



March 2020

Research on E-Cigarette Vaping

This Project News update provides an overview of recent work produced under a grant from the Ontario Ministry of Health and Long-Term Care's *Research on E-Cigarettes and Waterpipe* Health System Research Fund, including:

- Abstracts of four articles that summarize some of OTRU's research (other articles are under review)
- Three poster presentations from the Society for Research on Nicotine & Tobacco's 2020 Annual Meeting in mid-March
- A [presentation slide deck](#) (PDF) of findings that covers:
 - Recent results from population surveys
 - Youth and Young Adult Survey research (e.g., perceived addiction to vaping, baseline and 12-month follow-up transitions, stealth vaping, etc.)
 - Adult Vape to Quit Survey research (e.g., Concept Mapping study, predictors of successful quitting)
 - Focus Group studies of youth, young adults and adults
 - Point-of-Sale study
 - Other studies including heated tobacco, most popular google search terms, e-liquid flavours

As this project comes to a close, we would like to thank all of our survey and focus group participants, retail stores involved in the point-of-sale study, Advisory Committee, and project team members. Over the next few months, we anticipate several other publications arising out of this project and look forward to sharing these with all of you. Visit our [E-Cigarette Vaping project page](#) for additional project findings.



Publication Abstracts

Perceived Addiction to Vaping Among Youth and Young Adult Regular Vapers

Camara-Medeiros A, Diemert L, O'Connor S, Schwartz R, Eissenberg T, Cohen JE. [Perceived addiction to vaping among youth and young adult regular vapers](#). *Tobacco Control* 2020. doi:10.1136/tobaccocontrol-2019-055352.

Background: The prevalence of e-cigarette use among youth and young adults has increased markedly in recent years; however, little is known about young people's perceptions of e-cigarette addiction. This study examines factors associated with self-reported addiction to e-cigarette use among this population.

Methods: In 2018, 1048 Canadians aged 16–25 years were recruited through online social media platforms to complete a survey. Quota sampling was used to oversample regular e-cigarette users (vaping at least weekly); these 578 regular users were included in this analysis. Self-perceived addiction was assessed by asking participants if they felt they were 'very', 'somewhat' or 'not at all' addicted to e-cigarettes. A proportional odds model was employed to identify factors associated with the ordinal outcome.

Results: Almost half of regular users perceived themselves to be 'not at all addicted', 41% felt they were 'somewhat addicted' and 13% felt they were very addicted to e-cigarettes. Women, former cigarette smokers, daily vapers and those vaping for more than a year were more likely to report higher levels of perceived addiction. Similarly, high sensation-seeking youth, those reading blogs and websites about vaping, those frequently dripping and those using higher nicotine strengths had a greater likelihood of higher perceived addiction than their respective counterparts.

Conclusion: More than half of youth and young adult regular e-cigarette users felt they had some level of addiction. The findings identify possible opportunities for targeted programming for education and treatment, as well as potential opportunities for policy change such as maximum allowable nicotine strengths.



Awareness and Perceived Risk of Heated Tobacco Products

Fung MD, Diemert LM, Zhang B, O'Connor S, Schwartz R. [Awareness and Perceived Risk of Heated Tobacco Products](#). *Tobacco Regulatory Science* 2020;6(1):15-19. doi:10.18001/trs.6.1.2.

Objectives: Heated tobacco products (such as IQOS) and e-cigarettes have been introduced and advertised in a variety of ways despite inconclusive evidence regarding their safety and benefit for smoking cessation. In this study, we examine the awareness, use, and perceived risk of these products among recent smokers.

Methods: In 2017, we conducted an online survey of 727 current and recent smokers in Ontario. We asked participants about their awareness, use, and perceived risk of heated tobacco products and e-cigarettes.

Results: Among respondents, 10% were aware of heated tobacco products, and 3% had ever used them. Compared to non e-cigarette users, e-cigarette users were more likely to agree with statements that heated tobacco is less harmful than regular cigarettes, e-cigarette use is less harmful than regular cigarettes, and both products can help smokers stop smoking regular cigarettes.

Conclusions: Respondents who used e-cigarettes were more likely to have positive perceptions about heated tobacco and may be more susceptible to the marketing of these products. It is important to monitor the use of multiple nicotine products to inform policies and programming for these products.

Marketing IQOS in a Dark Market

Mathers A, Schwartz R, O'Connor S, Fung M, Diemert L. [Marketing IQOS in a dark market](#). *Tobacco Control* 2018;28(2):237-238. doi:10.1136/tobaccocontrol-2017-054216.

