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Creating Knowledge for E-Cigarette Regulatory Policy

This Research News update provides an overview of recent work produced under a grant from Health Canada's Substance Use and Addictions Program (SUAP) on which OTRU is partnering with Physicians for Smoke-Free Canada.

Introduction and Summary of Work Completed

The e-cigarette policy environment in Canada is developing rapidly. With support from Health Canada, and in partnership with Physicians for a Smoke-Free Canada's project *"Addressing Knowledge Gaps Important to Tobacco Control",* the Ontario Tobacco Research Unit has completed three reports about policy options for regulating vaping in Canada. Each of these reports discusses the evidence for a range of policy options and assesses feasibility for implementation in the Canadian context.

These reports include:

- E-Cigarette Dependence and Association with Cigarette Smoking
- Regulatory Policy for E-Cigarette Flavours
- Regulatory Policy for E-Cigarette Marketing

Current Studies

We have undertaken four additional projects this fiscal. These studies include:

- Simulation Modelling of E-Cigarette Policies
- Youth Access to E-Cigarettes
- E-Cigarette Harm Reduction Discourse Analysis
- E-Cigarette Discrete Choice Experiment

Simulation Modelling of E-Cigarette Policies

Developed by Melbourne researchers, the SHINE platform is a scalable and robust platform that integrates with "big data" to provide comparisons of health interventions in a highly standardized way, traversing different risk factors and conditions, as well as different population groups, and doing so over different time scales. SHINE is intended to be adaptable to different countries by using standardized demographic, epidemiological (e.g., global burden of disease data) and cost data. This project has adapted SHINE to the Canadian context to test the impact of e-cigarette policy interventions. This project identifies a test intervention to develop the model for Canada and inputs appropriate Global Burden of Disease indicators. The primary outputs of the SHINE model when fully implemented will provide Canada with the health burden and health costs associated with switching and quitting behaviour with respect to e-cigarettes, providing health decision makers access to effectiveness and cost-effectiveness data on interventions identified by the project's Vaping Advisory Committee. Modelling of e-cigarette and cigarette related burden was completed for Canada. Depending on the assumptions of the relative health burden of e-cigarettes and level of switching, access to vaping products can produce either health savings or costs.

Youth Access to E-Cigarettes

This study provides an overview of the problem of youth access to e-cigarettes in Canada and reviews the evidence to inform policy options to limit youth access. Methods include a jurisdictional scan to identify promising policies, as well as evidence related to their effectiveness. Policy options used to restrict youth access to other substances—including alcohol, tobacco and cannabis—are also considered.

Special attention is given to the following policy areas:

- Minimum age of purchase
- Compliance with youth regulatory measures
- Retail licensing
- Social sources
- Online sales
- Outlet proximity
- Restricting sales to adult only stores

The study includes a test shop to explore retailer compliance with regulatory measures to restrict youth access. Emerging findings are summarized below.

Minimum Age

- Prince Edward Island has recently increased minimum age to 21 for all tobacco including conventional tobacco and e-cigarettes
- The U.S. federal government has recently set minimum age to 21 for all tobacco including conventional tobacco and e-cigarettes
- Evidence from conventional tobacco shows that increasing minimum age to 21 is likely to reduce social sources, especially for high school aged kids
- There is strong public support among the Canadian public for increasing the minimum age for e-cigarettes to 21

Compliance

- There is limited evidence on the impact of enforcement on youth access to e-cigarettes
- There is strong evidence from conventional tobacco that enforcement programs can be expected to reduce the number of youths who use tobacco
- Tobacco best practices include:
  - A retail licensing fee
  - Test shopping by undercover decoys
  - Penalties for non-compliant retailers
  - Lead agency with authority for enforcement
  - Goal of 95% compliance
  - No pre-emption of local ordinances
  - Education programs for retailers

Retail Licensing

- Studies of retail licensing regulations in California and Pennsylvania show potential to reduce youth use of e-cigarettes. The aims and the strength of the law are important
- Several studies from Australia, Finland and Hungary have shown that retail licensing strategies may reduce youth access to conventional tobacco

- Toronto and Oakville have recently brought in retail licensing measures to increase compliance

