

The Issue

Electronic cigarettes (e-cigarettes) are small devices that are designed to emulate tobacco smoking and can provide a safer alternative to smoking that does not involve combustion and all the related toxic emissions. E-cigarettes have the potential to help tobacco users reduce or overcome nicotine dependence. However, more evidence is required to confirm that e-cigarettes are effective smoking cessation aids. Meanwhile e-cigarettes are growing in use and popularity particularly among young people. Evidence suggests they have the potential to increase youth tobacco dependence and contribute to the possible re-normalization of smoking in public areas.^{1,2} In fact, youth e-cigarette use in Alberta has tripled in the last several years. Alberta's youth vaping rate is the third highest in the country (behind Ontario and Quebec) with more than 35,000 kids using vaping devices³. In fact, youth e-cigarette use has surpassed smoking among youth in Alberta⁴.

Background

E-cigarettes are small devices that are used to deliver nicotine and/or other substances to a user in the form of vapour and liquid aerosols, while simulating the sensation of smoking. Battery operated heating elements within the canisters heat fluid-filled cartridges that emit vapour and liquid aerosols. These products are often made to look like cigarettes, cigars, and pipes. Using an e-cigarette is often referred to as "vaping." The cartridges contain a fluid referred to as 'e-liquid' or 'e-juice' which is a combination of various amounts of propylene glycol, glycerol as well as flavourings⁵. The e-liquid used in e-cigarettes can also contain nicotine. When the vapour and aerosol is inhaled the nicotine is absorbed into the bloodstream through the linings of the mouth, throat and lungs. The amount of nicotine delivered varies depending on the e-cigarette.

The base of most e-liquid is propylene glycol which is considered safe for digestion but not necessarily inhalation especially when heated. In addition, the process of heating the liquid can result in additional emissions including possible toxins especially since there are no current products standards regarding the safe composition and heating of e-liquids. Although propylene glycol is used in some approved inhalation products like medical inhalers and mists, the glycol is not heated in these products and there are no heating by-products or emissions.

Research is ongoing regarding the effectiveness of e-cigarettes containing nicotine as a smoking cessation tool. E-cigarettes are almost certainly less harmful than cigarettes. However there have been no long-term studies to examine cessation efficacy and existing studies have had very small sample sizes and lacked scientific rigour and there is limited scientific support for claims about the safety of e-cigarettes⁶. As a result, Alberta Health Services supports Health Canada's position and warnings to Canadians not to purchase or use e-cigarettes⁷.

Youth use and renormalization of tobacco use

The proliferation of the e-cigarette market gives rise to another serious public health concern. Even if e-cigarettes are proven to be safe and effective in helping smokers quit or reduce tobacco consumption, there is still a risk that e-cigarette use could lead to nicotine dependence and potential tobacco use among youth and non-smokers. Also, these

1. World Health Organization Framework Convention on Tobacco Control. *Electronic nicotine delivery systems*. FCT/COP/6-10 Rev.1. 2014.

http://apps.who.int/gb/fctc/PDF/cop6/FCTC_COP6_10Rev1-en.pdf?ua=1

2. Czoli CD, Reid JL, Rynard VL, Hammond D. *E-cigarettes in Canada - Tobacco Use in Canada: Patterns and Trends, 2015 Edition, Special Supplement*. Waterloo, ON: Propel Centre for Population Health Impact, University of Waterloo.

3. Health Canada. Canadian Student Tobacco, Alcohol and Drugs Survey, 2016-2017. June 2018. <https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey.html>

4. Health Canada. Canadian Student Tobacco, Alcohol and Drugs Survey, 2016-2017. June 2018. <https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey.html>

5. U.S. Food and Drug Administration. *E-Cigarettes: Questions & Answers*. <http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm225210.htm>. Accessed May 26, 2014.

6. Czoli CD, Reid JL, Rynard VL, Hammond D. *E-cigarettes in Canada - Tobacco Use in Canada: Patterns and Trends, 2015 Edition, Special Supplement*. Waterloo, ON: Propel Centre for Population Health Impact, University of Waterloo.

7. Alberta Health Services. Let's Talk About...Electronic Smoking Products and Safety. http://www.albertaquits.ca/files/AB/files/library/FINALElectronic_Smoking_Products_R2_.pdf

products can model and renormalize smoking behaviour among children and youth. E-cigarette use closely emulates smoking with devices that often look like cigarettes and produce visible emissions that closely resemble cigarette smoke. To this day, these products are often marketed as “e-cigarettes” instead of nicotine vaporizers.

Recent evidence indicates that non-smoking youth are using e-cigarettes⁸. Due to the unregulated sale and use of e-cigarettes, youth who use e-cigarettes may be vulnerable to nicotine dependence which can lead to tobacco use.⁹ The latest Health Canada data shows 35,500 Alberta youth in grades 7 to 12 are using e-cigarettes¹⁰. The number of Canadian youth trying e-cigarettes now surpasses the number of youth trying tobacco cigarettes¹¹. Evidence suggests that youth who experiment first with e-cigarettes are almost twice as likely to intend to smoke conventional cigarettes compared to those who have never tried either¹². While more research is needed to show a definitive link between youth e-cigarette use and an increase in tobacco use and dependence, the current evidence suggests that a precautionary approach should be taken.