Introduction: Phillip Morris International (PMI) is pushing hard to promote IQOS heat-not-burn cigarettes in Ontario, Canada. Canada regulates IQOS as a tobacco product so that the robust tobacco marketing ban creates challenges to its promotion.

Methods: We collected data on IQOS promotion in 49 retail outlets, and through interviews with clerks and observations outside an IQOS store.



Results: The dominant marketing channel is the visible availability of IQOS in a large number of tobacco retail outlets—1029 across Ontario. Several stores display the price of ‘heated tobacco’ on one of three price signs which are permitted despite Ontario’s total display ban. IQOS boutique stores are the locus of aggressive promotion including exchanging a pack of cigarettes or lighter for an IQOS device, launch parties, ‘meet and greet’ lunches and after-hour events. Outside the store, promotion includes a prominent IQOS sign, a sandwich board sign reading ‘Building a Smoke-Free Future’ and sales representatives regularly smoking IQOS. Membership services: Upon acquiring an IQOS device one can register to access the IQOS website store5 and receive customer support services, a map of retail locations and a product catalogue. Members receive regular email invitations to complete surveys with opportunities to win prizes.

Conclusions: These promotion activities have undoubtedly made substantial numbers of Ontarians aware of IQOS. Yet, the government has not provided guidance as to absolute and relative potential harms. Our observations of tactics to promote a new tobacco product in a dark market may inform government regulatory policy and non-governmental organisation efforts wherever heat-not-burn products are introduced.

E-Liquid Product Labels: The Good, the Bad, and the Ugly

O’Connor S, Luk R, Schwartz R. **E-liquid product labels: the good, the bad, and the ugly.** *Tobacco Induced Diseases* 2018;16(1). doi:10.18332/tid/84357.

Background: E-liquid products have exploded in Canada over the last number of years. Although current federal regulations apply to some aspects of these products (e.g., Made in Canada designation, net quantity, French/English text), there are a number of other packaging elements that are not covered by existing regulations. The purpose of this research was to enumerate what choices are being made on e-liquid packaging by manufacturers, surveille compliance with existing regulations, and to inform governments about packaging elements that could benefit from strengthened regulations.

Methods: A sample of 90 e-liquid products were obtained from across 5 Canadian provinces, representing 49 unique manufacturers/distributors. This included 26 non-nicotine products and 64 nicotine products. All e-liquid containers were examined for type of information presented on



product packaging including branding, promotional elements, claims, usage instructions, and warnings.

Results: Diverse labeling practices among manufacturers were observed. Of the 90 samples examined, 62 were highly legible, 21 were of moderate legibility and 7 were low. Only 62% of the products had English and French text, with English predominant. All but one sample included an ingredient list. However, 11% of samples listed quantity of nicotine as separate from the ingredient list. 19% listed nicotine quantity with a handwritten mark. 6% of sample had no text warning related to children (keep out of reach of children). 10% of samples did not include specific age-restrictive text. Only 72% of sample included a danger/caution image (skull, exclamation mark!).

Conclusions: Labeling practices among our sample of e-liquid products varied widely, with some manufacturers having strong practices, whereas others falling well short. Future labeling regulations that consider the main elements described in this study will have the potential to provide consumers of e-liquid products with pertinent information they need to make informed purchase decisions.

Posters

Note: Links open PDF versions of the conference posters.

Fung M, Pelletier H, Diemert L, O'Connor S, Cohen J, Schwartz R. [The Availability and Marketing of E-Cigarette Products Pre and Post Legalization of Nicotine Containing E-Cigarettes in Canada.](#)

Poster presented at: The Society for Research on Nicotine & Tobacco 26th Annual Meeting; March 11-14, 2020; New Orleans, Louisiana.

Pelletier H, Borland T, Bayoumy-Buning D, O'Connor S, Diemert L, Schwartz R. [Becoming a Vaper: The Experiences of Young Adults in Ontario.](#) Poster presented at: The Society for Research on Nicotine & Tobacco 26th Annual Meeting; March 11-14, 2020; New Orleans, Louisiana.

Diemert L, O'Connor S, Eissenberg T, Schwartz R. [Transitions in Youth and Young Adult E-Cigarette Use: A Prospective Study.](#) Poster presented at: The Society for Research on Nicotine & Tobacco 26th Annual Meeting; March 11-14, 2020; New Orleans, Louisiana.