Social Sources

- Youth are accessing e-cigarettes primarily via social sources; however, interventions to address this problem are under-developed
- Select provinces have fines for youth who purchase e-cigarettes (e.g., Quebec) and non-retailer adults who supply to underage youth (e.g., Quebec and Ontario)
- Studies show that adolescents who supply cigarettes to youth primarily purchase cigarettes from retailers, suggesting that efforts to reduce retail sources may also reduce social sources
- Experts have recommended the following interventions to reduce social sources: increased minimum age, increased enforcement, media campaigns, fines for supplying youth, and school-based interventions
- There is a need for further research on interventions to address social sources of e-cigarettes

Online Sales

- Quebec prohibits the online sale of cigarettes, making it the only province or territory in Canada that has regulations related to online sales
- Health Canada indicates that it is monitoring the dynamic market of online vaping product sales and is considering several possible responses[1]

E-Cigarette Harm Reduction Discourse Analysis

This study reviews the discourse about "harm reduction" with respect to electronic cigarettes. While "harm reduction" has been well-defined in the context of safe injection sites and naloxone, far less attention has been paid to the term in tobacco research. Specifically, this study explores how the tobacco industry is using "harm reduction" language to influence attitudes, perceptions, and beliefs about electronic cigarettes and how public health stakeholders and policymakers working within commercial tobacco reduction frameworks are adopting it. The project explores policy options to oversee the use of harm reduction language by

industry particularly as it pertains to attracting youth to electronic cigarettes. Furthermore, traditional harm reduction fields have not had to account nearly as much for industry influence or co-option of "harm reduction" in the way that tobacco public health professionals must. Results will inform research, guidelines, and policies to protect consumers from industry manipulation.

The project includes a literature review on harm reduction and e-cigarettes, and a jurisdictional review about how different jurisdictions are using harm reduction language. A discourse analysis explores how harm reduction language is being used by different stakeholder groups including industry, government, and academia. Key informant interviews were conducted with experts to triangulate findings.

Vague Definitions

Definitions of *harm reduction* in Canada remain vague, particularly as they pertain to tobacco. While "harm reduction" has been well-defined traditionally in public health, far less attention has been paid to the term until recently in tobacco. Clearer guidelines on both how to use harm reduction language and the potential pros and cons of various *harm reduction* strategies in tobacco are needed. Furthermore, traditional harm reduction fields have not had to account nearly as much for industry influence or co-option of "harm reduction" in the way that tobacco public health professionals must.

The Tobacco Industry Benefits from Polarizing Harm Reduction Discussions

"Harm reduction," as the rallying cry of the tobacco industry, is distinct from a public health harm reduction approach to tobacco. While the nuances of the latter public health harm reduction approach are important (and are widely discussed in the report), it is important not to conflate it with current industry efforts to co-opt the term. The debate around harm reduction has frequently become a debate about supporting industry. Through this lack of nuance, supporting public health harm reduction has become equated with supporting industry and industry's definition of tobacco harm reduction. Industry is relying on simplistic generalizations and for-or-against logic to divide the public health community and promote the use of their products with minimal regulations.

Harm Reduction as a Principle is Largely Supported

Harm Reduction as a *principle* was widely supported by most public health interviewees. Every expert claimed to support *harm reduction*, yet it is the details of these beliefs that were important. For instance, many viewed prescription-only e-cigarette policies as harm reduction, while others viewed a largely unregulated market as *harm reduction*. Both can make claims that these fall within the broad principles of the term.

E-Cigarette Discrete Choice Experiment

A discrete choice experiment (DCE) is a survey-based experimental approach, with the objective of eliciting individual preferences for goods and services.[2] In DCEs, the participants note a series of preferences across products described using a set of attributes and characteristics. The relative importance of each attribute and the value of alternative options can be derived from the choices, using choice models. As a hypothetical choice strategy, DCEs' particular strengths are in their capacity to examine potential policies that have not yet been implemented. This research strategy has significant precedent in both public health and tobacco research.[3,4,5] In this DCE, respondents have chosen their preferred option from a choice of four e-cigarette products described by four attributes: flavour, health impact, nicotine concentration, and price. Emerging findings for this study will be available shortly.

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