Public health organizations are very concerned about the experimental use of e-cigarettes among youth and its potential to result in nicotine addiction and tobacco use. Health groups are also concerned about the potential renormalization of tobacco use that could result from e-cigarette use in public areas. E-cigarettes are designed to look and function like regular cigarettes and most have visible emissions and some even have glowing tips like normal cigarettes. Significant progress has been made in tobacco reduction due to reduced social acceptability which has largely resulted from smoking bans. Tobacco reduction legislation is being undermined by the public use of e-cigarettes in places where smoking is banned.

Regulatory and legal framework for e-cigarettes

In 2018, the federal government passed legislation that regulates the manufacturing labelling and promotion of both nicotine and nicotine-free e-cigarette products.¹³ The legislation includes a ban on the sales of e-cigarette products to minors and gives the ability for Health Canada to prescribe health warning labels on e-cigarette products. However, the federal bill contains several loopholes that the provincial government needs to close to better protect Alberta teens from vaping and nicotine addiction. Alberta and Saskatchewan are the only provinces that do not currently regulate e-cigarette use. The *Tobacco and Smoking Reduction Act* currently contains a section which would prohibit e-cigarette use in indoor public places and workplaces, however this section of the legislation remains un-proclaimed and unimplemented.

A handful of Alberta municipalities including Calgary, Edmonton and Red Deer have included e-cigarettes in their smoking bylaws and are prohibiting the use of e-cigarettes anywhere smoking is currently prohibited. All Albertans should be afforded the same protection through provincial legislation.

Federal Bill S-5 contains numerous omissions and loopholes including:

- No restrictions on the public use of vaping devices by minors or adults
- Limited restrictions on the retail promotion of vaping devices
- No carding for purchases of vaping devices for those between the ages of 18 and 25 (versus tobacco, liquor and cannabis)
- No mandatory training for vaping or tobacco retailers (cannabis and liquor retailers require mandatory provincial training and certification)

8. Health Canada. Canadian Student Tobacco, Alcohol and Drugs Survey, 2016-2017. June 2018. <https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey.html>

9. World Health Organization Framework Convention on Tobacco Control. *Electronic nicotine delivery systems*. FCT/COP/6-10 Rev.1. 2014. http://apps.who.int/gb/fctc/PDF/cop6/FCTC_COP6_10Rev1-en.pdf?ua=1

10. Health Canada. Canadian Student Tobacco, Alcohol and Drugs Survey, 2016-2017. June 2018. <https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey.html>

11. Health Canada. Canadian Student Tobacco, Alcohol and Drugs Survey, 2016-2017. June 2018. <https://www.canada.ca/en/health-canada/services/canadian-student-tobacco-alcohol-drugs-survey.html>

12. Bunnell RE, Agaku IT, Arrazola R, Apelberg BJ, Caraballo RS, Corey CG, Coleman B, Dube SR, King BA. Intentions to smoke cigarettes among never-smoking U.S. middle and high school electronic cigarette users, National Youth Tobacco Survey, 2011-2013. *Nicotine and Tobacco Research*. 2014 Aug 20. [Epub ahead of print] <http://www.cdc.gov/tobacco/youth/e-cigarettes/>

13. Bill S-5. <https://openparliament.ca/bills/42-1/S-5/>

This creates a great deal of concern as the sale and promotion of new alluring, high-nicotine “stealth” vaping devices could make matters worse based upon the recent U.S. experience which witnessed an explosive rise in youth vaping¹⁴. How these products continue to be regulated will in large part determine whether they are a net benefit or a net harm to public health.

Public support for restricting e-cigarette use

A telephone survey of 1,200 Albertans aged 18 and over conducted in 2016 revealed that 82% of respondents supported banning e-cigarette use in all public places where tobacco use is banned. The 2016 Chronic Disease Prevention Survey was commissioned by the Alberta Policy Coalition for Chronic Disease Prevention.

Policy Recommendation

The *Tobacco and Smoking Reduction Act* provides regulatory authority to prohibit the use of any tobacco-like products in indoor public establishments and workplaces. E-cigarettes can be easily defined as tobacco-like products through a Cabinet Order allowing for the prohibition of their use in indoor public establishments and workplaces. **The Campaign for a Smoke-Free Alberta recommends that Cabinet proclaim all sections of the TSRA pertaining to tobacco-like products and order the prohibition of e-cigarette use in indoor public places and workplaces.**

¹⁴ U.S. Food & Drug Administration. FDA takes new steps to address epidemic of youth e-cigarette use. Sept 2018. <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm620184.htm>