living Tobacco-Free* operations	
Research	• Complete a population health assessment, situational assessment, and environmental scan around characteristics of Peel smoker populations and effective interventions
	• Give direct consideration to ethno-cultural populations with high smoking prevalence, young adult males (18–29), pregnant/post-partum, low socio-economic status, at-risk young males and females
Protection	• Develop more rigorous second-hand smoke policy with workplaces, school boards, and other youth agencies
	• Address second-hand smoke exposures in multi-unit dwellings
	• Create outdoor smoking policies
Prevention	• Adapt curriculum and increase advocacy to eliminate tobacco advertising and encourage activity places to be tobacco-free
	• Collaborate with cultural/faith groups to ensure consistent anti-tobacco messaging
Cessation	Improve access to cessation programs
	• Encourage employers to provide cessation services as an employee benefit
	• Advocate for coverage of cessation aids in the Ontario Drug Benefit Plan
	• Advocate for increased tobacco taxes as an evidence-based cessation method (Hanewinkel and Isensee 2007, Parks et al. 2017)
	• Advocate for federal government to prevent distribution of cheaper contraband tobacco products

Progress in Protection included strategies to target second-hand smoke exposure. In 2018, the Smoke-Free Living Policy was passed which bans tobacco, cannabis, and herbal material smoking inside multi-unit housing buildings.

For Prevention, the steering committee continued to lead LTF priorities, and advocacy efforts continued around restricting child and adolescent exposure to movies displaying smoking. A Smoke-Free Movies social marketing campaign was implemented to advocate for a rating change to movies which depict smoking. A 2018 survey of adult Ontarians found that 78% supported "banning smoking in movies that are rated 14A or under" (Ipsos 2018).

Cessation efforts focused on improving access to services, increasing availability of cessation resources online, and creating a dedicated strategy with healthcare system partners. Individuals who smoke and live in social multi-unit housing are less likely to receive social support to quit and often suffer poorer health outcomes (Kernoghan et al. 2014). Cessation workshops and nicotine replacement therapy were offered for these tenants who were likely impacted by the Smoke-Free Living Policy.

Despite its accomplishments, LTF has also experienced notable challenges. For example, implementation of the *Waterpipe Smoking By-Law* was delayed due to a court challenge brought by a group of waterpipe owners. The increasing popularity of novel tobacco-delivery systems, such as e-cigarettes, has refocused research and interventions towards preventing and reducing use of these products, particularly by adolescents. Last, data gaps for certain populations present a considerable challenge. When this occurs, the best available

Table 2 Overview of operations from the 2014 updated Living Tobacco-Free strategic plan, organized by areas defined in the framework

2014 Region of Peel *Living Tobacco-Free* operations	
Research	• Analyze emerging trends in tobacco use to develop and evaluate our programs, policy, and strategy
	• Continue to measure progress by monitoring smoking prevalence, exposure to second-hand smoke, smoking-related complaints, cessation support, and successful policy implementation
	• Conduct research studies around attitudes, perceptions, and behaviour around tobacco use
Protection	• Strengthen the Peel Outdoor Smoking Bylaw
	• Investigate the use of water pipes, e-cigarettes, and other novel tobacco-delivery systems
	• Consider policy options for tobacco control in multi-unit dwellings
Prevention	• Perform a literature review of strategies to prevent young adults from becoming regular smokers
	• Utilize these findings to inform further planning with this priority group
Cessation	• Collaborate with internal/external stakeholders including Human Services Department, sexual health clinics, pharmacists, and primary care providers to improve access to cessation supports

Table 3 Overview of accomplishments from the Living Tobacco-Free strategic plan, organized by areas defined in the framework

Region of Peel *Living Tobacco-Free* accomplishments	
Research	• Burden of Tobacco Report (2012)
	• Mixed Methods Research Project (tobacco use, attitudes and behaviours of males aged 19–29) (2015)
	• Tobacco Use Survey (2013)
	• Cigarette butt study to understand contraband use
	• Various research reviews, including: Health Effects from the Use of, and Exposure to, Tobacco and No-Tobacco Waterpipes; Tobacco Enforcement Strategies that Affect Youth Access to Tobacco; Effective Interventions to Prevent Young Adult Males from Progressing to Regular Smoking; and Effective Postpartum Smoking Relapse Prevention Interventions
Protection	• Peel Waterpipe (Hookah) Smoking Bylaw (Nov 2016)
	• Smoke-Free Regional Worksites (January 2017)
	• Smoke-Free Living Policy (November 2018) for regionally owned and/or operated buildings
	• Peel Outdoor Smoking Bylaw (Sept 2013)
	• Smoke-Free Ontario Act proactive workplace inspection program (2017)
	• Development of a pledge strategy where parents commit to making their private homes smoke-free
Prevention	• Smoke-Free Movies social marketing campaign
	• Cross-divisional steering committee and workgroups to address the high smoking prevalence of males aged 19–29
	• Prevention strategy was developed in 2018
Cessation	• Webpage for patient referrals and resources
	• Cessation strategy was developed in 2017
	• Cessation services to Regional employees to support smoke-free grounds policy development
	• Cessation services provided to tenants who live in residential units of Regionally owned and/or operated multi-unit housing buildings
	• Primary care cessation program with Family Health Team

data are used (i.e., provincial/national data) or necessary data are collected. For example, data were merged using four cycles of Canadian Community Health Survey (CCHS) to help determine the proportion of current smokers by sexual orientation, age group, and sex in Peel.

The Theory of Change

A refreshed departmental tobacco strategy is being developed using a ToC model to align with the emerging Tobacco Endgame vision. The ToC is a widely used (Breuer et al. 2016) tool for planning public health interventions that works backwards from a single desired outcome to systematically determine the necessary steps to reach this goal (Weiss 1995). Among many examples, the model has been successfully used in programming for reducing alcohol-related harms in Scotland (Beeston et al. 2016) and creating safer urban environments for children and youth in distressed urban environments (Weitzman et al. 2009).

The first step for building a ToC defines a single ultimate desired population health outcome; this will likely be aligned with the smoke-free Tobacco Endgame goal. The next level defines penultimate desired outcomes required to support achieving the ultimate goal, which might include reducing adolescent smoking initiation or exposure to second-hand smoke. From these goals, the ToC then identifies programming and resources needed to achieve these outcomes. The ToC process continues until forming a sequence of changes necessary to transition from the current population health state to the desired outcome. A properly sequenced departmental ToC will provide insight into which interventions should be deployed to reach the goal identified by the Tobacco Endgame.

Conclusion

RoP-PH has made considerable progress over the past 10 years by identifying tobacco as a strategic priority. The new strategy will face both familiar and novel challenges, such as reaching priority populations and preparing for emerging tobacco-related products. As the 10-year mark approaches, the department is developing a ToC as an innovative approach towards achieving the Tobacco Endgame goal of < 5% smoking prevalence locally by 2025.

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Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

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